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EXAMINING THE RELATIONSHIP BETWEEN EXTERNAL CUES TO ACTION AND  
PROSTATE CANCER SCREENINGS AMONG AFRICAN-AMERICAN MALES

BY

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DISSERTATION

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## ABSTRACT

African American men have the highest incidence, morbidity, and mortality rates in the United States. The purpose of this study was to examine the relationship between *External Cues to Action* and Prostate Cancer screenings among African American males ages 40-65. Specifically, the study evaluated the relationship between the influence of external cues and the decision to undergo prostate screenings in African American males while examining four external cues: media/advertising, friends/family, medical professionals, and church/community. This study also considered the role of culture among African American males and its influence on their decision making process for participating in screenings. A convenience sampling of 100 African American men were recruited from churches and barbershops in the Champaign-Urbana community and surrounding areas. A mixed methods research approach was used in this study; a quantitative survey along with two focus groups was used to explore cues to action and cultural influence in this population. Descriptive statistics, ordinal regression, and the usage of themes were used for the analysis. For the category of media/advertising there was significance for the cues, Internet (Mean 1.67, SD .957) and Television (Mean 1.62, SD .924). Specific advice from family (Mean 2.09, SD .982) was significant within friends/family. Within the category of medical professional, specific advice from the physician (Mean 2.19, SD .910) was significant and highest ranking mean for all cues to action. For the category, church/community, health fair (Mean 1.97, SD .945) and information received from church (Mean 1.77, SD 1.049) were significant. The results also revealed that the African American men viewed the testimony of experience, influential persons, and the physician recommendations as *Enablers*. Social groups (fraternity, community organization, church), the church (pastors, parishioners, spirituality), and

family/spouse were *Nurturers*. The results revealed that trust, a sense of connectedness, and culturally sensitive messaging were significant *Perceptions*.

This study leads to positive implications for African American men and prostate cancer screenings. The use of the churches, social networks, family/spouse, influential voices, while strengthening physician/provider relationships, using the context of culturally sensitive and tailored education and promotion could lead to positive change, increasing the usage of prostate cancer screenings in this population.

## DEDICATION

I dedicate this significant milestone to my beautiful wife Dr. LaTasha Nesbitt and two children: son Kyler and daughter Jaylon. The love and support shown from my family throughout this process has been nothing short of AMAZING. My wife graduated with her PhD in 2014 and has been my source of inspiration and encouragement from Day 1. It is my prayer that the hard work and dedication witnessed by my children during this process can be carried out in every other area of their own lives, giving them the passion to accomplish. To my mother and father, Juanita and William Nesbitt, thank you for instilling in me the character trait of persistence. Your example and constant encouragement has allowed me to see the rewards it manifested in my own life. It is my hopes that the rich heritage of the Nesbitt family continues to live on within the Champaign Urbana community and beyond.

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## CHAPTER 1

### INTRODUCTION

#### **1.1 Statement of the Problem**

Prostate cancer is the most commonly diagnosed cancer in men and is the second leading cause of cancer deaths among men in the United States (Jones, Steeves, & Williams, 2009). The American Cancer Society (ACS, 2014) has estimated that 233,000 men in the United States would be newly diagnosed with prostate cancer in 2014 and approximately 29,000 will die from the condition. Prostate cancer affects African American men disproportionately. At 248.5 cases per 100,000, they have the highest incidence of prostate cancer among men in America. In comparison, Caucasian men have 156.7 cases per 100,000, and Hispanic men have 138.0 cases per 100,000. (Delancey, Thun, Jemal, & Ward, 2008). An estimated 35,110 cases of prostate cancer were expected to occur among African American men in 2014, accounting for 40% of all cancer diagnoses in African American men (Ward, Halpern, & Schrag, 2008).

African American men also continue to have the highest morbidity and mortality rates for prostate cancer. According to the ACS (2011), African Americans have a 1-in-5 lifetime probability of developing invasive prostate cancer compared to a 1-in-7 probability for Caucasians. The lifetime probability of dying from invasive prostate cancer is 1 in 23 for African American men and 1 in 38 for Caucasian men. African American men also experience disparities relative to prostate cancer survival, with an overall 5-year survival rate of 95% for African American men and 100% for Caucasian men (ACS, 2011). The average annual prostate cancer death rate between 2007 and 2011 was 56.3 per 100,000 for Black men and 23.6 for Caucasian men, which is 2.2 times higher than that of Caucasian men.

The ACS (2015) estimated 29,130 American men would develop prostate cancer during last year. However, if the disease is diagnosed and treated in its early stages, the 5-year survival rate is 99% (Albaugh & Danaher Hacker, 2008; ACS, 2006). Treatment success is further demonstrated by records that showed 72% of men lived 10 years, and 53% survived for 15 years following treatment (ACS, 2007). A challenge to early diagnosis is that African Americans generally develop prostate cancer at younger ages than Caucasians, Hispanics, and Asians American (Stroud, Ross, & Rose, 2006), and when detected years later, the disease is often in its advanced stage and therefore, untreatable (Toles, 2008).

Consistent screening for cancer has been shown to improve early detection and mortality rates in African American men (Williams & Corbie-Smith, 2006). However, only a small percentage of the African American male population participate in cancer screenings; for example, among a group of 4,784 African American men, only 37.1% reported recent use of available cancer screenings (Delancey et al., 2008). The ACS (2011) recommends that health care providers should offer a prostate specific antigen (PSA) blood test and a digital rectal exam (DRE) yearly, beginning at age 50. Men at risk should begin testing at age 45; examples include African American men and men who have a first-degree relative (e.g., a father, brother, or son) who was diagnosed with prostate cancer before age 65. This early development of prostate cancer among African Americans prompted the National Medical Association (NMA), which is comprised primarily of African American physicians, to recommend that screening for African American men begin as early as 35 years of age (Stroud et al., 2006). Researchers agree that regular screening examinations with the PSA and DRE can result in detection of prostate cancer at earlier stages, when treatment is more likely to be successful (Menashe, Anderson, Jatoi, & Rosenberg, 2009)

## 1.2 Significance of the Study

African American men frequently decline PSA and DRE's in their clinical examinations (Jones & Wenzel, 2005), despite them having the highest incidence and mortality rates for prostate cancer. The importance of screenings and early detection became very real to me at an early age. The image of my Uncle lying helplessly in bed is one I will never forget. He was strong, vibrant, politically astute, and a charismatic intellectual; yet, prostate cancer had become his fate. It was new to our family. I committed to learning more about Prostate Cancer and have a desire to uncover various strategies that will end the disparity of this disease among African American men.

African American men often receive insufficient education and information tailored specific to their population, particularly regarding healthcare (Kafele, 2004 & Villarruel, 2006). Studies indicate men of African descent are less knowledgeable concerning various preventative behaviors such as healthcare screenings, have less access to information, and receive subpar healthcare services, which are crucial components of closing the widening gap of health disparities in our nation (American Cancer Society, 2006). Because many that make up this population experience a lack of awareness about chronic disease risks and interest in preventive health screenings, controllable risk factors are often disregarded, rendering Black Americans vulnerable to the untoward complications of diseases such as prostate cancer (Eyre et al, 2004). Since the lack of preventative behavior is the leading cause of death in African American men, meaningful health education strategies through various forms of external cues to action are critical (Wood, 2007).

By gaining an understanding of why African American men experience health disparities at such a high rate, proactive counter measures could be implemented to address

health disparity concerns (CDC, 2007). African American men could benefit from comprehensive, culturally sensitive research that investigates socio-economic factors as well as healthcare realities that are population specific (Wood, 2007). This is true because the healthcare disparity of African American men are a result of multiple factors. Researchers have suggested that an understanding of the African American cultural experience can provide a more meaningful understanding of the present practices within the African American males (Adjei, 2006). Additional research is needed to understand how their own experiences determine their healthcare choices as well as research on the cues to action that are effective in this population, ultimately leading to participation in screenings.

By examining the relationship between *External Cues to Action* and prostate cancer screenings in African American men at ages (40-65 years old), when they are prone to the disease, health care professionals can have a greater understanding of the cues most effective for increasing prostate screenings in this population. Although there are existing studies that explore some of the effective ways to recruit African American males, there are limited studies that explore the external cues and marketing avenues that are effective and specific to this population. Also, a key piece currently missing in the literature is the role of varying personal cultural beliefs and values on individual behavior among black men. This study explores the role of culture in the receptivity and decision-making process to participate in screenings.

### 1.3 Theoretical Framework

#### Health Belief Model

One of the potential sources of disparities in prostate cancer is due to the variability in individual health promotion and disease prevention behaviors (Institute of Medicine, 2010). Thus, individual behavioral theories such as the Health Belief Model play a significant role in predicting, explaining and modifying health behaviors including prostate cancer prevention and screening behaviors. The Health Belief Model (HBM) postulates that an individual's behavior is affected by perceptions of the threat posed by a health problem, the benefits of avoiding the threat, and factors influencing the decision to act (Rosenstock, 1974). The HBM, a highly utilized framework, has been the foundation for acknowledging and establishing African American men health related practices regarding prostate cancer screening. The model's ability to explain and predict a variety of behaviors associated with positive health outcomes has been successfully replicated countless times (Janz & Becker, 1984). The model has also been used to develop many successful health communication interventions by targeting messages at the HBM variables to change health behaviors (Sohl & Moyer, 2007)

The Health Belief Model is a framework for motivating people to take positive health actions that can be summed up in six areas: perceived severity, perceived susceptibility, barriers, benefits, self-efficacy, and cues to action. This study focuses on the latter construct, *Cues to Action*. A Cue to Action is when an individual is spurred to adopt the preventative behavior by an activating factor. Cues to action were the last construct to be added to the HBM and is known as the trigger for behavior change (Janz & Becker, 1984). *Cues to action* can be classified as something, someone, or some event that alerts individuals of a particular disease (Hayden, 2009) and can be internal or external (Rosenstock, 1974). *Cues to action* included in the HBM, but not

limited to, are illness of a family member or friend, media reports, mass media campaigns, advice from others, health warnings on products, and advice from a medical care provider (Hayden, 2009). This study primarily focuses on external cues to action, examining their influence in areas of media/advertising, friends/family, medical professionals, and church/community.

Gaining a deeper understanding of the key cues that encourage African Americans to participate in a given health behavior can be vital to devising disease prevention and diagnosis programs for them. A recent study by Drake (2010) revealed some of the *cues to action* important to increasing screenings among African American males. Drake utilized focus groups with 39 African American men and found that churches play a prominent role in many African American communities and represent a trusted, credible institution that addresses both spiritual and physical health. The findings presented in this study suggest that a community-based intervention delivered by a male, African-American health educator in a church setting is a feasible strategy for promoting prostate screenings among African-American men.

### **PEN-3 Cultural Model**

Another model that is beneficial to this study is the *PEN-3 Cultural Model*. Culture plays a vital role in determining the level of health of the individual, family and community. Culture can be understood in terms of positive qualities that should be promoted, unique qualities that should be examined, and negative qualities that should be changed (Hall, 1999). A key piece currently missing in the literature on prostate cancer is the role of personal cultural beliefs and values on individual behavior among black men. It has been noted that fundamental elements related to ethnicity and culture shape health perceptions, attitudes and behaviors. The PEN-3 cultural model has been at the forefront of understanding the influence of culture on health. It

was developed by Airhihenbuwa (1989) in response to the apparent omission of culture in explaining health outcomes in existing health behavior theories and models. *The PEN-3 Model* was developed to centralize culture in health promotion and disease prevention interventions, assisting public health interventionist and communities with the planning, implementation and evaluation of relevant culturally-based health interventions (Airhihenbuwa, 1999). The *PEN-3 cultural model* has been used to address problems associated with Cancer, HIV, hypertension, diabetes, malaria, nutrition, smoking, and other issues requiring an understanding not only of behavior but also of related cultural contexts.

The *PEN-3 cultural model* consists of three primary domains: (1) Cultural Identity, (2) Relationships and Expectations, and (3) Cultural Empowerment. Each domain includes three factors that form the acronym PEN; Person, Extended Family, Neighborhood (Cultural Identity domain); Perceptions, Enablers, and Nurturers (relationship and expectation domain); Positive, Existential and Negative (Cultural Empowerment domain).

For the scope of this research, I examined the influence of the three domains of the PEN-3 Model and its relations to the decision-making process. This is very vital to researching African American males in relation to prostate cancer, as it gives further insight on the way to effectively reach this population. It also gives the most effective level and best ways to position and target strategies for cues to action. Abernathy et. al (2005) used the *PEN-3 Model* to examine the influence of cultural values of African-American Men and prostate screening. The researchers found that the values of the community were viewed as essential for recruitment. Also distrust of research and hidden costs associated with participation may serve as negative enablers, while partnerships with churches and specifically, church leadership were viewed as key nurturers. More recently, a study conducted by Odedina (2011) confirmed associations

among prostate cancer screening behaviors, health beliefs, and cultural beliefs. Odedina's study underscored the importance of health beliefs and cultural beliefs in the promotion of prostate cancer risk reduction behavior in African American Men.

A key piece currently missing in the literature is the role of varying personal cultural beliefs and values on individual behavior among African American men. Researchers have suggested that an understanding of the African American cultural experience can provide a more meaningful understanding of the unique historic perspective that relate to the present practices within the African American males (Adjei, 2006). Additional research is needed to understand how their own experiences determine their healthcare choices as well as research on the cues to action that are effective in this population, ultimately leading to participation in screenings. By examining the relationship between External Cues to Action and prostate cancer screenings in African American men at ages (40-65 years old), when they are prone to the disease, health care professionals can have a greater understanding of the cues most effective for increasing prostate screenings in this population. Although there are existing studies that explore some of the effective ways to recruit African American males, there are limited studies that explore the external cues, culture, and social marketing avenues that are effective and specific to this population. This study further explores the role of culture in the receptivity and decision-making process to participate in screenings.

#### **1.4 Purpose of the Study**

This study examines the relationship between *External Cues to Action* and prostate cancer screenings among African American males. Specifically, the study evaluates the relationship between the influence of external cues and the decision to undergo prostate screenings in African American males. There are four external cues that will be examined for

this study: media/advertising, friends/family, medical professionals, and church/community.

This study also considers the role of culture among African American males and its influence on their decision making process for participating in screenings. Understanding the influence of culture on one's health will be beneficial in identifying the positive qualities that should be promoted and the unique qualities that should be considered when examining external cues that may be most influential to this population.

#### Research Questions

1. Is there a relationship between media/advertising and African American males' decision to participate in prostate cancer screenings?
2. Is there a relationship between advice from friends/family and African American males' decision to participate in prostate cancer screenings?
3. Is there a relationship between the medical professional's advice and African American males' decision to participate in prostate cancer screenings?
4. Is there a relationship between church/community involvement and African American males' decision to participate in prostate cancer screenings?
5. What is the relationship between Cultural Empowerment (positive, existential, negative) and the decision to participate in prostate cancer screenings?
6. What is the relationship between Relationships and Expectations (perception, enablers, nurturers) and the decision to participate in prostate cancer screenings?

#### Hypothesis

1. There is a positive relationship between media/advertising and participation prostate cancer screenings in African American males.

2. There is a positive relationship between friend/family advice and participation prostate cancer screenings in African American males.
3. There is a positive relationship between medical professional advice and participation prostate cancer screening in African American males.
4. There is a positive relationship between church/community involvement and participation prostate cancer screening in African American males.
5. There is a positive relationship between *Cultural Empowerment* (positive, existential, negative) and the decision to participate in prostate cancer screenings in African American males?
6. There is a positive relationship between *Relationships and Expectations* (perception, enablers, nurturers) and the decision to participate in prostate cancer screenings.

Definitions:

Cues to Action: A trigger is that is necessary for prompting engagement in health-promoting behaviors; strategies to activate "readiness" (Rosenstock, 1988).

Digital Rectal Examination (DRE): The digital rectal examination is a screening method that is conducted by a doctor in order to detect cancer of the prostate. During the examination, a lubricated and gloved finger is inserted into the rectal cavity in order to search for and locate any abnormalities in the rectum that may give rise to cancer cells (Murthy, Byron, & Pasquale, 2004).

External Cue to Action: include events or information from close others, the media, or health care providers, promoting engagement in health-related behaviors (Rosenstock, 1998).

Prostate: A walnut-sized gland exclusive to males located in front of the rectum and just below the bladder. This gland is part of the reproductive system that makes the fluid that protects, nourishes, and carries sperm cells in the semen (CDC, 2013).

Prostate specific antigen (PSA): A procedure in which a blood test is performed to measure levels of PSAs. The higher the PSA level, the greater the risk for prostate cancer (Agho & Lewis, 2001).

## CHAPTER 2

### LITERATURE REVIEW

#### **2.1 Prostate Cancer African American Men**

Prostate Cancer is the most commonly diagnosed cancer in men and is the second leading cause of cancer deaths among men in the United States (Jones, Steeves, & Williams, 2009). The American Cancer Society (ACS, 2014) has estimated that 233,000 men in the United States would be newly diagnosed with prostate cancer in 2014 and approximately 29,000 will die from the condition. Prostate cancer affects men regardless of ethnic or racial background, however, compared to other racially classified groups, African American men are disproportionately affected by the disease both in incidences and mortalities (Howlader et al., 2014; Odedina et al., 2009). At 248.5 cases per 100,000, they have the highest incidence of prostate cancer among men in America. In comparison, Caucasian men have 156.7 cases per 100,000, and Hispanic men have 138.0 cases per 100,000 (Delancey, Thun, Jemal, & Ward, 2008). An estimated 35,110 cases of prostate cancer were expected to occur among African American men in 2014, accounting for 40% of all cancer diagnoses in African American men (Ward, Halpern, & Schrag, 2008).

African American men also continue to have the highest morbidity and mortality rates for prostate cancer. According to the ACS (2011), African Americans have a 1-in-5-lifetime probability of developing invasive prostate cancer compared to a 1-in-7 probability for Caucasians. The lifetime probability of dying from invasive prostate cancer is 1 in 23 for African American men and 1 in 38 for Caucasian men. African American men also experience disparities relative to prostate cancer survival, with an overall 5-year survival rate of 95% for African American men and 100% for Caucasian men (ACS, 2011). The average annual prostate

cancer death rate between 2007 and 2011 was 56.3 per 100,000 for Black men and 23.6 for Caucasian men, which is 2.4 times higher than that of Caucasian men.

The ACS (2015) estimated 29,130 American men would develop prostate cancer last year. However, if the disease is diagnosed and treated in its early stages, the 5-year survival rate is 99% (Albaugh & Danaher Hacker, 2008; ACS, 2006). Treatment success is further demonstrated by records that showed 72% of men lived 10 years, and 53% survived for 15 years following treatment (ACS, 2007). Some researchers have argued that the higher prostate cancer burden in African Americans is not only because of their predisposition to prostate cancer disease based on age, family history, and race, but also because of extremely low prostate cancer screening rates among the group (ACS, 2013, 2014; Consedine, Morgenstern, Kudadjie-Gyamfi, Magai, & Neugut, 2006; Lee, Consedine, & Spencer, 2011; Hosain, Sanderson, Du, Chan, & Strom, 2011). A challenge to early diagnosis is that African Americans generally develop prostate cancer at younger ages than Caucasians, Hispanics, and Asians American (Stroud, Ross, & Rose, 2006), and when detected years later, the disease is often in its advanced stage and therefore, untreatable (Toles, 2008).

## **2.2 Prostate Screening Recommendations**

In 1986, the PSA test was approved by the FDA as a diagnostic tool (NCI, 2013a). Its use was to differentially diagnose patients by placing a numerical value on the amount of protein in the prostate after the disease has been detected. However, the test was used widely as a screening tool for the early detection of prostate cancer and became the most common screening method by 1994, when the FDA formally approved the PSA test for screening. The PSA test is used to screen for high levels of the protein in the blood associated with abnormalities of the prostate such as BPH as well as prostate cancer (NCI, 2008). Prior to 2012, PSA screening was recommended for men age 50 years and older. However, men at increased risk for prostate

cancer, such as black males and persons with a family history of prostate cancer, were recommended to receive the PSA tests at 45 years of age. If a PSA test results show abnormalities, a biopsy is performed. Other screening procedures for prostate cancer include Digital Rectal Exams (DRE), CT scans, and bone scans. The DRE consists of the physician inserting a gloved finger into the rectum of the male to palpate for tumors in the prostate gland. A DRE is recommended if there are elevated levels of PSA or in combination with the PSA test, if the person is considered to be at-risk.

In 2012, under new guidelines issued by the U.S Preventive Services Task Force (USPSTF), the mass screening of prostate cancer for all eligible men was no longer recommended. Instead, individual screening was suggested based on informed decisions made by the doctor and the patient, after discussion and examination of the patient's medical history (US Preventive Services Task Force [USPSTF], 2012). The controversy surrounding mass PSA testing is that it leads to over-diagnosis and overtreatment of prostate cancer (USPSTF, 2011). The USPSTF found that screening detects a high prevalence of low grade cancers that are easy to detect but not dangerous, causing over-diagnosis of men who might otherwise have lived to old age with the disease that is not harmful. Unfortunately, overtreatment often follows such diagnoses, even for men who will not benefit from treatment. The USPSTF also reported false-positive results from PSA testing and unnecessary harm and suffering to thousands of patients diagnosed with cancer. The USPSTF based its recommendations on the review of several studies, including two major clinical trials in the US and Europe (Andriole et al., 2009; Schroder et al., 2009). Unfortunately, these studies did not include adequate numbers of black males to analyze the benefit of PSA testing in this particular population. Hence, black males remain an important subject of study particularly regarding incidences of prostate cancer.

The ACS (2011) recommends that health care providers should offer a prostate specific antigen (PSA) blood test and a digital rectal exam (DRE) yearly, beginning at age 50. Men at risk should begin testing at age 45; examples include African American men and men who have a first-degree relative (e.g., a father, brother, or son) who was diagnosed with prostate cancer before age 65. This early development of prostate cancer among African Americans prompted the National Medical Association (NMA), which is comprised primarily of African American physicians, to recommend that screening for African American men begin as early as 35 years of age (Stroud et al., 2006). Researchers agree that regular screening examinations with the PSA and DRE can result in detection of prostate cancer at earlier stages, when treatment is more likely to be successful (Menashe, Anderson, Jatoi, & Rosenberg, 2009). However, only a small percentage of the African American male population participate in cancer screenings; for example, among a group of 4,784 African American men, only 37.1% reported recent use of available cancer screenings (Delancey et al., 2008). Culture plays a pivotal role in-patient and physician information and interaction.

### **2.3 Importance of Culture**

According to Hughes Halbert et al. (2007), culture as a “socially transmitted phenomenon carries with it the idea that people who interact on a regular basis know the same unwritten rules and criteria for social life that confer status as a member of the group” (p. 277). It was further defined by Newman, Giger and Davidhizar (1999) as “a patterned behavioral response that develops over time as a result of imprinting the mind through social and religious structures and intellectual and artistic manifestations” (p.3). Airhihenbuwa (2007) described it as a “collective sense of consciousness active enough to influence and condition perception, judgment, communication, behavior, and expectations and the location of power in a given society” (p. 4).

Culture has framed identity and knowledge and has been expressed through communications as well as through the community through families and schools. According to Diop, (1991), “cultural identity is based primarily on shared historical, linguistic, and psychological lineage” (Airhihenbuwa, 1995, p. 5). Furthermore, Airhihenbuwa (1995), noted that “these sets of collective factors in a culture influence the group’s design for living, the shared set of socially transmitted perceptions about the nature of the physical, social, and spiritual world” (p. 5).

In their role as healthcare provider and educator, Martin (1960) confirmed a need for medical professionals to understand behavior dynamics of patients from the perspectives of their present and past world. Moreover, Airhihenbuwa (1995) contended that “the ability to look to our past is significant, not only for historical continuity but for understanding about the trials, failures, and possibilities that shape our individual and collective experiences” (p. 5).

A key piece currently missing in the literature on prostate cancer is the role of varying personal cultural beliefs and values on individual behavior among black men. It has been noted that fundamental elements related to ethnicity and culture shape health perceptions, attitudes and behaviors (Leininger, 1995). It is thus important to acknowledge cultural diversity and study the specific cultural beliefs of each ethnic group as related to health and health behaviors. The importance of culture in the Black community has been recognized by researchers, including the US Department of Health and Human Services (Harrison and Harrison 1971 & UDHHS, 1985). Thereby, knowing the cultural worldview of black men will further improve our understanding of prostate prevention and control behaviors and ultimately enhance the design of successful interventions (Hughes et.al, 2003). According to Leininger (1995) culture is defined as shared beliefs, values, customs, behaviors and artifacts used by individuals within a society to cope with

other people and the world in general, and passed down from one generation to another through learning.

## **2.4 Distrust of Healthcare**

History has shown that African Americans have been subjected to negative experiences, which may have contributed to current feelings of distrust and skepticism among many African Americans regarding medical professionals and the health care system. These experiences are seen as key essential components with regard to the health care disparities, seen within the African American culture. This has resulted in the continued mistrust of the medical community, particularly in African American men who experience disproportionately greater chronic diseases and declines in health, compared to other racial groups in the United States (National Center for Health Statistics, 2007).

In regards to PSA/DRE screening participation of African American men, Levi, Kohler, Grimley, Green, and Anderson-Lewis (2007) pointed out that negative beliefs toward medical professionals and the health care system, included fear and distrust. A focus group study conducted by Forrester-Anderson (2005), explored knowledge, perceptions, attitudes, and behavior of African American men concerning prostate cancer and screening for the disease using the PSA and DRE. Twelve focus groups (n = 104) were conducted among African American men 40 years of age and older. The major general theme showed mistrust of the medical professionals and the government as predisposing factors that limit the participation of African American men in routine screening for prostate cancer. In another study by Armstrong, Ravenell, McMurphy, and Putt (2007) they investigated racial differences in physician distrust by analyzing data from a Community Tracking Study from 32,047 households in 60

communities in the United States. The univariate analyses used found that African Americans reported higher levels of physician distrust than European Americans.

The cultural feelings of distrust and skepticism of the health care system were historically instigated by the participation of government-sponsored clinical trials, which in effect were dishonest in their purpose. The oral folklore tradition is deeply rooted in the African American heritage, and for generations, a wide variety of negative stories have circulated within the community about the medical profession and public health programs (Clark, 2009). Harter, Stephens, and Japp (2000) stated that in our nation's history, one of the most notorious cases of minority exploitations is the Tuskegee Syphilis Experiment. The infamous Tuskegee Syphilis study is perhaps the most widely known study exclusive to African American men, and has since been used as a subject of reference for this population. From 1932 to 1972, the United States Public Health Service researchers withheld treatment from about 400 African American men in Macon County, Alabama in order to study how the disease progressed (Weinrich et al., 2002). African American participants infected with syphilis were used as a non-interventional control. The study continued without treatment, even after penicillin became established as the standard cure. The reaction from the African American community was one of outrage and later acknowledged among White historians (Lederer, 1929). This study has become, to many, a classic and historical case of blatant governmental racism against African Americans, and is one major reason why many African Americans distrust the healthcare system (Kennedy, Mathis, & Woods, 2007).

In Forrester-Anderson's 2005 study, participants expressed mistrust for the government and medical professionals and a belief that it (prostate cancer) has something to do with the government, because of its prevalence in African American men, and that the government may

add things to food that is distributed to African American communities, which may produce cancer. In addition, participants expressed the views that the culture is set up against "African American men's health" and "African American people are exploited." In another focus group study by Blocker et al. (2006) it was found that African American patients who hold strong negative stereotypes of physicians, and judge physicians negatively, may be reluctant to visit a physician for relatively minor medical complaints, choosing instead to delay health care until their problems become more severe or impede functioning. Hughes et al. (2007) found that a major concern of many males in their focus group discussions was trusting non-African American physicians in the treatment and diagnosis of their prostate cancer. There were a series of 10 focus groups (6 men only and 4 women only) conducted with African American patients and some women partners; 54 men and 37 women; age 55 to 79 years for men and 48 to 77 for women. They shared that many in the study recalled experiences of going to the doctor and not having their conditions explained to them in detail; other participants recalled the cold atmosphere when they received their information from Caucasian American doctors via telephone or office visits. The study revealed that African American physicians were trusted because the participants felt that they could relate to what the patient was going through.

## **2.5 PEN-3 Cultural Model and Studies**

The *PEN-3 Cultural Model* has been at the forefront of understanding the influence of culture on health and can be used to further understand the African American historical experience. The model was developed by Airhihenbuwa (1989) in response to the apparent omission of culture in explaining health outcomes in existing health behavior theories and models. The *PEN-3 Model* was developed to centralize culture in health promotion and disease

prevention interventions, assisting public health interventionist and communities with the planning, implementation and evaluation of relevant culturally-based health interventions (Airhihenbuwa, 1999). The *PEN-3 cultural model* has been used to address problems associated with Cancer, HIV, hypertension, diabetes, malaria, nutrition, smoking, and other issues requiring an understanding not only of behavior but also of related cultural contexts. The *PEN-3 Cultural Model* consists of three primary domains: (1) *Cultural Identity*, (2) *Relationships and Expectations*, and (3) *Cultural Empowerment*. Each domain includes three factors that form the acronym PEN; Person, Extended Family, Neighborhood (Cultural Identity domain); Perceptions, Enablers, and Nurturers (relationship and expectation domain); Positive, Existential and Negative (Cultural Empowerment domain).

The first dimension, *Cultural Identity*, is defined as person, extended family, and neighborhood. Person is viewed as “a social entity within a communal context, whereas an individual is one who is detached from the community” (Airhihenbuwa, 2007, p. 187). Gyekye (1997) also reflected that “a person comes to know who she is in the context of relationships with others, not as an isolated lonely star in a galaxy” (p.43). Extended family reportedly included the entire family unit: the nuclear family and external relatives. Extended family “entails the degree to which the family-network privileges different persons within the family to influence key decisions in the family” (Airhihenbuwa, 2007, p.188). The model defined neighborhood as “the capacity of a geographically and/or ideologically defined group (community, village, congregation, etc.) to influence decisions for its collectives” (Airhihenbuwa, 2007, p. 189).

The second dimension was *Relationships and Expectations*. The focus was to determine the factors (perceptions, enablers, and nurturers) that influenced the actions of the target

audience. Perception was described as “knowledge and belief, values, in decision making that are focused on either persons or groups, highlighting the complementarity of emotion and rationality in behavioral outcomes” (Airhihenbuwa (2007, p. 176). According to Airhihenbuwa (2007), “knowledge is the key element that shapes our perceptions of reality” (Airhihenbuwa, 2007, p. 176). Enablers “refer to resources and institutional support and wealth (assets over liabilities) as measures of resources and power, and costs and availability of services such as drugs for treating HIV” (Airhihenbuwa, 2007, p. 177). Nurturers provided support and were described “family eating traditions, community and events, spirituality and soul, values of friends (for example, drinking), and marriage rules and expectations” (Airhihenbuwa (2007, p. 178).

The third dimension, *Cultural Empowerment*, is vital in the development of culturally sensitive interventions and instruments to assess the target health behavior of ethnic minority cultures. The three components were positive, existential, and negative behaviors. Positive behaviors included “values and relationships that promoted the health behavior of interest; healing modalities given that each culture has its strategy for dealing with health problems including sexually transmitted infections” (Airhihenbuwa, 2007, p. 180). According to Airhihenbuwa (2007), existential referred to the distinct features of a culture. Airhihenbuwa (2007) wrote that “these [existential] qualities are mostly ill understood by outsiders and often are blamed for program failures” (p. 180). Language is a characteristic of culture and a form of cultural expression that has demonstrated how differences could make an important impact. Airhihenbuwa (1995), encouraged health practitioners to design health programs that would correlate to African American health practices (Airhihenbuwa, 1995). Negative referred to beliefs that conventional programs and interventions were wrong and required change to more modern programs (Airhihenbuwa, 2007).

There are several studies that have used the *PEN-3 Model* to better understand health behavior. Abernathy et. Al (2005) used the *PEN-3 Model* to examine the influence of cultural values of African-American Men and Prostate Screening. The researchers found that the values of the community were viewed as essential for recruitment. Also distrust of research, hidden costs associated with participation may serve as negative enablers, while partnerships with churches and specifically, church leadership were viewed as key nurturers.

Ka'opua (2008) examined mammography use and screenings in Hawaiian women. Using the *PEN-3 Model*, the study found that participants viewed mammograms as beneficial, not harmful, and important to health. Family and older women were viewed the primary focus of family-oriented health interventions, with men and younger women as the secondary foci. Messages of hope (such as how screening benefited women and families) and of help (examples of family support) were suggested, while encouragement from spiritual leaders or loved ones of survivors may be especially valuable and facilitate screening intent. Finally, the inclusion of spiritual practices and time for talk story (culturally familiar style of discussion) enhanced cultural responsiveness to intervention.

Erwin et. Al (2005) conducted a study on Latinos for screening behavior for breast and cervical cancer. The study showed a mechanism for creating a culturally competent program through progressively analyzing the findings to define the key perceptions, enablers, and nurturers, then applying this information to construct program components to address appropriate health behavior and cultural components that address the specific needs of a diverse Latino population.

## 2.6 Cues to Action and Studies

The Health Belief Model is a framework for motivating people to take positive health actions that can be summed up in six areas: perceived severity, perceived susceptibility, barriers, benefits, self-efficacy, and cues to action. *Cues to action* were the last construct to be added to the HBM and is known as the trigger for behavior change (Janz & Becker, 1984). Noar and Zimmerman (2005) suggested that a cue has to occur to motivate the individual to perceive the health problem as a threat. Two types of action cues include (a) internal (e.g. perception, cognition, and physical signs), and (b) external (e.g. social influence on communication) (Chou & Wister, 2005). Cues of action influenced intrapersonal factors and interpersonal factors that affected the individual's behavioral changes (Chou & Wister, 2005). The individual reduced the risk of prostate cancer if internal cues such as perceptions, beliefs, symptoms, and external cues, such as mass media, health campaigns, and patients-provider communication were involved, affecting health behavior (Chou & Wister, 2005; Noar & Zimmerman, 2005). The goal of cues to action is to expose individuals to information that allows them to determine their susceptibility. The more knowledge the cues contain the higher rate of perceived susceptibility (O'Donnell, Goldstein, DiMatteo, Fox, John, & Obrzut, 2010). Individuals exposed to a greater number of cues to action are inherently given more opportunities to assess their susceptibility and think about behavior changes needed to reduce their susceptibility. According to Rosenstock (1974) cues affect individuals depending on their level of perceived susceptibility and the intensity of the cue. Exposure to a cue to action can be the first step to encouraging the participation in a given behavior change.

Witte, Stokols, Ituarte, & Schneider (1993) cited the over-all empirical neglect of the construct of cues to action. The same has been true for use of the construct in prostate cancer

screening. Cues to action in prostate cancer screening were initially studied by McKee (1994). McKee's study (N=127 men, 2% African American) provided information about how prostate cancer screening participants retrospectively ranked various cues as having influenced their decision to participate in screening. One of the major limitations of this study was the extremely low participation of African American males in comparison to their ethnic counterparts.

Since this initial study, emerging research suggest that when cues of action were in place, African American men increased the rate of participation and frequency in prostate cancer screening (Thompson et al., 2008). African American men were motivated by the stimulus (e.g. educational messages on benefits of early screening, and culturally sensitive health information that reduced fear), which increased their awareness that led to their involvement in prostate cancer screening (Thompson et al., 2008).

Jandorf, Chang, Smith, Florio, and Hall (2007) found that cues of action were a key component of the Health Belief Model influencing health behavior changes of African American men. Based on a quantitative study of 150 men, 47 were African American. Jandorf et al. (2007) found that African American community leaders were more successful in influencing African American men in the cultural setting to be screened for prostate cancer. Although controversy among urology and cancer society on the benefit and risk of prostate cancer screening existed, dialogue on the disease and screening were encouraged between patient and provider to promote prostate cancer screening (American Cancer Society, 2008; Oliver, 2007).

Based upon the result from their study, Cowart, Brown, and Biro (2004) reported that public awareness with culturally sensitive educational information was needed to motivate African American men to seek prostate cancer screening. Cowart et al. (2004) conducted a case study on 600 men over a 3-year period from central New York State to participate in the

Barbershop Program. The purpose of the Barbershop Program was to promote prostate cancer awareness, empowering men to discuss screening comfortably with their providers, and increased open communication about prostate cancer screening. Through the Barbershop Program, African American men's awareness of prostate cancer screening increased, and many improved their participation and annual follow-up for PSA screening (Cewart et al., 2004).

Public awareness programs involved healthcare workers, social workers, community leaders, healthcare policymakers, educators, and prostate cancer survivors to promote prostate cancer screening (Cewart et al., 2004). Positive cultural messages on prostate screening, for example, culturally sensitive pamphlets that addressed men of color, were distributed to promote awareness through diverse channels (Cewart et al., 2004). Churches, faith-based organizations, and the media were found to be effective networks to communicate culturally sensitive information and promoted prostate cancer among the African American community.

Nivens, Herman, Weinrich and Weinrich (2001) proposed the Cues to Participation theory, stating that prostate cancer screening participation is triggered by exposure to information about prostate cancer and that access to information is affected by socio-demographic variables such as age, ethnicity, education, or income. To test the propositions 1,867 men (a high proportion were African-Americans and/or socio-economically disadvantaged) were recruited from a variety of community sites and asked to complete a questionnaire containing items regarding exposure to information about prostate cancer as well as socio-demographic variables. Cues to action items were adapted from the National Health Interview Survey Cancer Control Supplement (Brown, Potosky, Thompson, & Kessler, 1990). After completion of the questionnaire, participants were given a voucher for a free prostate cancer screening. Uptake of the latter was significantly associated with overall exposure to

information about prostate cancer. Univariate regression analyses found information by health care provider and media to be significant predictors of screening uptake. When socio-demographic variables were controlled, only information from a health care provider was significantly predictive of screening participation. The authors also found the amount and the source of information exposed to, varied as a function of socio-demographic variables and suggested to consider these differences when planning interventions aimed at increasing participation rates.

## **2.7 Family/Significant Others**

A significant cues to action that can be identified in the African American culture is one's family or significant others. The impact of a prostate cancer diagnosis is extensive affecting the patient, his wife or partner, and his significant others (Mason, 2005). Plowden (2006) concluded from a qualitative study that significant others, who included blood relatives, peers, and others with whom the patient could identify, were strong influences on whether or not African American men participated in PSA/DRE screenings. Plowden also acknowledged that significant others were motivating factors in educating African American men about prostate cancer, and most were motivated to participate in screening after knowing someone diagnosed with cancer. Arrington's (2005) study found that men, in general, portrayed their wives as selfless sources of support and as health care monitors and providers. Open communication among family members and friends who are familiar with the patient's daily life activities may assist the patient in deciding to have PSA/DRE screening (Jones et al., 2009). In Jones et al.'s (2008) study, men recognized the significance of family and friend support during chronic illness. Prostate cancer affects not only the patient, but also involves other people in his environment, especially family members. A prostate cancer diagnosis can have an immeasurable effect on the lives of survivors

and their family relationships, especially considering that the husbands or significant others generally serve as their primary caregivers and sources of support (Arrington, 2005).

In a focus group study by Ford et al. (2006) 21 participants between 55-87 years of age were evaluated for their intentions to obtain a prostate cancer screening. A theme from the study was the influence of social support, which indicated intergenerational family members and specifically daughters as a motivator to obtain a prostate cancer screening. Jones et al. (2010) reported on informal support systems possibly being an essential component among African American men deciding to receive prostate cancer screening. Additional literature on the topic of family support involved a focus group comprised of nine men and women between the ages of 43-72 years. Participants discussed psychosocial factors for African American men engaging in prostate cancer screening. Findings from the study indicated female encouragement as a precipitating factor for obtaining prostate cancer screening (Jernigan, Trauth, Neal-Ferguson, & Cartier, 2001).

In 2010 Jones et al. reported their results regarding how rural African American men decided whether or not they received a prostate cancer screening. A sample of seventeen AA men from a rural setting between the ages of 40-71 years participated in the study. Findings indicated that informal support along with advice from family was significantly associated with African American men obtaining prostate cancer screening. Participants valued input from family members and family members were viewed as being a crucial part of the decision making process. Some of the participants reported that it was their daughters that constantly encouraged them to obtain prostate cancer screening. The encouragement ultimately led to these men receiving prostate cancer screening. In the African American community, family peers, and the

(health) profession have greatly influenced African American men to seek early screening (Toles, 2008).

## **2.8 Church**

To address the major health concern of prostate cancer among African American men, Healthy People 2020 recommended an increased focus on community-based health programs (USDHHS, 2012). The church is a key community-based organization and cues to action in motivating and reaching African American men (Campbell et al., 2007; Weinrich et al., 1998). Compared to Whites, African American's had higher levels of attending religious services and activities (Johnson, Elbert-Avila, & Tulskey, 2005). The church was recognized as an influential partner for health promotion and as a community resource to reduce health disparities (Holt et al., 2009; Peterson, Atwood, & Yates, 2002). Studies focused on faith-placed programs have been shown to increase African American men's knowledge of prostate cancer screenings and to yield increased utilization rates of actual prostate cancer screening (Holt et al., 2009). McFall and Davila (2008) examined psychosocial factors which could impact prostate cancer and also found that church attendance was related to receiving prostate cancer screening.

African American churches, in general have an extensive history of providing social support to its members and the community (Eng et al., 1985; Krause, 2002). Social support has been an important characteristic among African American churches (Chatters, Taylor, Lincoln, & Schroepfer, 2002). Past research indicated African American men view informal support systems as a vital component for the decision to receive prostate cancer screening (Jones et al., 2010). The African American church has been considered second, behind family, as a vital source for providing support (Taylor & Chatters, 1988). Blocker et al. (2006) showed that church members, namely pastors, were essential for encouraging members to engage in cancer

screening, such as that used to detect prostate cancer. Emotional and informational support among church members has been extensively documented in the literature (Taylor & Chatters, 1988). A study conducted by Taylor and Chatters (1986) examined types of support for older African American's from family members, church members and friends. The sample of 581 African American individuals who were over the age of 55 yielded results of over 80% for support from church members. The most prominent type of support received from church members was that of encouragement and advice. Likewise, Webb et al. (2006) found that the church encouraged members to receive prostate cancer screening. African American men, who avoided health preventive services provided in the healthcare setting, have been shown to rely on community leaders, healthcare providers, and social services organizations for support (Plowden, 2006; Woods et al., 2006). The lived experiences and views of African American men provided insight into how resources needed to be allocated to increase the awareness of prostate cancer screening.

## **2.9 Community Leaders**

The inclusion of community and church leaders as possible peer educators and role models represents a newer concept in efforts to affect the disparities in prostate cancer screening between African American men and men in other ethnic groups. Geiger (2005) emphasized community participation should represent a central ingredient in the success of community health-center programs. The method might aid leaders of health organizations and the community in forming a more direct link to the community and might provide more open discussion for prostate cancer screening in African American men (Geiger, 2005). The inclusion of community and church leaders lends a level of hope for minority populations who were otherwise overlooked. "Hope is a universal human phenomenon that exists across nations and

cultures,” (Coughlin, 2006, p. 170). Coughlin described hope as an important peculiarity in evaluating barriers and a positive cue to action for cancer screening in African Americans.

According to the study done by Plowden (2006), African American men were motivated to be screened through prostate cancer awareness programs, media information, and seminars from prominent community leaders who were prostate cancer survivors. African American men, who observed people in prominent positions (e.g., Adam Clayton Powell, who died of prostate cancer, and Colin Powell, who was treated successfully with the disease) were motivated to change their health behavior (Plowden, 2006). Plowden reported that when prostate cancer survivors communicated their experiences, individuals observing the positive outcomes from the modeling behaviors sought to adopt these successful behavioral health changes. Fyffe et al. (2008) and Plowden (2006) postulated that media messages were strong positive stimuli to motivate African American men to increase their knowledge, promoted prostate cancer screening, and reduced the barriers that prevented screening. Jandorf et al. (2007) conducted a study investigating the connection between avenues of communications that increased African American men’s self-efficacy to obtain prostate cancer screening. Based on the criteria for verbal persuasion in their study, media advertisement and community health programs were used to encourage African American 45 men to change their health behaviors (Jandorf, 2007). In a study conducted by Partin, Nelson, Flood, Friedmann-Sanchez, and Wilt (2006), self-efficacy and knowledge were found to be associated with the decision making of cancer screening in African American men. African American men, who were more knowledgeable about prostate cancer screening, increased their participation in screening following shared decision making with their providers (Partin et al., 2006).

## 2.10 Media

Media, such as television, radio, newspapers, Internet and magazines, is prominent throughout our society. This prominence makes media an important cue to action given the high level of exposure. Media can include specific campaigns aimed to encourage behavior changes in individuals as well as media reports. A review of mass media campaigns to change health behaviors found individuals do make positive behavior changes from exposure to mass media messages (Wakefield, Loken, & Hornik, 2010).

African Americans seek out health information from a doctor, but also use interpersonal, traditional, and technology-related sources to support their search (Montague & Perchonok, 2012; Rooks, Wiltshire, Elder, BeLue, & Gary, 2012). For example, a study by Owens and colleagues found that nearly 75% of the African American participants reported their primary doctor as one of their regular sources of general health and cancer information followed by television (43%) and newspaper (31%) (Owens, Thomas, Friedman, & Hebert, 2011a). In addition, respondents reported being willing to receive health/cancer information through internet, email, and text messaging (42%, 40%, and 25% respectively) (Owens et al., 2011a). Additionally, 78% of all participants reported owning mobile phones that were capable of receiving text messages and over half of those individuals reported being willing to receive health-related text messages as part of a Prostate Cancer education program (Owens et al., 2011a). Rooks et al. (2012) found that in addition to their physician, African Americans most often consulted books (33%) family (32%), Internet (25%), or TV/ radio (24%) for health information (Rooks et al., 2012). Pew reports that 74% of African American's seek health information online about a variety of topics, but most often search for disease-specific information (Pew Internet & American Life Project, 2013c). African American's are also

significantly more likely than Whites to seek information on the internet about weight control or additional information about an advertised drug (Pew Internet & American Life Project, 2013c).

There have been few recent studies that have assessed African American's cancer-specific information sources, particularly for Prostate Cancer (Friedman et al., 2012c; Owens et al., 2011a; Ross et al., 2011). However, Ross et al. (2011) reported that men rely on their primary care provider for Prostate Cancer information (only half had ever received any information), but also used other sources (Ross et al., 2011). While 86% of study participants reported receiving information from their physicians, 62% received prostate cancer information from the mass media, 61% from printed sources, 36% from peers, and 18% from the Internet (Ross et al., 2011). In addition, 80% of the participants who reported seeking any prostate cancer information used multiple information sources (e.g., doctor and internet) (Ross et al., 2011).

## **2.11 Gaps in Literature**

A review of literature showed a lack of knowledge regarding the direct link between prostate cancer and cues to action. The available literature did not contain information on what cues exist in the community or if they motivate African American men to participate in Prostate Screenings. The gap in the literature regarding cues to action is described as missing and a challenge to future research of the Health Belief Model (Glanz, Rimer, & Viswanath, 2008). Rosenstock (1974) discussed the importance of cues to action but still minimal research has been performed to substantiate the claim.

By gaining an understanding of why African American men experience health disparities at such a high rate, proactive counter measures could be implemented to address health disparity concerns (CDC, 2007). Also, a key piece currently missing in the literature is the role of varying personal cultural beliefs and values on individual behavior among African American men.

African American men could benefit from comprehensive, culturally sensitive research that investigates the socio-economic factors as well as healthcare realities that are population specific (Wood, 2007). This is true because the healthcare disparity seen in African American men are a result of multiple factors. Researchers have suggested that an understanding of the African American cultural experience can provide a more meaningful understanding of the unique historic perspective that relate to the present practices within the African American males (Adjei, 2006). Additional research is needed to understand how their own experiences determine their healthcare choices as well as research on the cues to action that are effective in this population, ultimately leading to participation in screenings.

By examining the relationship between External Cues to Action and Prostate Cancer examinations in African American men at ages (40-65 years old), when they are prone to the disease, health care professionals can have a greater understanding of the cues most effective for increasing prostate screenings in this population. Although there are existing studies that explore some of the effective ways to recruit African American males, there are limited studies that explore the external cues, culture, and social marketing avenues that are effective and specific to this population. This study further explores the role of culture in the receptivity and decision-making process to participate in screenings. I incorporated literature that is currently available regarding cues to action and culture to determine the most appropriate methodology for the study performed

CHAPTER 3  
METHODOLOGY

**3.1 Purpose of the Study**

This study examines the relationship between *External Cues to Action* and Prostate Cancer screenings among African American males. Specifically, the study evaluates the relationship between the influence of external cues and the decision to undergo prostate screenings in African American males. There are four external cues that will be examined for this study: media/advertising, friends/family, medical professionals, and church/community. This study considers the role of culture among African American males and its influence on their decision making process for participating in screenings. Understanding the influence of culture on one's health will be beneficial in identifying the positive qualities that should be promoted and the unique qualities that should be considered when examining external cues that may be most influential to this population.

**3.2 Research Questions**

1. Is there a relationship between media/advertising and African American males' decision to participate in prostate cancer screenings?
2. Is there a relationship between advice from friends/family and African American males' decision to participate in prostate cancer screenings?
3. Is there a relationship between the medical professional's advice and African American males' decision to participate in prostate cancer screenings?
4. Is there a relationship between church involvement and African American males' decision to participate in prostate cancer screenings?

5. What is the relationship between Cultural Empowerment (positive, existential, negative) and the decision to participate in prostate cancer screenings?
6. What is the relationship between Relationships and Expectations (perception, enablers, nurturers) and the decision to participate in prostate cancer screenings?

### **3.3 Hypothesis**

1. There is a positive relationship between media/advertising and participation prostate cancer screening in African American males.
2. There is a positive relationship between friend/family advice and participation prostate cancer screening in African American males.
3. There is a positive relationship between medical professional advice and participation prostate cancer screening in African American males.
4. There is a positive relationship between church involvement and participation in prostate cancer screening in African American males.
5. There is a positive relationship between *Cultural Empowerment* (positive, existential, negative) and the decision to participate in prostate cancer screenings in African American males?
6. There is a positive relationship between *Relationships and Expectations* (perception, enablers, nurturers) and the decision to participate in prostate cancer screenings.

### **3.4 Participants**

In this research project I examined the relationship between Cues to Action and Prostate Examinations among African American Males between 40-65 years of age. A convenience sampling method is used for this study. This sampling method involves participants being “in the

right place at the right time” (Burns & Grove, 2009, p. 353). Criteria for inclusion in this study will be African American men who (a) were at least 40 years of age, (b) had no previous personal history of prostate cancer, (c) spoke English fluently (d) were able to read and write in English at a level high enough to understand the consent and study materials, and (e) consented to take part in the study. A convenience sample of 100 African American men was the target level of volunteers desired to participate in the study.

The participants were recruited from local barbershops through the distribution of fliers and direct contact and personal interactions (word of mouth). I spoke with the barbershop owners and gain participants by being present during the times of high traffic in the shops; Friday and Saturday. In addition, I met with African American church Pastors to aid with recruitment. This provided the opportunity to make announcements targeted to their male parishioners. This allowed me to gain access to auxiliary meeting times of male small groups, fellowships, and bible studies within the congregation, which will allowed an even more intimate avenue to seek participation as well. Recruitment of African American men in places where they frequent ensures a cross section of African American men from various socioeconomic, educational and income backgrounds within the targeted age group. A separate demographic background section is included (educational, marital, employment, screenings, and health insurance status), which gave me the ability to control for certain variables within my data analysis.

### **3.5 Informed Consent**

This study was submitted to the University of Illinois Urbana-Champaign Institutional Review Board (IRB). Once approved, I made contact with various individuals and informed them that participation in the study would be voluntary, and the participants would be

able to withdraw at any time. Verbal and written consent were required from the participants to be part of the study. Written informed consent was obtained from the participants after the questions were explained to them and individual consent forms were signed. The participants received an explanation of the nature of the study and potential risks, benefits, and ethical considerations prior to participation in this study. The participants received printed information explaining the study, the process for anonymity and confidentiality, and processes for the collection and analysis of data. Participants in the study were given the right to decide what to report in the data and to make the final decisions with regard to editing or deletion of information from the interview transcript.

### **3.6 Instruments**

The Cues to Health Action Questionnaire was used to assess the cues that influence Prostate Screening attitudes and behaviors in American males. The instrument is based on the framework of Pender's Health Promotion Model (Pender, 1987).

The instrument is a 32-item cues rating scale. The questionnaire includes various types of mass media, social settings, and individuals who might strongly advise one to take action. It also includes descriptions of several feelings that individuals may experience which could serve as cues. The questionnaire uses a 4-point response format to measure the possibility or the likelihood of the cue in influencing the engagement in promoting Prostate Screenings such as, 0=not at all; 1=possibly likely; 2=moderately likely; and 3=very likely. The instruction for making a choice among the four options is "What is your rating of effectiveness of that method in encouraging you?"

Permission for use of the Cues to Health Action Questionnaire in this study was obtained from the developers, Teddy L. Jones and Melanie C. Fowler. The initial development, pilot testing and evaluation of the Cues to Health Action instrument was conducted by Jones and Fowler (1998). The final 32-item instrument was found to have high internal consistency for the particular sample, with the Cronbach alpha coefficient of 0.88. Acceptance of the instrument by a panel of expert reviewers was indication of the validity of the instrument. The developers of the instrument also enhanced the validity of the instrument by seeking information from the validation panel as well as respondents regarding their personal perceptions of cues not mentioned in the instrument, but which they believed might affect their behaviors (Jones & Fowler, 1998).

Participants for the focus groups were recruited from among those who completed the questionnaires. Participants were asked after the completion of the survey tool if they were interested in participating in a focus group session on prostate cancer screening. A date, time and location for the proposed focus group session was then provided to the participants along with my contact information. Participants were then contacted one week prior to the scheduled focus group session to confirm their participation. The focus group interviews took place at one of the local churches within the Champaign-Urbana community. I was be the investigator and conducted the interviews, which lasted for 1 hour. Because scheduled did not allow for comprehensive focus groups, two focus group sessions were conducted with a total of 4 participants in each session. In the focus groups sessions, participants were asked a series of open-ended, culturally oriented questions specific to *Cues to Action*. These questions focused heavily on the components of *PEN-3 Cultural Model's* component of *Cultural Identity*. The *Cultural Identity* domain highlights the intervention points of entry which are essential in further

understanding African American males screening behaviors. The focus group interviews assisted in gaining a further understanding of the of subjects' decision-making process in relation to culture.

This model has provided a perspective of culture and health, in terms of the positive qualities that should be promoted and the unique qualities that should be examined when discovering the *Cues to Action* most effective for this population.

### **3.7 Procedure/Design**

In addition to the qualitative focus groups sessions, quantitative surveys were used. Hence, a mixed method research approach was incorporated in this study. Many scholars agree that mixed methods not only allow for triangulation of quantitative data, qualitative data and other important explanatory information, but also provide a unique paradigm that gives voice to the experiences of marginalized or underrepresented populations which is why this was an important methodology for this study (Hanson, et. Al, 2005). The outcomes often provide in-depth explanations for issues identified by quantitative data, which were essential to understanding the views and behaviors of African American males in relation to prostate cancer screenings. Researchers suggest that the information provided in mixed methods can be used as enhancements to the quantitative data, suggesting that quantitative survey data alone does not always provide the most robust information, particularly when considering institutional or professional practice changes (Scott, Grebinnikov & Shah, 2008). Further, qualitative data collected as part of quantitative surveys can provide important information about particular patterns or themes which can be useful in social and institutional practices, ultimately altering health outcomes (Scott, Grebinnokov & Shah, 2008).

### 3.8 Data Analysis

Various methods of analyses were examined to interpret the data. For my research the dependent variable is the likelihood that the African American males would engage in Prostate Cancer screenings. The independent variables are the External Cues to Actions. An Ordinal Regression was conducted to determine whether the independent variable predicts the ordinal dependent variable. By implementing this ordinal regression, I was able to determine which of the independent variables (Cues to Action) had a statistically significant effect on the dependent variable (Likelihood for Prostate Screenings). The quantitative data were analyzed in SPSS Statistics 21.0. I also conducted a descriptive analysis and compared the means for the demographics variables of age, education, marital, employment, and health insurance status.

For the focus groups, the data collected from participants was transcribed from a digital recording device within 72-hours after each interview. Several strategies were employed to ensure the quality and trustworthiness of the data analysis process. During the interviews I took many field notes in regards to the participant's demeanor (i.e., varying tones of voice, facial expressions, physical movements, sadness, and joking prior to responding to difficult questions). After all interviews were concluded I reviewed the data utilizing the three stage process of open, axial, and selective coding identified by (Neuman, 2003). *Open coding* is the first review of the collected data came from research and interview questions, analytical notes, and memos describing behaviors and other actions of participants during each interview. Data were screened for terms having significant meaning, key elements and initial themes. *Axial coding* consists of an in-depth review of the initial themes and if appropriate, determined if relationships were established between themes. This process will confirm multiple references to themes to strengthen relationships. *Selective coding* process represents the final step before analysis and

the identification of final themes and the development of concepts. Major themes were selected to serve as the focus of the study. To reduce researcher bias the services of two undergraduate students (interns) and a doctoral student in Department of Community Health at the University of Illinois were enlisted to review, critique, and collaborate findings of this researcher. After discussion and agreement these themes, they were implemented and adopted for this study. These themes were placed within the scope of the PEN-3 model and its' given constructs.

## CHAPTER 4

### RESULTS

The results of the research study are reviewed in this section. This study examines the relationship between *External Cues to Action* and prostate cancer screenings among African American males. Specifically, the study evaluates the relationship between the influence of external cues and the decision to undergo prostate screenings in African American males. First, the results of the quantitative phase of the study are reported. Next, the results from the second phase, the qualitative focus groups sessions of the study are reviewed.

#### **4.1 Phase 1**

The results for Phase 1 are guided by the following research questions and hypotheses:

#### **4.2 Research Questions**

R1: Is there a relationship between media/advertising and African American males' decision to participate in prostate cancer screenings?

H: There is a positive relationship between media/advertising and participation in prostate cancer screening in African American males.

R2: Is there a relationship between advice from friends/family and African American males' decision to participate in prostate cancer screenings?

H: There is a positive relationship between friend/family advice and participation prostate cancer screening in African American males.

R3: Is there a relationship between the medical professional's advice and African American males' decision to participate in prostate cancer screenings?

H: There is a positive relationship between medical professional advice and participation prostate cancer screening in African American males.

R4: Is there a relationship between church involvement/community and African American males' decision to participate in prostate cancer screenings?

H: There is a positive relationship between church involvement/community and participation in prostate cancer screening in African American males.

### 4.3 Theory

Phase 1, the Quantitative portion of the study, was implemented to gain a greater understanding which *Cues to Action* are the most effective in motivating African American men to participate in prostate cancer screenings. The Health Belief Model (HBM) was used to guide this portion of the research. HBM is a highly utilized framework for establishing African American men health related practices regarding prostate cancer screening. The model's ability to explain and predict a variety of behaviors associated with positive health outcomes has been successfully replicated several studies (Glanz, 2002).

As noted above, HBM is a framework that explains the process of decision making that can be summed up in six areas: (1) perceived severity, (2) perceived susceptibility, (3) barriers, (4) benefits, (5) self-efficacy, and (6) cues to action. This research focuses on the construct *Cues to Action*. A cue to action occurs when an individual is spurred to adopt the preventative behavior by an activating factor. *Cues to action* were the last construct added to the HBM and is known as the initial trigger for behavior change (Glanz, 2002). *Cues to action* can be classified as something, someone, or some event that alerts individuals of a particular disease and can be internal or external (Hayden, 2009). Phase 1 will specifically focus on external cues to action,

examining their influence in four areas: (1) Media/Advertising, (2) Friends/Family, (3) Medical Professionals, and (4) Social/Community.

#### 4.4 Sample

The sample size consisted of 105 African American Men ages 40-65, recruited from local barbershops and churches within the community. Demographic data were collected from all participants including age range, marital, educational, insurance, and employment status along with prostate cancer screening status information. Results yielded that most men were age 40-50 (62.9%), married (63.8%), employed 84.8%, and had insurance (91.4%) (Table 1).

Table 1. Number and Percent of Men by Age, Marital, Employment, Education, Insurance and screening Status

	Number	Percent
<b>Age Group</b>		
40-50	66	62.9
51-60	25	23.8
61-65	14	13.3
<b>Marital Status</b>		
Married	67	63.8
Not Married	38	36.2
<b>Employment Status</b>		
Employed	89	84.8
Unemployed	16	15.2
<b>Education Status</b>		
High School	40	38.1
Some College	39	37.1
College Graduate	26	24.8
<b>Insurance Status</b>		
Insured (Private)	78	74.3
Insured (Public)	19	18.1
No Insurance	8	7.6
<b>Screening Status</b>		
Yes	26	24.8
No	79	75.2

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## 4.5 Results

This study used descriptive statistics and regression models to analyze the role of cues to action in prostate cancer screening in African American males. Descriptive statistics were used to gain information in the four areas: (1) Media/Advertising, (2) Friend/Family, (3) Medical Professional, and (4) Social/Community. Although there were 32-items on the Questionnaire, only 25 items were utilized for the analysis. The 7 omitted questions from this study, examined internal cues to action. The focus of this study, however, considered only external cues to action; the triggers that prompt behavior change. The questionnaire uses a 4-point response format to measure the possibility or the likelihood of the cue in influencing the engagement in promoting prostate screenings such as, 0=not at all; 1=possibly likely; 2=moderately likely; and 3=very likely. The data was analyzed and the frequencies, means, and standard deviations were computed for each of the 25-items on the questionnaire.

An ordinal regression was conducted in this study to further understand *Cues to Action* in African American males. As a predictive analysis, ordinal regression describes data and explains the relationship between one dependent variable and two or more independent variables. By implementing this ordinal regression, this research was able to determine which independent variables (Cues to Action) have a statistically significant effect on the dependent variables (African American male Demographics). SPSS Statistics 21.0 and the Ordinal Regression procedure PLUM (Polytomous Universal Model) method was employed to analyze the data. The Cox-Snell was used as standardized residuals to ensure reliability by determining the correct fit.

#### 4.6 Descriptive Statistics

The 25 questions focusing on *Cues to Action* were analyzed and the frequencies, means, and standard deviations were computed. For the 4-point response measure, the means ranged from 1.06-2.19. All except three responses (Promising Family to Begin Action SD 1.004, Church/Church Group SD 1.049, and Promising Friend to Begin Action SD 1.078) had a standard deviation of less than 1.0, which indicates moderate variability. Table 2 outlines the 25 Questions for Cues to Action by Survey Response Frequency, Mean, and Standard Deviation. Table 3 outlines the 25 Question for Cues to Action by Rank Order.

Table 2: Cues to Action-Response Frequency, Means and Standard Deviation

Item	Cues to Action	Frequency				Means	SD
		0	1	2	3		
1	Radio PSA	16	48	30	11	1.34	.864
2	Radio Ad	24	47	24	10	1.19	.900
3	Health Fair	8	24	36	37	1.97	.925
4	TV Talk Show	15	27	46	17	1.62	.924
5	TV News	15	35	41	14	1.51	.900
6	TV Ad	16	44	28	17	1.44	.940
7	TV PSA	16	41	34	14	1.44	.909
8	Newspaper Story	23	38	32	12	1.31	.944
9	Newspaper Ad	22	51	27	5	1.14	.802
10	Book	22	47	23	13	1.26	.931
11	Magazine	26	45	23	11	1.18	.928
12	Newsletter	29	48	21	7	1.06	.864

Table 2 (cont.)

13	Internet	14	29	40	22	1.67	.957
14	Church	15	27	30	33	1.77	1.049
15	Club/Association	22	36	34	13	1.36	.952
16	Convention/Workshop	12	32	39	22	1.68	.935
17	Specific Advice/Healthcare Provider	5	20	30	50	2.19	.910
18	Specific Advice/Friend	9	22	39	33	1.95	.944
19	Specific Advice/Close Family	10	16	34	45	2.09	.982
20	General Advice/Provider	7	33	40	25	1.79	.885
21	General Advice/Friend	12	34	47	12	1.56	.843
22	General Advice/Close Family	10	35	37	23	1.70	.921
23	Promising a Friend	19	16	37	33	1.80	1.078
24	Promising Close Family	12	14	36	43	2.05	1.004
25	Agree to begin action with healthcare provider	6	24	30	45	2.09	.942

Table 3: Cues to Action-Rank Order Means

Rank Order	Item Number	Cues to Action	Means	SD
1	17	Specific Advice from Healthcare Provider	2.19	.910
2	25	Agreeing with Healthcare Provider to Begin Action	2.09	.942
3	19	Specific Advice Close Family	2.09	.982

Table 3 (cont.)

4	24	Promising Family to Begin Action	2.05	1.004
5	3	Health Fair	1.97	.945
6	18	Specific Advice from Friend	1.95	.944
7	23	Promising Friend to Begin Action	1.80	1.078
8	19	General Advice Provider	1.79	.885
9	14	Church/Church Group	1.77	1.049
10	22	General Advice Close Family	1.70	.921
11	16	Convention/Workshop	1.68	.935
12	13	Internet	1.67	.957
13	4	TV Talk Show	1.62	.924
14	21	General Advice Friend	1.56	.843
15	5	TV News	1.51	.900
16	6	TV Ad	1.44	.940
17	7	TV PSA	1.44	.909
18	15	Club/Association	1.36	.952
19	1	Radio PSA	1.34	.864
20	8	Newspaper story	1.31	.944
21	10	Book	1.26	.931
22	2	Radio/Ad	1.19	.900
23	11	Magazine	1.18	.928
24	9	Newspaper Ad	1.14	.802
25	12	Newsletter	1.06	.864

*Media/Advertising*

R 1: Is there a relationship between media/advertising and African American males' decision to participate in prostate cancer screenings?

H: There is a positive relationship between Media/Advertising and participation in prostate cancer screening among African American males.

For the category, Media/Advertising, the survey yielded results for following cues to action: *Internet, TV Talk Show, TV News, TV Ad, TV PSA, Radio PSA, TV News Service Announcement, Book, Radio Ad, Magazine Article, Newspaper AD, and Newsletter*. The results are reflected below in Table 4.

Within Media/Advertising, the cue of the *Internet* had the highest mean (Mean 1.67, SD .957) for prostate cancer screening. Current research suggest that although health professionals remain the most important source of health information, the Internet is consistently rated as the second most important tool (Fox, 2011; Hesse et al., 2006; Koch-Weser, Bradshaw, Gualtieri, & Gallagher, 2010). This is consistent with Rooks et al. (2012) which found that in addition to their physician, African Americans most often consulted the Internet (25%). Pew reports that 74% of African Americans seek health information online about a variety of topics, but most often search for disease-specific information (Pew Internet & American Life Project, 2013). Numerous studies support how convenience, accessibility, anonymity, and immediacy are among the primary benefits of seeking cancer information online (HINTS, 2006; Pew American Life Project, 2006).

Following the *Internet*, cues from the use of the *Television* also had high means in the category of advertising/marketing. This finding corresponds to current research that suggest that African Americans have more access to television and consume more hours of live television than any racial/ethnic group (Nielsen, 2011). While the average amount of television consumed per day across all races and ethnicities across the U.S. is five hours and eleven minutes, AAs consume approximately seven hours and twelve minutes of television per day. A few recent studies indicate African American males often rely on their doctor as a primary source for information but commonly seek out secondary sources (Ramsey et al., 2009). For example, a study by Owens and colleagues found that nearly 75% of the African American participants reported their primary doctor as one of their regular sources of general health and cancer information followed by television at (43%). Ross et. al (2011) found that while 86% of study participants reported receiving information from their physicians, 62% received prostate cancer information from television (mass media). These previous studies support the findings in Table 4, suggesting that the use of the television is a strong cue to action in prostate cancer screenings.

Table 4: Rank Order Means for Media/Advertising

Rank Order	Cues to Action	Means	SD
1	Internet	1.67	.957
2	TV Talk Show	1.62	.924
3	TV News	1.51	.900
4	TV Ad	1.44	.940
5	TV PSA	1.44	.909
6	Radio PSA	1.34	.864
7	TV News Service Announcement	1.31	.944
8	Book	1.26	.931
9	Radio Ad	1.19	.900
10	Magazine Article	1.18	.928
11	Newspaper Ad	1.14	.802
12	Newsletter	1.06	.864

*Friend/Family*

R 2: Is there a relationship between advice from Friends/Family and African American males' decision to participate in prostate cancer screenings?

H: There is a positive relationship between Friend/Family advice and participation in prostate cancer screening among African American males.

For the category, Family/Friend, the survey yielded results for following cues to action: *Specific Family Advice, Promising Close Family to Begin Action, Specific Advice from Friend, Promising Friend to Begin Action, General Family Advice, and General Advice Friend*. The results are reflected below in Table 5.

In Table 5, *Specific Family Advice* is ranked first in mean within this category (2.09). This cue is also tied for the second in its overall ranking in Table 4, on the list all 25-survey questions. The importance of family within African American males and their decision making for prostate cancer screening supports similar findings in this regard. Plowden (2006) concluded from a qualitative study that significant others, who included blood relatives, peers, and others with whom the patient could identify, were strong influences on whether or not African American men participated in PSA/DRE screenings. Plowden also acknowledged that significant others were motivating factors in educating African American men about prostate cancer, and most were motivated to participate in screening after knowing someone diagnosed with cancer. The role of the cue, *Specific Family Advice*, was also viewed as significant in a focus group study by Ford et al. (2006). Participants between 55-87 years of age were evaluated for their intentions to obtain a prostate cancer screening. A theme from the study was the influence of

social support, which indicated intergenerational family members as a motivator to obtain a prostate cancer screening.

The cue, *Specific Advice Friend*, also had high means in Table 5. This supports existing research that suggest that open communication among family members and friends who are familiar with the patient’s daily life activities may assist the patient in deciding to have PSA/DRE screening (Jones et al., 2009). In Jones et al.’s (2008) study, men recognized the significance of family and friend support during chronic illness. In the African American community, family peers, and the (health) profession have greatly influenced African American men to seek early screening (Toles, 2008).

The results also show that specific advice from friends and family had higher means than general advice given. This supports finding in Jones (et al., 2008) which state African American that men tend to be reluctant to seek healthcare and are more likely to discuss their problems with their family and peers. Family and friends can be very important participants in the education and decision-making process and the more informed and specific information they provide might be a stronger cue to action in prostate cancer screenings.

Table 5: Rank Order Means for Family/Friend

Rank Order	Cues to Action	Means	SD
1	Specific Family Advice	2.09	.982
2	Promising Close Family to Begin Action	2.05	1.004
3	Specific Advice Friend	1.95	.944
4	Promising Friend to Begin Action	1.80	1.078
5	General Family Advice	1.70	.921
6	General Advice Friend	1.56	.843

### *Medical Professional*

R 3: Is there a relationship between the Medical Professional's advice and African American males' decision to participate in prostate cancer screenings?

H: There is a positive relationship between medical professional advice and participation in prostate cancer screening among African American males.

For the category, Medical Professional, the survey yielded results for following cues to action: *Specific Advice from Healthcare Provider*, *Agreeing with Healthcare Provider to Begin Action*, and *General Advice from Provide*. The results are reflected below in Table 6.

The top cue to action within the category, Medical Professional, was *Specific Advice from Healthcare Provider* with a mean of 2.19. This cue was also ranked number one overall in the list of 25 cues to action questions in Table 3. The cue, *Agreeing with Healthcare Provider* was had the second highest mean in Table 6 of 2.09. It was also tied for second in the list of 25 cues to action question in Table 3.

These findings that support the role and the importance of medical professional within African American males' decision-making process were also found in other studies. Ross et al. (2011) findings suggest that although African American men used other outlets for information, they relied on their primary care provider for prostate cancer information as their primary source. A study by Owens and colleagues found that nearly 75% of the African American participants reported their primary doctor as one of their regular sources of general health and cancer information followed by television (43%). A report by Pew (2013), found that more African American males were using the Internet search for more information on health related issues. They found that this was more effectively used after discussion with their health care provider as

a supplement source. These findings are also supported in Table 4 where *Specific Advice from Healthcare Provider* was ranked first in mean and *Internet* ranked 12<sup>th</sup> on the rank order list of cues to action questions.

Table 6: Rank Order Means for Medical Professional

Rank Order	Cues to Action	Means	SD
1	Specific Advice from Healthcare Provider	2.19	.910
2	Agreeing with Healthcare Provider to Begin Action	2.09	.942
3	General Advice from Provider	1.56	.843

#### *Church/Community*

R 4: Is there a relationship between Church/Community involvement and African American males' decision to participate in prostate cancer screenings?

H: There is a positive relationship between church/community involvement and participation in prostate cancer screening among African American males.

For the category, Social/Community, the survey yielded results for the following cues to action: *Health Fair*, *Church/Church Group*, *Convention/Workshop*, and *Club/Association*. The results are reflected below in Table 7. The cue, *Health Fair*, had the highest means within this category. This cue was placed within in the Social/Community category due to it being an event. At Health Fair events, there is often the presence of health care professionals, in which the attendees can communicate and interact. As noted in Table 6 and throughout this study there is evidence that advice from a healthcare professional has higher means. On the overall rank order list of 25 cues in Table 3, *Health Fair* was ranked 4<sup>th</sup>.

The cue to action, *Church/Church Group*, was ranked 2<sup>nd</sup> within the category Church/Community. This finding supports current research concerning the important role of the church within the African American community. Studies suggest that the church is a key community-based organization and cue to action in motivating and reaching African American men (Campbell et al., 2007; Weinrich et al., 1998). The church is one of the places that African American men frequent. Compared to Whites, African American's had higher levels of attending religious services and activities (Johnson, Elbert-Avila, & Tulsky, 2005). Blocker et al. (2006) showed that church members, namely pastors, were essential for encouraging members to engage in cancer screening, such as that used to detect prostate cancer. Overall, the emotional, educational, and social support among the church and its members has been extensively documented in literature.

Table 7: Rank Order Means for Social/Community

Rank Order	Cues to Action	Means	SD
1	Health Fair	1.97	.945
2	Church/Church Group	1.77	1.049
3	Convention/Workshop	1.68	.935
4	Club/Association	1.36	.952

### *Ordinal Regression*

Each analysis considered the demographic variables of age, marital, employment, education, prostate screening, and insurance status. An ordinal regression analysis was performed on 25-items on the Cues to Action Questionnaire. In general, marital status and educational attainment were strong predictors of cues of actions. The predictors were significant in African American males for six cues within the category of Media/Advertising: *Public Service*

*Announcement (PSA) on the Radio, Advertisement on the Radio, Information on a T.V. Talk Show, TV News or Magazine Show, Public Service Announcement (PSA) on TV, and Material on the Internet.* Marital status and educational attainment was also significant for the category of Church/Community involvement for two cues: *Information Provided at Church* and *Information provided at a Convention/Workshop*. Marital status and educational attainment was also found significant for the cue Advice from Family, within the Family/Friend category. The results are outlined below in Table 8.

The findings in the ordinal regression suggest that African American males with a marital status of “married” were less likely to engage in the nine cues compared with “non-married” males. This finding is supported in recent studies that highlights the importance of one’s spouse in the decision-making process to engage in prostate cancer screenings. Blanchard (2005) suggests that women are the primary healthcare providers in many African American households; thus, they have the potential to impact household and family members’ health – seeking behaviors. Blanchard mentions that the wife assumes the responsibility of ensuring that the husband has an appointment and follows through with the visit. Arrington (2005) ascertained from one study that the wives encouraged their partners to see a physician, and although many men remembered resisting medical help, their wives were portrayed as “health monitors” for their respective families. Within the 25-item survey given to the participant, there was no specific question that asked about “spouse” or “significant other”. The survey only included the general cue of one’s “family.” Although there was no specific question for “spouse” or “significant other,” previous studies support their significance in comparison to those with a marital status of “not married.”

The results from this study also indicate significance within educational attainment. African American males that had lower educational attainment (high school diploma) were less likely to utilize the nine cues in Table 8, in comparison to those with higher educational attainment (college degree or higher). Drake et al., (2010) who conducted a study on informed decision making regarding prostate cancer screening among a sample of African American men in a church-based setting, also supported this finding. Results from the 2010 study reported that the majority of prostate cancer screenings were from participants, which were over 50 years and over and had a college degree or more. Perhaps, higher levels of education can lead to increased exposure on health topics and receptivity of health information. In addition, higher levels of education, as in a college degree, can provide more knowledge on the health disparity for African American men and prostate cancer; thus increasing their motivation to participate in prostate cancer screenings.

Table 8: Ordinal Regression Significance by Marital and Education Status

Variables	OR	95% C.I. for OR		<i>p</i> -value
		Lower	Upper	
<b>PSA Radio</b>				
Married (ref=not married)	0.31	0.14	0.68	0.004
HS Education (ref=college ed)	0.23	0.08	0.69	0.009
<b>Advertisement Radio</b>				
Married (ref=not married)	0.36	0.17	0.80	0.01
HS Education (ref=college ed)	0.39	0.14	1.14	0.09
<b>TV Talk Show</b>				
Married (ref=not married)	0.42	0.19	0.92	0.03
HS Education (ref=college ed)	0.25	0.09	0.74	0.01
<b>TV News/Mag Show</b>				
Married (ref=not married)	0.22	0.09	0.49	<0.001
HS Education (ref=college ed)	0.17	0.05	0.50	0.002
<b>PSA TV Announcement</b>				
Married (ref=not married)	0.42	0.19	0.91	0.03
HS Education (ref=college ed)	0.33	0.33	0.11	0.04

Table 8 (cont.)

Material on Internet				
Married (ref=not married)	0.31	0.14	0.68	0.004
HS Education (ref=college ed)	0.38	0.13	1.10	0.07
Information provided at Church				
Married (ref=not married)	0.33	0.15	0.74	0.07
HS Education (ref=college ed)	0.35	0.12	1.03	0.06
Information Convention/Workshop				
Married (ref=not married)	0.49	0.23	1.06	0.07
HS Education (ref=college ed)	0.34	0.12	0.99	0.05
Family Member Advice				
Married (ref=not married)	0.32	0.14	0.72	0.006
HS Education (ref=college ed)	0.27	0.09	0.80	0.02

There were other significant factors in the data for the following cues: *Advertisement on TV, News story in Newspaper, Advertisement in Newspaper, Club/Association, Advice from the Provider, Advice from a Friend, and Promising Family*. The results are compiled below in Table 9.

For the results, African American males with lower educational attainment (high school diploma) were less likely 78% less likely to utilize the cue, *Advice from Provider*, in comparison to those with higher educational attainment (college degree or higher). This finding supports the literature suggesting effective communication between patients and providers is essential in the patient adhering to physician advice; ultimately achieving positive health outcomes (Piette et al., 2003; Travaline, Ruchinskas & D'Alonzo; 2005). African Americans with lower education attainment have been shown to engage in fewer communication behaviors (i.e. asking questions, expressing concerns, assertions) with doctors. A potential cause of ineffective communication between patient and provider here could be linked to one study by Gordon et al. (2006) that

reported African American patients stated that doctors did not respect their intelligence, which in turned served as a barrier to the adherence of their provider’s advice.

Table 9: Ordinal Regression Significance Other Findings

Variables	OR	95% C.I. for OR		<i>p</i> -value
		Lower	Upper	
<b>Advertisement on TV</b>				
Married (ref=not married)	0.29	0.13	0.64	0.002
<b>News story in Newspaper</b>				
Married (ref=not married)	0.39	0.18	0.84	0.02
Screened (ref=never screened)	0.35	0.1	1.22	0.1
<b>Advertisement in Newspaper</b>				
Married (ref=not married)	0.36	0.16	0.81	0.01
<b>Club/Association</b>				
Married (ref=not married)	0.49	0.23	1.06	0.07
HS Education (ref= college ed)	0.49	0.23	1.05	0.08
Age	4.51	0.97	21.13	0.06
<b>Provider Advice</b>				
HS Education (ref=college ed)	0.22	0.07	0.69	0.01
<b>Friend Advice</b>				
Married (ref=not married)	0.35	0.16	0.77	0.009
Insurance (ref=not insured)	0.17	0.03	0.91	0.04
<b>Promise to Family</b>				
Married (ref=not married)	0.42	0.19	0.93	0.003

## 4.7 Phase 2

The results for Phase 2 are guided by the following research questions and hypotheses:

### 4.8 Research Questions

R1: What is the relationship between Cultural Empowerment (positive, existential, negative) and the decision to participate in prostate cancer screenings?

H: There is a positive relationship between *Cultural Empowerment* (positive, existential, negative) and the decision to participate in prostate cancer screenings in African American males?

R2: What is the relationship between Relationships and Expectations (perception, enablers, nurturers) and the decision to participate in prostate cancer screenings?

H: There is a positive relationship between *Relationships and Expectations* (perception, enablers, nurturers) and the decision to participate in prostate cancer screenings.

The overall goal of Phase 2 was to give voice to the participants and to gain a deeper understanding of their behaviors in relation to prostate cancer screenings. Many scholars agree that mixed methods not only allow for triangulation of quantitative data, qualitative data and other important explanatory information, but also provide a unique paradigm that gives voice to the experiences of marginalized or underrepresented populations (Hanson, et al., 2005).

Utilizing the focus groups in Phase 2 provided a more in-depth explanation of some of the key components identified by the quantitative data seen in Phase 1.

## 4.9 Sample

The sample consisted of eight African American men in two focus groups. There were four men in the first focus group and four in the second group. These men were a part of Phase 1 and completed the Cues to Action Questionnaire. Upon completion of the survey, the men were asked if they were interested in participating in Phase 2, the 1-hour focus group session. Each of the males expressed interest in the focus group session and were given two date and time options for the sessions. The males received a follow-up call and an e-mail reminder the week of the focus group session, confirming their attendance. Both focus group sessions were held at the approved research site, Glory Center International Church (GCI), where I am a parishioner. GCI is local church within the Champaign community, which has conference room meeting space.

The ages of the eight men ranged from 43-61. The employment statuses of the men were “employed.” Six of the men were full-time and two were part-time status. Four of the men reported being “married,” one “divorced,” and three were “never married.” All of the men reported having no previous diagnosis of prostate cancer. Four of the men reported undergoing a previous prostate cancer screenings. The detailed demographic data for the focus groups are outlined below (Table 10).

Table 10. Focus Group Participant by Age Range, Marital, Employment, Education, Health Insurance, and PC screening Status.

Research Participant	Age Range	Marital	Employment	Education	Health Insurance	PC screening Status
Participant 1	61	M	Full-time	HS	Yes (Pr)	Yes
Participant 2	54	D	Full-time	GS	Yes (Pr)	Yes
Participant 3	52	M	Full-time	CG	Yes (Pr)	No
Participant 4	45	M	Full-time	HS	Yes (P)	No
Participant 5	45	NM	Full-time	CG	Yes (Pr)	No
Participant 6	53	NM	Part-time	HS	Yes (P)	Yes
Participant 7	58	M	Full-time	GS	Yes (Pr)	Yes
Participant 8	42	NM	Part-time	SC	No	No

Table 2 \*M-Married NM-Never Married D-Divorced Pr-Private P-Public HS-High School SC-Some College CG-College Graduate GS-Graduate School

#### 4.10 Theory

The qualitative phase of the study was implemented to gain a greater understanding of the *Cues to Action* most effective in motivating African American men to participate in prostate cancer screenings. More specifically the focus groups sessions were used to explore the role of culture and its impact in participants' decision-making process. The *PEN-3 Cultural Model* has been at the forefront of understanding the influence of culture on health, and was used as the primary framework for Phase 2. The *PEN-3 Model* was developed to centralize culture in health promotion and disease prevention interventions, assisting public health interventionist and communities with the planning, implementation and evaluation of relevant culturally-based health interventions (Airhihenbuwa, 1999). The *PEN-3 Cultural Model* consists of three primary domains: (1) Cultural Identity, (2) Relationships and Expectations, and (3) Cultural

Empowerment. Each domain includes three factors that form the acronym PEN; Person, Extended Family, Neighborhood (Cultural Identity domain); Perceptions, Enablers, and Nurturers (Relationship and Expectation domain); Positive, Existential and Negative (Cultural Empowerment domain).

In the focus group sessions, this study examined the first domain, *Cultural Identity*. This domain highlights the intervention points of entry. Airhihenbuwa (1999) explains how they may occur at the level of persons (e.g., mothers or health care workers), extended family members (grandmothers), or neighborhoods (communities or villages). The questions in the focus group session were designed to gain a further understanding of the intervention, points of entry or cues in the African American male participants. The sessions examined the level of motivation of a message about prostate cancer screenings when delivered by one's spouse, significant other, friends, or health care provider. The study also evaluated the effectiveness and level of motivation of messages about prostate cancer screenings that came from the participants' community. The implementation of open-ended questions examined the effectiveness of community organizations, the role of the African American church, and other entities within the participants' local community.

In the second domain, *Relationships and Expectations*, perceptions or attitudes about the health problems, the societal or structural resources such as health care services that promote or discourage effective health seeking practices, as well as the influence of family and kin in nurturing decisions surrounding effective management of health problems are examined (Airhihenbuwa, 1999). Within this domain there are three factors (perceptions, enablers, and nurturers) that are noted to influence the actions of the target audience. Perception is described as "knowledge and belief, values, in decision making that are focused on either persons or

groups, highlighting the complementarity of emotion and rationality in behavioral outcomes” (Airhihenbuwa (2007, p. 176). Enablers “refer to resources and institutional support and wealth (assets over liabilities) as measures of resources and power, and costs and availability of services such as drugs for treating HIV” (Airhihenbuwa, 2007, p. 177). Nurturers provide support and are described as “family eating traditions, community and events, spirituality and soul, values of friends (for example, drinking), and marriage rules and expectations” (Airhihenbuwa (2007, p. 178). During the focus groups sessions it was essential to have the participants share their thoughts and detailed experiences in references to cues to prostate cancer. From these sessions the study then determined if the cues acted as a perception, enabler, or nurturer to the participant.

*Cultural Empowerment* is the third domain of the *PEN-3 Cultural Model*. In this domain health problems are explored first by identifying beliefs and practices that are positive, exploring and highlighting values and beliefs that are existential and have no harmful health consequences, before identifying negative health practices that serve as barriers. In this way Airhihenbuwa (2007) explains that “cultural beliefs and practices that influence health are examined whereby solutions to health problems that are beneficial are encouraged, those that are harmless are acknowledged, before finally tackling practices that are harmful and have negative health consequences” (p.179). During the focus group session the values and the beliefs of the African American participants are explored. The study explores African American history and traditions, historical distrust of the medical community, the role of spirituality and the impact that it has on their decision making process. Through the domain of Cultural Empowerment, we determine what values and beliefs within this culture are positive, identifying the unique qualities within this population that should be promoted. We also illuminate some beliefs and practices that are

deemed as negative; those that must be considered and addressed in efforts to promote prostate cancer screenings within this population.

### THE PEN-3 MODEL

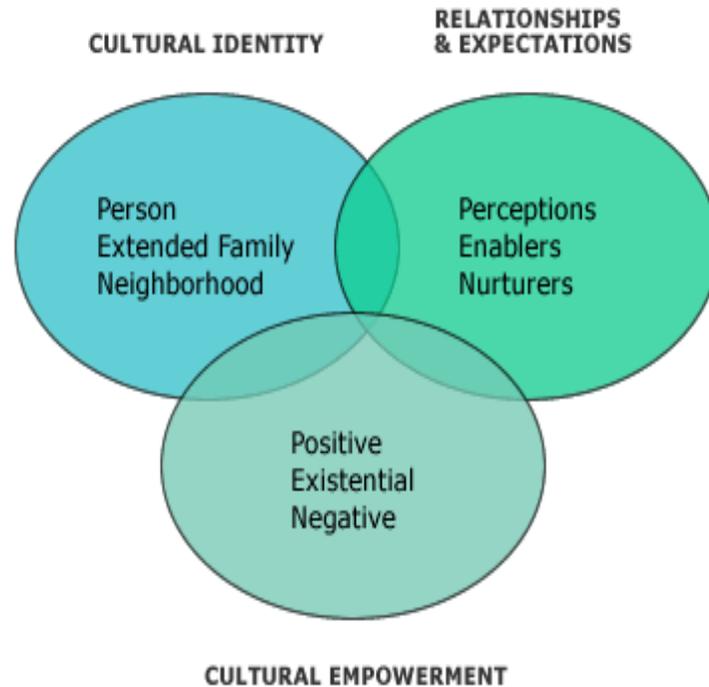


Figure 1. PEN-3 Model

Note: Based on information from Airhihenbuwa, 2007

#### 4.11 Data Analysis

This data analysis of Phase 2, Focus Group Sessions will implore more of a deductive approach to the research. The research examined through the eyes of the *PEN-3 Cultural Model* with its implications tested with data. The data analysis will moved from a more general level to a more specific one. Lincoln & Gaba (1985) discussed how researchers study what others have done, reading existing theories of whatever phenomenon he or she is studying, and then tests hypotheses that emerge from those theories. This is sometimes referred to as the “top-down”

approach. The goal of this data analysis is to ultimately lead to the testing of the initial hypotheses; the relationship between culture within the three domains of the *PEN-3 Cultural Model* and decision to participate in prostate cancer screenings. The specific data gained from the focus group sessions will serve as a confirmation (or not) of this model.

The researcher transcribed the audio recordings from the focus groups. The researcher then reviewed the transcribed data and recurrent themes were identified utilizing the three-stage process of open, axial, and selective coding identified by (Neuman, 2003). The open coding process involved the breaking down of the data into conceptual labels, grouping them together to form categories, subcategories, and labeling. It also allowed the researcher to break down the data into identifiable segments by assigning names to each segmented category. This involved the extraction of phrases, and sentences that pertained to the experiences of each participant. The axial coding process related categories to sub-categories. The delineation of units of meaning related back to the relevant research questions. Each focus group session was analyzed for repeated ideas that related to the original research questions. This allowed the data to be reduced into patterns and themes. The emergent themes were categorized within the three domains of the *PEN-3 Cultural Model*. An independent coder, a private Ph.D. level contractor, also reviewed the transcriptions in order to estimate inter-rater reliability.

#### **4.12 Results**

Seven themes emerged from the focus group analysis by the researcher: Church, Testimonials, Influential Person, Social Groups, Spouse/Family, Doctor, and Media. These seven themes identified by the researcher were also identified and supported by an independent coder.

*Church.* In the focus group sessions the participants were asked about the church institution and if it was an effective place to receive information about overall health and prostate cancer screenings. There were two questions that were asked in reference to the African American church:

Question: Do you believe that churches are an effective place to receive information about health, specifically prostate cancer and screenings?

Question: Do you believe that the African American church holds a strong significance in the African American community and culture?

The participants' responses supported the existing literature about the usage of the church in the African American community. Many of the participants spoke about their involvement in the church, its activities, or group offerings.

*"I feel we try to design our church experience to be holistic and be part of our social circle. Unless you say, "I go to church Sunday and then I'm going to do something else...we have bible study, in the Baptist community we have laymen's groups. There's an opportunity there to connect and be real with each other" (Participant 2).*

A study conducted by Johnson, Elbert-Avila, & Tulskey (2005), found that in comparison to Whites, African American's had higher levels of attending religious services and activities (Johnson, Elbert-Avila, & Tulskey, 2005). The participants discussed the historical value of the church, and how it has been a source of social support.

*"Yeah, because the African American church is part of our heritage, a part of our history. It's definitely a place you can find, in this case African American males" (Participant 3).*

For example, other studies also support how the African American churches, in general have an extensive history of providing social support to its members and the community (Eng et al., 1985; Krause, 2002). Social support has been an important characteristic among African American churches (Chatters, Taylor, Lincoln, & Schroepfer, 2002). Studies generally support many of the views of the participants, suggesting that the church, overall, is a key community-based organization and cue to action in motivating and effectively reaching African American men (Campbell et al., 2007; Weinrich et al., 1998).

Some of the responses associated with participants views on church are that were found in my study are included below:

“It [the church] not only is, but it should be a place that holistically ministers to the body. And health and wellness is exceptionally important so that we have intentional information from the pulpit of from groups that bring in information that is not only important to us spiritually but also physically as well.” (Participant 2)

“Yeah, because the African American church is part of our heritage, a part of our history. It’s definitely a place you can find, in this case African American males.” (Participant 3)

“Yeah, you see, I trust the church before I trust a stranger.” (Participant 6)

“I believe so, I think hmmm the churches should have health seminars. Hmm, it’s African American race, males a lot, so maybe every quarter or every 6 months have a health seminar type thing focusing on may health issues and that being included in that session.” (Participant 5)

“I think the church is a good place for everything, in regards if it’s benefiting people and if it’s educating people I think should also have a responsibility to make certain that important information gets out because you know our society stereotype us. So I think it is important for the church to have some type of dialogue, workshops set up to talk to the people. Because the church is one of the biggest institutions we have in our community in terms of gathering on a positive note. So I think is responsible for a lot of things that they can address particularly in regards to health....” (Participant 7)

“I feel we try to design our church experience to be holistic and be part of our social circle. Unless you say, “I go to church Sunday and then I’m going to do something else...we have bible study, in the Baptist community we have laymen’s groups. There’s an opportunity there to connect and be real with each other.” (Participant 2)

“I think the church can, you know, may (de)stigmatize the process in terms of you know, making it more accessible to men. You know, you don’t have to be afraid to go.”  
(Participant 5)

“That’s why I am here!” Because of the trust of the church.” (Participant 6)

*Media.* The participants discussed the role of media and how it might be used a cue to action for prostate cancer screenings. The questions asked in reference to media were:

Question: What form of media is best for receiving information about prostate cancer screenings (T.V, radio, Internet, newspaper, flyer, etc.)?

Question: In reference to the culture of men and being African American, which avenues of media do you believe are not effective?

In the focus group session, a few of the men mentioned how television was a strong motivator, since most men between the age groups watch sports or other forms of programming. A majority of the men believed that television would probably be the most effective source of media to receive information about prostate cancer screenings.

*“Other than the men’s groups, I would say television. Ok. We spend a lot of time in front of the television. Sports, sporting events that’s huh other sources of information, talk shows, reality shows, there other things that people interact with or are touched by in certain ways. When you can relate to something in some of the world experience that you had, you can form your own opinion about it and take a step forward to go see a doctor”*  
(Participant 1).

A study done by Owens (2011) also supported these findings. In that study they found that nearly 75% of the African American participants reported their primary doctor as one of their regular sources of general health and cancer information followed by television (43%). When the usage of reading the newspaper was addressed, many of the men agreed that they did not read the newspaper daily or view it as a cue to action for behavior change. *“I don’t read the newspaper” (Participant 4)*. This somewhat contradicted the findings of Owen (2011), citing that 31% of African American males used the newspaper as the second most used form of media.

The participants also discussed how social media was not effective for their age group and lacked the effectiveness to be a motivator to action. Many of them discussed how they did not believe they could or would receive credible information via social media and how it could not be taken seriously in relation to behavior change. Pew Internet & The American Life Project (2010) supports this finding. Their study cites that approximately 73% of all adult Internet users visit social networking sites such as Facebook/Myspace but only 15% of social network users visit these sites to seek health information. One participant from the focus groups stated,

*“I don't take a lot of social media seriously. I just don't bring value to media. No, magazine either. If I'm reading Sports Illustrated I'm going right to the article”*  
(Participant 2).

Rooks et al. (2012) found that in addition to their physician, only 25% of the African American men used Internet. While all participants in this study used the Internet, they did not believe that it was a credible tool in enhancing their health outcomes or trusted it enough that it would impact behavior. In the same study by Rooks et. Al. (2012), found that the radio was the least used medium used in addition to their physician at 24%. This was a similar finding in the

focus amongst the African American men, as majority of them stated that they no longer listened to the radio and would not be motivated by messaging in relation to prostate cancer screenings.

*“Because the guys up in my age range watch T.V. I'm not on the Internet. And the radio, only music I listen to is gospel and it's on a cd. So radio is out of the question.....”*

(Participant 6).

Other studies also support that African Americans seek out health information from a doctor, but use of interpersonal, traditional, and technology-related sources as a supported source of information (Montague & Perchonok, 2012; Rooks, Wiltshire, Elder, BeLue, & Gary, 2012). During the focus group sessions, the participants reported limited usage of traditional forms of media as motivating cues for prostate cancer screenings. These findings suggest that the participants viewed personal interactions, social groups, and interpersonal forms of messaging to be more effective. The major theme that emerged from the usage of media was its ability for the participants to feel a sense of personal connection to the source of media, which in turn, caused the messaging to be more effective the motivation of prostate cancer screenings.

*“...So, it's been real life experiences. But other than that, I had a message here, a message there, a billboard here, and a radio ad there. It's like another everyday event, because you know you get hit with so many advertisements and you talk to people so you don't tend to take it seriously. It's like, you see the cancer sign but you're like, "I'll get it done later on or something" (Participant 1).*

The focus group participants agreed that media messaging are more effective when given by someone “famous” or influential, increasing the motivation from its recipient.

*“I think the key word you said earlier, I'm going to listen because of relationship, personal. The relationships that I valued whether it's television or people that I connect*

*to. I'm watching stuff that I connect to. I read the newspaper and I glance at it, but it's not something that I relate to” (Participant 2).*

Some of the participants’ responses were following:

“Other than the men’s groups, I would say television. Ok. We spend a lot of time in front of the television. Sports, sporting events that's huh other sources of information, talk shows, reality shows, there other things that people interact with or are touched by in certain ways. When you can relate to something in some of the world experience that you had, you can form your own opinion about it and take a step forward to go see a doctor.” (Participant 1)

“I don't take a lot of social media seriously. I just don't bring value to media. No, magazine either. If I’m reading Sports Illustrated I'm going right to the article.” (Participant 2)

“I don’t read the newspaper.” (Participant 4)

“I think the key word you said earlier, I'm going to listen because of relationship, personal. The relationships that I valued whether it's television or people that I connect to. I'm watching stuff that I connect to. I read the newspaper and I glance at it, but it's not something that I relate to.” (Participant 2).

“...So, it's been real life experiences. But other than that, I had a message here, a message there, a billboard here, and a radio ad there. It’s like another everyday event, because you know you get hit with so many advertisements and you talk to people so you don't tend to take it seriously. It's like, you see the cancer sign but you're like, "I'll get it done later on or something." (Participant 1)

“...So, I mean, every year my doctor is taking blood and screen it because in one of my social circles, ideally the church, that would move me more than the commercials more than an advertisement, that moved me to have somebody my age...” (Participant 2)

“Because the guys up in my age range watch T.V. I'm not on the Internet. And the radio, only music I listen to is gospel and it's on a cd. So radio is out of the question. And I'm always watching TV. That's all we do when we get up in age, we sit right there in front of the T.V. We don't want to hear no music, want to hear nothing. The kitchen and the T.V.” (Participant 6)

“I believe the TV in terms of being visual. And if you have a high impact commercial that is geared towards the African-American race or the Internet. I have cable and I do the

Internet a lot too, so I guess but the TV I believe would be the most effective. Radio, no.”  
(Participant 5)

*Social Groups.* In the focus groups the men discussed how social groups were of great importance as a cue to action for prostate cancer screenings. The questions asked were:

Question: Do you believe that the use of Social Groups and organizations are essential Cues to Action in encouraging men to receive prostate cancer screenings?

Question: Do you believe Social Groups are important in the African American culture?

The theme expressed in reference to the importance of social groups supported the findings of Jones et al. (2010). The findings indicated that African American men view informal social support systems as a vital component for the decision to receive prostate cancer screenings. Examples of social groups mentioned in the session were these informal support systems: Churches, Men’s Bible Studies, Community Groups, Fraternities, Family, and Friends. Many of their examples echoed the importance of commonality amongst brotherhood and being able to identify with those of the same gender or culture. They also expressed how social groups build rapport and establish strong bonds of trust, which motivates one to make decisions as well. In regards to prostate cancer screening and the effectiveness of social groups, some participants stated the following:

*“We have a health and wellness awareness through our fraternity that we do. We all at least get checked once. We had people stand up and talk that we knew. And that hit all of us”* (Participant 2).

*“They are probably more effective in a more effective way than social media because in these groups you build up a trust. If you are a part of it you eventually want to convey your ideas...that trust is there, that camaraderie is there” (Participant 7).*

Plowden (2006) backed these ideologies; he found that African American men, who avoided health preventive services provided in the healthcare setting, have been shown to rely on various forms of social support as a motivator for action. These themes that emerged from the focus groups were also supported by Jones et al. (2010) which reported on informal support systems possibly being an essential component among African American men deciding to receive prostate cancer screening.

*“You have to get in our circles, whatever that circle is. Because if the pastor says it's important, it becomes important to the church culture. If you come to 100 Black Men [organization] that become engrained in our culture. I think we are very relational in our age group. If I don't know you like that, but I will listen but I won't feel you” (Participant 2).*

Some of the more detailed responses from the participants' are outlined below:

*“You have to get in our circles, whatever that circle is. Because if the pastor says it's important, it becomes important to the church culture. If you come to 100 Black Men [organization] that become engrained in our culture. I think we are very relational in our age group. If I don't know you like that, but I will listen but I won't feel you.” (Participant 2)*

*“There are many Black men that are positive. We do it every year. We need the people who have moderators, preachers... It's about way we relate to each other. I've been in this group, I know you, and I'm going to listen to what you have to say. But there is so much more that we have to do. There are so many social groups that have influence.” (Participant 2).*

“Yes. You want groups like those groups...bible study. Mention them in bible study. Sometimes it's better than T.V. Those groups are effective.” (Participant 6, 53, NM, PT)

“They are probably more effective in a more effective way than social media because in these groups you build up a trust. If you are a part of it you eventually want to convey your ideas...that trust is there, that camaraderie is there.” (Participant 7)

“If you are in that group and you go you can come back and say how it went and it might help the other brothers. I trust him. So I can better understand. I can ask him questions.” (Participant 6)

“....But when I found out one of my frat brothers had prostate cancer, I was more willing in telling the doctors and requesting a screening.” (Participant 2)

“...So if we can get guys in on free screenings whether through church, through fraternities, or other groups.” (Participant 7)

“We have a health and wellness awareness through our fraternity that we do. We all at least get checked once. We had people stand up and talk that we knew. And that hit all of us!” (Participant 2)

*Doctor.* In the focus group sessions the participants generally valued the options and recommendations of their doctor. Questions that were asked in the focus groups:

Question: What is your relationship with you and your doctor? How would you describe it?

Question: If your doctor makes a recommendation in reference to receiving prostate cancer screening, is this a cue that causes you to take action?

Question: In the African American culture in particular, there have been some historical trust issues. Do you Trust and value the recommendations of your doctor?

Many of the men mentioned how they valued the recommendations of their physician. They further explained how this was a very strong cue to action and motivator to taking action. One participant stated, “*Every time my Doctor say it, I go get it [prostate cancer screening]. I don't even argue with him*” (Participant 6). There have been few recent studies that have

assessed African American's cancer-specific information sources, particularly for prostate cancer. Ross et al. (2011) findings suggest African American men rely on their primary care provider for prostate cancer information, supported themes present in the focus groups. Owens (2011) and colleagues found that nearly 75% of the African American participants reported their primary doctor as one of their regular sources of general health and cancer information.

The African American men in the focus groups expressed the importance of rapport building, feeling comfortable and ultimately trusting their physician. Once that trust was in place, the doctor could advise a given health behavior and they would take immediate action.

One participant said:

*“Overall, you believe he has your best interest at heart. Maybe I should listen to him, he knows my issues, history, so if he suggests that maybe it will be in my best interest to get that done...I have excellent doctors and I fully trust them”* (Participant 5).

Countless studies support the historical notion of fear, skepticism and ultimately distrust of the healthcare system/providers on the part of the African American community. One study, Blocker et al. (2006) found that African American patients who hold strong negative stereotypes of physicians, and judge physicians negatively, may be reluctant to visit a physician for relatively minor medical complaints, choosing instead to delay health care until their problems become more severe or impede functioning. Another study Hughes et al. (2007) cites that a major concern of many males in their focus group discussions was trusting non-African American physicians in the treatment and diagnosis of their prostate cancer. Harter, Stephens, and Japp (2000) stated that the Tuskegee Syphilis Experiment is one of the most notorious cases of minority exploitations in our nation's history. The infamous Tuskegee Syphilis study is

perhaps the most widely known study exclusive to African American men, and has since been used as a subject of negative reference for this population. However, the African American men in the focus groups did not view these happenings as significant barriers to perceiving the doctor as a motivator for action. Overall, in the focus groups sessions the participants acknowledged and were aware of some of the historical happening in reference to African American, specifically the Tuskegee Syphilis Experiment. However, the participants saw the doctor as a strong positive motivating cue to action in prostate cancer screenings. Some noted the following:

*“That was the main issue with me when I first go and see the doctor for the first time... If I don't feel I can trust I go find another doctor. And the first appearance I get from him and the first response when I'm asking him questions, that lets me know if I want him to be my doctor or not”* (Participant 6).

*“...And I want to trust my doctor...that's the expert. We can go to Google all we want, but the doctor is the one”* (Participant 2).

The participants' detailed responses were as follows:

“And I'm going to need a doctor that is going to be honest with you, "Mr. XXX bent over, we gotta do what we gotta do, we need to check your blood and all these other things because, it's about being preventative! So today, I totally trust my doctor and the team that we have. So anything he says, I get checked twice a year because I am diabetic and he's goes through all of my blood work so that we are ahead of it!” (Participant 2)

“...And I want to trust my doctor...that's the expert. We can go to Google all we want, but the doctor is the one.” (Participant 2).

“I'm very comfortable. I actually sought a Christian doctor and so again, I'm good about taking his advice and we've been with for several years. But he's often not available, so I end up seeing the physicians' assistant. But then she goes back to him. But we do have a good rapport where I do listen to what he says.” (Participant 3).

“Every time my Doctor say it, I go get it. I don't even argue with him.” (Participant 6)

“It's a trigger but it is also some hesitation because hum, for lack of saying it a better way there's some scam with physicians too and with pharmaceuticals and all of that you know... I mean, its big money to get us on medicines and treatments and all of that. I mean, the doctors saying is definitely very important.” (Participant 3)

“That was the main issue with me when I first go and see the doctor for the first time... If I don't feel I can trust I go find another doctor. And the first appearance I get from him and the first response when I'm asking him questions, that lets me know if I want him to be my doctor or not.” (Participant 6)

*Influential Person.* The participants explored the impact of receiving messaging from someone with influence. The questions that were asked in the session were as follows:

Question: From whom do you feel would be the best in receiving prostate cancer screening Information and taking their suggested action?

Question: Do you believe that receiving information from someone Influential is effective for men and in the African American culture?

The participants expressed that receiving messaging about prostate cancer screenings from an influential person strengthened the message and the motivation to engage in the action. This also supports some of the previous findings from studies that examined the message being given by someone viewed as influential or prominent. One participant stated:

*“It gives more credibility, not that should because everybody should be equal in terms of status but if you have somebody famous talking about it gives more credibility to the subject as oppose to some random person and you have no on social media talking about it and you have no idea of who it is, that goes on your timeline. But if you it's somebody in your timeline that you respect, then you are going to take heed to that as oppose to somebody that is random”* (Participant 5).

According to the study done by Plowden (2006), African American men were motivated in screenings for prostate cancer by awareness programs, media information, and seminars from prominent community leaders. African American men, who observed the messaging and experiences of people in prominent positions (e.g., Adam Clayton Powell, who died of prostate cancer, and Colin Powell, who was treated successfully with the disease) were motivated to change their health behavior (Plowden, 2006). Plowden reported that when prostate cancer survivors communicated their experiences, those who hear the testimony adopt these successful behavioral health changes. The testimony was shown to strengthen the effectiveness of the message, leading to a stronger cue to action for prostate cancer screenings. Some of the participants mentioned the names of influential persons within their immediate community, media, or even on the national scope that might have an effective voice in motivating African American men to perform the action. In the session that participants gave examples of famous R & B musical artist, entertainer (Steve Harvey), Tom Joyner, and famous basketball player (Kobe Bryant) giving the message about prostate cancer screenings and how the influences of these voices might provide further motivation. One participant said:

*“The key word is “that we can relate to”. So my reason...I don't know but we all listen to Steve Harvey now. He can't read a card, but he's telling us to think like a men (laughs). Who doesn't listen to his morning show? Like Tom Joyner. We can relate to them because they are in our ear” (Participant 2).*

The inclusion of prominent and influential persons as possible peer educators and role models could aid in addressing the disparities in prostate cancer screenings seen in the African American community. A study conducted by Geiger (2005) emphasized that community

participation should represent a central ingredient in the success of community health-center programs and a way to encourage conversations. The men in the focus groups expressed the importance of being able to relate to someone and how this brought value to the message. Geiger (2005) goes on to support how the inclusion of this form of messaging lends a level of hope for minority populations who are otherwise overlooked.

Finding from the focus group participants support this claim:

“If you're going to be effective in your communication you need to communicate in 7 different ways to really be effective to have the message be delivered and received. I think you're eluding a talk show or people who have influence. You honed in if it's a popular TV shows and we're all watching and it's an episode about prostate cancer. All of sudden, "JJ got cancer and we're like, Oh lord! So, those are effective because we have different mediums and even when athletes speak up and we give them that power, when they speak up they tend to listen.” (Participant 2)

“Especially when you've followed those athletes and then they go pro and how well they're doing and you find out well this happens, you're like Oh wow! You know, so?” (Participant 1)

“The key word is "that we can relate to". So my reason...I don't know but we all listen to Steve Harvey now. He can't read a card, but he's telling us to think like a men (laughs). Who doesn't listen to his morning show? Like Tom Joyner. We can relate to them because they are in our ear.” (Participant 2)

“Now I do a lot of Facebook, not twitter but Facebook. It would be effective if it were some high profile person you know in terms of, let's say some R & B artist or Actor got diagnosed with it and then you know and some kind awareness of it. Something like that, but you know just general speaking of it would be passed that over.” (Participant 5)

“It gives more credibility, not that should because everybody should be equal in terms of status but if you have somebody famous talking about it gives more credibility to the subject as oppose to some random person and you have no on social media talking about it and you have no idea of who it is, that goes on your timeline. But if you it's somebody in your timeline that you respect, then you are going to take heed to that as oppose to somebody that is random.” (Participant 5)

“Me and you could have said that same thing and won't get nothing... but a Kobe Bryant whoever on social media, it's going be a fanfare out there!” (Participant 6)

“It would be a trigger to me, like I told you yesterday, I have a friend that is going through this now and I've known other people who have died. So, yes, it's would be a trigger to me to check that out man...with the quickness.” (Participant 4)

*Testimonials or previous experience.* One of the motivating cues that emerged from the focus groups were the testimonials of individuals that had previous dealings with prostate cancer and/or screenings.

The questions that were asked:

Question: What is the influence of family or the testimonies of other that have experience with prostate cancer and/or screenings? Is this a motivating cue to action?

Question: Do you believe that testimonies are effective for men in the African American culture?

Some of the men referred to personal conversations or experiences with other individuals and how this impacted them and became motivation for screening. The participants discussed interactions with individuals who shared testimonials of their previous experiences with prostate cancer and/or screenings. Many of the participants shared how this provided them with further insight and knowledge, motivating them to take action.

*“One of my friends that have supported my ministry for years are going through this now and consistency ask for prayer. And now one of my friends are going through this, so this is hitting me...”* (Participant 4).

These finding related to another study that was conducted by Plowden (2006), who concluded from a qualitative study that significant others, who included blood relatives, peers, and others with whom the patient could identify, were strong influences on whether or not African American men participated in PSA/DRE screenings. In the focus group session many of

the men shared how listening to men who experienced prostate cancer or screenings relieved some of the fears and misconceptions about engaging in the action. The personal feedback regarding the success of the screenings provided the necessary motivation and confidence for other participants to complete their examinations. Also, the men shared testimonials on how hearing the importance of early detection from others and then learning of the fatalities due to late detection were also strong motivators to action.

*“I had an Uncle that uh died from prostate cancer. When he got checked it was too late, it was too far-gone. And it's kind of like reminds you, in terms of impact on his family and about him dying and things like that it could have been prevented with a simple check. And I'm not sure how much he went to the hospital; it was just way too late. So that like in the back of my mind, "well you um this happened to him and this could be prevented with a smile check." Because if you check it early, it doesn't have to be a problem, that's to my understanding” (Participant 5).*

Some of the participants’ responses were:

“...The reality check for me when a person I knew who a 40 something odd years old came to me and said he had prostate cancer, OK! So that reality check, and that was not in the church. I know we will talk about social groups in a minute. And we have health and awareness in those groups. He spoke and that year we all went and got checked! Do what you got to do ‘cause that's real!” (Participant 2)

“Because my Grandmother died at 55 of diabetes, well, we caught it too late. Most, of the things, I've learned, whether it's prostate cancer or any type of...well if you catch it early enough, you can survive. The key is early detection... that would move me more than the commercials more than an advertisement that moved me to have somebody my age. I'm looking at him and he has cancer. I'm going, and he's a survivor. My cousin is dealing with prostate cancer today and he's 70. He's been dealing with it for 20 years.” (Participant 2)

“I had an uncle who was a preacher died in 90 something, he beat it like a bunch of time. And I said, if Uncle Isador can do it. And I had a cousin who survived...”

Not only getting checked, but follow-through with what the doctor tell you to do. I would like at them and they are able to getting around, but thrive.” (Participant 2)

“Well, we got cancer running through our family. I done lost my Mother, Auntie, Uncles, and a Sister. Within two years I lost my Mother and Sister, all my other sisters after my other sisters and my nieces, all them got together right after we bury our sister, went to the doctor and got a check-up for cancer.” (Participant 6)

“I had an Uncle that uh died from prostate cancer. When he got checked it was too late, it was too far-gone. And it's kind of like reminds you, in terms of impact on his family and about him dying and things like that it could have been prevented with a simple check. And I'm not sure how much he went to the hospital; it was just way too late. So that like in the back of my mind, "well you um this happened to him and this could be prevented with a smile check." Because if you check it early, it doesn't have to be a problem, that's to my understanding.” (Participant 5)

*Spouse/Family.* The participants discussed the role of a spouse or family and its impact as a cue to action for prostate cancer screenings.

The questions that were asked of the participants were as follows:

Question: Do you believe that the voice or role of one’s spouse or significant other is a cue to action in prostate cancer screenings?

Question: Do you believe that they role of family is important in the African American culture and in one’s health decisions?

Most of the men believed that their spouse, significant other, and family were positive motivators in taking the action. This supports many research finding that suggest how the role of a spouse or significant other can be a positive cue to action in the African American culture. One participant said, “*I would definitely listen to my spouse.*” (Participant 3). Mason (2005) discusses the impact of prostate cancer diagnosis and its impact on the patient, his wife or partner, and his significant others. These potential implications on the relationship often lead to support and reinforcement of the necessary actions to benefit their health. Further research also supports the

theme of positive motivation in one's spouse or significant other. In 2010 Jones et al. reported their results of African American men from a rural setting between the ages of 40-71 years. Findings indicated that informal support along with advice from family was significantly associated with African American men obtaining prostate cancer screening. Participants valued input from family members and family members were viewed as being a crucial part of the decision making process.

The role of the spouse or significant other was highly regarded amongst men in the focus groups. Many of them mentioned how these were motivators because the participants knew these individuals had their best interest at heart and how they kept reminding the participant of need for exam until this resulted in action. Some participants mentioned the following:

*“Because they want you to be around for the children, for themselves so they are going to be persistence in terms of encouraging you to go to something. So they probably have more weight than the doctor in terms of influencing you”* (Participant 5).

*“If he has a spouse, he is going to go to the doctor regularly, but if he lives by himself the EMS gotta come and take him to the doctor because he ain't going to get up and go on his own”* (Participant 6).

There are other studies that also support these finding. For example, Plowden (2006) acknowledged that significant others were motivating factors in educating African American men about prostate cancer, and most were motivated to participate in screening after knowing someone diagnosed with cancer. Arrington's (2005) study found that men, in general, portrayed their wives as selfless sources of support and as health care monitors and providers. Open communication among family members and friends who are familiar with the patient's daily life activities may assist the patient in deciding to have PSA/DRE screening (Jones et al., 2009).

The detailed responses of focus group participants are highlighted below:

“I would definitely listen to my spouse.” (Participant 3)

“If he has a spouse, he is going to go to the doctor regularly, but if he lives by himself the EMS gotta come and take him to the doctor because he ain't going to get up and go on his own.” (Participant 6)

“Yeah, she's gonna nag me until I go, I might as well go and gone get it over with.” (Participant 6)

“That's True. She's always nagging me. "You gotta lose that weight!” (Participant 7)

“Well, we got cancer running through our family. I done lost my Mother, Auntie, Uncles, and a Sister. Within two years I lost my Mother and Sister, all my other sisters after my other sisters and my nieces, all them got together right after we bury our sister, went to the doctor and got a check-up for cancer.” (Participant 6)

#### *Focus Group Results and PEN-3 Cultural Model*

The research findings were organized into seven identified themes: Church, Media, Social Groups, Doctor, Influential Persons, Testimonials, and Spouse/Family. These themes then were categorized, more specifically, within the domains of the *PEN-3 Cultural Model*. The constructs of *Perception*, *Enablers*, and *Nurturers* were three of the components of the model that were identified to further illuminate the role of culture in the decision making process of African American men and prostate cancer screenings. The *Perceptions* identified as themes by the participants within the focus groups were: The Importance of Trust, Feeling Connected to the Source, and the Importance of Culturally Sensitive Messaging. Three *Enablers* that were identified as positive motivators for prostate cancer screenings: Testimony of Experience, Influential Persons, and Doctor Recommendations. The participants identified the role of three positive *Nurturers*: Social Groups, Church, and Family/Spouse. These themes are outlined in (Table 11).

Table 11. Focus Group Themes and the *PEN-3 Cultural Model*

<i>Perceptions</i>	<i>Enablers</i>	<i>Nurturers</i>
The Importance of Trust	Testimony of Experience (survivors, early detection, loss of life)	Social Groups (Fraternity, Community Organizations, Church, Clubs)
Feeling Connected to the Source	Influential Persons	Church (Pastors, Parishioners, Spirituality)
Importance of Culturally Sensitive Messaging	Doctor Recommendation	Family/Spouse

#### 4.13 Phase Integrated Summary

The purpose of this study was to examine the relationship between *External Cues to Action* and prostate cancer screenings among African American males. Phase 1 focused specifically on external cues to action, examining their influence in four areas particular areas: (1) Media/Advertising, (2) Friends/Family, (3) Medical Professionals, and (4) Social/Community. Phase 2 provided an opportunity for the participants lend their voice and share their experiences; this allowed the researcher to gain a deeper understanding of their behaviors in relation to prostate cancer screenings. From the detailed results chronicled above, there was overlay in findings reported in Phase 1 and Phase 2.

For the category Media/Advertising, the use of the television as a cue was significant in Phase 1. The cues *TV News*, *TV Ad*, *TV PSA*, *TV News Service Announcement* each had high means ranging from (1-62-1.44), ranking as high as second in this category. This find was a noted theme within the focus groups in Phase 2. The men mentioned how within the category of Media/Advertising, the use of the television for a cue to prostate cancer screening would be more utilized over other mediums. The participants also mentioned that the internet was useful as well, however, the use of social media was not highly valued. This was similar to findings in Phase 1,

which ranked the cue, *Internet*, as the number one cue within this category. The men from the focus groups also mentioned how print media (newspaper/newsletter) and radio were not highly used and were viewed as non-effective in motivation. This theme was also supported in Phase 1, as the means of print media and radio ranked low in comparison to other cues in this category (1.19-1.06).

Within the category, Friends/Family, the participants expressed the value family and spousal support. This noted theme was voiced and viewed as a nurturer in Phase 2. Participants valued support and information from family and friends and saw them as motivators in making the behavior change. In Phase 1, the cue *Specific Advice Family* had the highest cue within this category with a mean of (2.09). Specific advice from friends/family had higher means than general advice.

In Phase 2, the participants expressed the importance in role of their physicians. This was one of the most valued cues and seen as an enabler for the participation in prostate cancer screenings. The findings in Phase 1 identified the same values for this cue of action, noting it as very significant in this category. *Specific Advice from the Physician* had the highest-ranking mean overall (2.19).

Finally, in the category Social/Community, the participants viewed the church as a key nurturer in Phase 2. The men discussed historical value of the African American church and its grave influence in African American culture. The importance of social groups (i.e. fraternities, church groups, and community organizations), testimonies, and shared experiences were viewed, as motivators were also a large discussion during both focus group sessions. In Phase 1, the cue *Church* ranked second with a mean of (1.77) in the Social/Community category. *Health Fair* ranked number 1 in this category and fourth in overall cues. Community health fairs often allow

the attendee direct access to medical professionals, therefore strengthening the use of this cue.  
Findings from both phases report that advice from healthcare professionals was significant.

## CHAPTER 5

### DISCUSSION

#### **5.1 Policy Implications**

The findings in this study have significant policy implications. In 2012, under new guidelines issued by the U.S Preventive Services Task Force (USPSTF), the mass screening of prostate cancer for all eligible men was no longer recommended as a required health care screening. Instead, individual screenings were suggested based on informed decisions made by the doctor and the patient, after discussion and examination of the patient's medical history (US Preventive Services Task Force [USPSTF], 2012). This new guideline has sparked the support of multiple organizations, which have also recommended against prostate cancer screenings, causing a sense of uncertainty within medical community and among African American males; the population that is most at risk for the disease.

Consequently, in effort to bring a unified recommendation, it is suggested that greater collaborations occur between researchers, the medical community, and outside organizations in hopes of providing clarity concerning prostate cancer screenings recommendation. Further discussion among these groups needed to discuss the effects of prostate cancer within African American male population, the pros, and cons of screenings, and the benefits of early detection. Through this collaborative effort, an overall and consistent decision can be made for recommendations throughout the United States. The consistency in recommendations would further alleviate confusion amongst communities that are presented with health education and promotion efforts.

These policy implications benefits would also affect policy in relation to insurance. In an effort to address health disparities, the federal government passed the Patient Protection and

Affordable Care Act (ACA, 2010). Shortly thereafter, the United States Preventive Service Task Force made its recommendations that the PSA testing was not required. As a result, the Affordable Care Act does not provide PSA or DRE coverage for men. Not only will policy changes supporting prostate cancer screenings establish clarity in screening recommendations, but insurance coverage and improved access to screenings which would be beneficial for longevity of African American males in the United States.

In relationship to African American men, targeted public policy initiatives are needed in supporting education, awareness, research, and outreach. A policy that allocates further resources for the study of a more reliable test for prostate cancer would be greatly needed. This would reduce the over-diagnoses of the disease, limiting the number of unnecessary prostate biopsies and treatments. An additional policy to mandate testing within the African American male population would also be essential. This would garner the support and coverage of public and private insurances and from the medical community. These policy initiatives will help reduce disparities, improve access, and further the allocation of resources dedicated to this target population.

## **5.2 Research Implications**

This study examined the role of cues to action and prostate cancer screenings among African American males. It examined the source of the cues and identified which ones were most effective in motivating screenings within this population. Although effective cues to action were identified, additional research is needed to determine the delivery methods of the messaging. For example, many of the participants in the study discussed how television is a highly utilized cue to action within the category of Media/Advertising. Further research would be necessary to

understand how a television advertisement promoting prostate cancer screening should be delivered to African American males. What delivery methods work best within this population? What style of messaging is most effective and received? For example, a study could conduct focus groups with African American men and provide them with options of television commercials for prostate cancer. These commercial would each a have different style and delivery message targeting African American males. One commercial would focus on testimonials and utilize the aspect of social support. Another message could use fear appeals and illustrate some the sense of “loss” if prostate cancer is not detected early. Another message could use an African American physician and provide more of an education emphasis, addressing some of the myths that surround the disease. Overall, more studies need to be conducted that research the effective channels and delivery of messaging most effective in this population.

The role of culture was another component explored in the study. The PEN-3 model was used to gain further insight on the unique qualities that must be considered when targeting African American males for prostate cancer screenings. Further studies are needed to examine the role of culturally sensitive marketing and community campaigns that center messaging on African American males. This study explored key components within the PEN-3 sphere, *Relationships & Expectations*. Within this sphere, the study highlighted cues that served as enablers, nurturers, and perceptions within this population. Further research is recommended within the sphere of *Cultural Empowerment*. This research would be essential, as it would provide further insight on the specific cultural beliefs and practices specific to African American males. The three components within this sphere focus on positive, existential, and negative behaviors. A study could focus utilize focus groups to further understand some of the barriers associated with prostate cancer screenings and how they affect African American males decision

to participate in prostate cancer screenings. A study could also survey African American males level of perceived barriers personally, within their family, community, and with health professionals. This research would further illuminate some of the negative practices and beliefs that have historically served as barriers to prostate cancer screenings. The information gained from this research would allow messaging to address these barriers and increase the overall effectiveness of delivery. This research would also provide health professions the opportunity to address these barriers, through further education and culturally sensitive messaging. The goal would be to provide men with alternative actions to modify these negative behaviors and encourage participation in prostate cancer screenings.

### **5.3 Proposed Campaign**

African American males are consistently disproportionately affected by prostate cancer (CD, 2007). Marketing and health promotion strategies are necessary and essential to encourage early detection through the use screenings. There are several program implications that can be identified as a result of this study. Communities similar (i.e. size and demographics) to Champaign-Urbana (120,000 population) could utilize some key strategies to promote prostate cancer screenings within African American males (which make up 12.47% Champaign County).

Community campaigns should consider the use of the African American church. In my study, the men identified the church as a trusted source within African American culture and also a place that African American males frequent. Of the approximately 40 African American churches in the area, strong partnerships would be recommended with health professionals, church pastors and leaders. The first step would be to gather all parties and properly educate them on the prostate cancer and its effect on African American males. During the times of

gathering it would be necessary to ensure that pastors and leaders are properly equipped as ambassadors to effectively translate the information and its' significance to their respective congregations. The pastor would not only discuss and encourage prostate cancer screenings, but health professional would partner and come alongside church leaders for education, awareness, and Q & A sessions. Health professionals would provide males with an intimate setting within small groups, bible studies, and community events to address concerns and the importance of screenings. The combined usage of pastors, health professionals and the testimonials of other African American males would be useful to serve as key enablers to encourage consistent screenings.

A campaign should host health fair within the African American community. Results from this study suggest that health fairs with specific health information from health professionals are cues to action for African American men. The target group should host the health fair at a central location within the African American community; one that is respected and frequented. This event should use a barbershops, fraternities, men social groups, and churches as forefront collaborators. At the health fair men would receive information about their overall health. They would also discuss the role of family history, risk factors, and other information specific to prostate cancer screenings. A community figure or prominent person should be present at the health fair. Within this study, key figures were noted as an enabling cue to encourage and strengthen messaging within the community. This person would share a testimonial of overcoming the fears screenings or having success with early detection, would be greatly beneficial to the target audience. It is also recommended that the African American male attendees have access to a physician onsite at the health fair. This would provide them with the opportunity to ask specific questions and develop further trust and rapport with healthcare

professionals.

One of the other key elements for an effective community campaign for prostate cancer would be the role of spousal and familial support. The finding in my study revealed that their roles are vitally important cues in the decision making process. A community campaign must consider effective ways to educate and provide family/spouse with the effective tools to encourage males to participate in screenings. Community campaigns can gain access to one's spouse and family in two ways. Firstly, the wives can also be targeted and recruited within the church. Although African American males frequent the church, African American women are still remain the membership's majority (Frederick, 2005). These spouses would receive prostate specific information; the ages that their spouses is suggested to be screened, some of the fears that males face, the benefits of early detection, common signs and symptoms, and how to effectively support their spouse or family member. These women would be able to ask question and ultimately leave with the information necessary to be effective supporters of their spouses in the decision making process for prostate cancer screenings. Secondly, the campaign can target women within their social groups such as sororities and fitness groups. These avenues would give access to large groups of women. Other women could share success stories on ways they were able to motivate their spouse and share it with the group for the greater good. The women not only would have education and information, but also the support within their social groups to continue supporting their spouse.

A community campaign should also consider the usage of media/advertising. From the results my study, findings suggest that television is one of the most effective mediums for African American males. Some key insights from the focus group sessions provided some ideas for effective advertisements. Firstly, the advertisement needs to be culturally sensitive. The

message needs to contain prostate cancer information that is specific to African American males. It would be essential to have relevant information specific to African American men and also screening recommendations for this population. Secondly, the message should air around the time of or in conjunction with sports programming or shows that feature African American culture (i.e. sitcoms/movies). These are the noted times and most recognized frequency of watched television among African American male. A study by Owens (2011) also supported these findings. Thirdly, the message should be strengthened by a “famous” or influential person. Messaging from these sources further allow males to connect with the information and found motive action. Fourthly, the television messaging positioned from one’s experience, through testimony. The message should address some of the potential barriers and fears associated with screenings within this population.

Lastly, it is recommended that the program campaign strengthen the relationship between the patient and provider. Community efforts should make strong partnerships with health professionals and have them more visible within the African American community. Many African American males don’t have a conversation with a physician outside of the doctor’s office. Encouraging physicians to be present and visiting churches, fraternities, small groups and community events will only strengthen the trust of African American males. The importance of “trust” was a major influencer in motivating action. The findings from this study suggest that the primary cue for African American males come through information from a physician. Providing African American males the opportunity to ask questions and have open communication with a physician are important. The physician has the ability to destigmatize screenings and ultimately establish trust by building rapport. These key elements are essential and effective in increasing prostate cancer screenings in this population.

#### **5.4 Limitations**

The population within this study did not represent a broad scope of African American men. The sample population was limited to Champaign-Urbana Illinois and surrounding communities. Findings can only be generalized to similar cities with similar demographic populations. While there is evidence from prior research that the findings can be supported to produce a more definitive result, a larger non-random sampling method with scientific inquiry must be utilized to generalize findings to the larger African American male population.

The participants were gained by a convenience sample in the Champaign-Urbana community and recruited through the usage of local barbershops and churches. This study was not randomized and not all African American men between the ages of 40-65 had an equal opportunity to be selected.

The original Cues to Action Questionnaire was used for this study and no questions were changed. Some of the general categories, for example questions about “family” had no mention of “spouse” or “significant other.” These questions might have limited the perspective of the participant with the options being so broad in context.

Despite these limitations, the study’s design provided sufficient methodologic rigor to validate the findings and the findings provide valuable information. This information can be used to contribute to the future development of effective cues to action that are culturally appropriate, promoting prostate cancer screenings in African American males.

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APPENDIX A  
IRB APPROVAL LETTER

January 4, 2016  
Reginald Alston  
Kinesiology &  
Community Health 120  
Huff Hall  
Champaign, IL 61820  
M/C 588

RE: *Cues to Action and Prostate Cancer Screenings Among African-American Men*  
IRB Protocol Number: 16446

Dear Dr. Alston:

Thank you for submitting the completed IRB application form for your project entitled *Cues to Action and Prostate Cancer Screenings Among African-American Men*. Your project was assigned Institutional Review Board (IRB) Protocol Number 16446 and reviewed. It has been determined that the research activities described in this application meet the criteria for exemption at 45CFR46.101(b)(2).

This determination of exemption only applies to the research study as submitted. Please note that additional modifications to your project need to be submitted to the IRB for review and exemption determination or approval before the modifications are initiated.

We appreciate your conscientious adherence to the requirements of human subjects research. If you have any questions about the IRB process, or if you need assistance at any time, please feel free to contact me or the IRB Office, or visit our website at <http://www.irb.illinois.edu>.

Sincerely,



Dustin L. Yocum, Human Subjects Research Specialist, OPRS c: Matthew Nesbitt

APPENDIX B  
CONSENT FORMS

Dear Potential Participant,

You have been invited to participate in this study to measure your views about Prostate Cancer Screening. The study is being conducted by Matthew Nesbitt, a doctoral candidate at the University of Illinois at Urbana-Champaign (UIUC) in the Department of Kinesiology and Community Health. Upon completion of reading this letter, you are asked to verify that you have completely read and comprehend the purpose of the interview and agree to participate. This survey is being conducted to examine the various *Cues to Action* or “triggers” that motivate African American males to participate in Prostate Cancer Screenings.

You are eligible to participate in this study if you are (a) African American (b) male (c) 40-60 years of age (d) No diagnosis of Prostate Cancer (e) Minimum Education of a High School Diploma (f) able to speak and read English. Participation is also voluntary; “You are free to decide not to participate in this study or to withdraw at any time without adversely affecting your relationship with the investigator, the University of Illinois, or your course assignments or grades”. This research involves a 15-minute survey and a potential for a 1-hour focus group session.

To maintain confidentiality, you will not be required to provide your name or any other identifying information on the survey. You are not required to answer any questions that make you uncomfortable. In addition, because data will be collectively analyzed your name will not be associated with your responses. The survey should take approximately 15 minutes to complete. Your decision on whether or not to participate will not result in any loss or gain of benefits to which you are otherwise entitled.

The benefits you will receive by participating in this survey are an increase in your level of Prostate Cancer awareness, along with information and knowledge of national health policy recommendations. On the other hand, in examination of personal behaviors, some questions may make you feel uncomfortable. As a result, resources about local health providers will be available, of which you will receive a copy. Results of this study could potentially be submitted for publication in academic journals and/or conference presentations. The risks are not greater than those encountered in daily life. As a survey participant, you have the right to ask questions about the content and collection of the study information. Please address any questions or concerns about this study via phone or email to Dr. Reginald Alston at (217) 333-XXXX or [alston@illinois.edu](mailto:alston@illinois.edu) and Matthew Nesbitt at (217) XXX-XXXX or [mlnesbit@illinois.edu](mailto:mlnesbit@illinois.edu). If you have any questions about your rights as a research participant that has not been answered by the investigator, you may contact the University of Illinois at Urbana Champaign, Institutional Review Board at (217) 333-2670 or [irb@illinois.edu](mailto:irb@illinois.edu). Thank You.

- I am 40 years of age or older.
- I have read and understand the above consent form and voluntarily agree to participate in this study.
- I will be given a copy of this consent form for my records.

I will complete the survey and I am also interested in participating in the 1-hour focus group session.

\_\_\_\_\_  
Participant Signature

\_\_\_\_\_  
Date

## FOCUS GROUP INFORMED CONSENT

Dear Potential Participant,

You have been invited to participate in this study to measure your views about Prostate Cancer Screening. You have already completed the survey and have displayed interest in our 1-hour focus group session. The study is being conducted by Matthew Nesbitt, a doctoral candidate at the University of Illinois at Urbana-Champaign (UIUC) in the Department of Kinesiology and Community Health. Upon completion of reading this letter, you are asked to verify that you have completely read and comprehend the purpose of the interview and agree to participate. This survey is being conducted to examine the various *Cues to Action* or “triggers” that motivate African American males to participate in Prostate Cancer Screenings.

You are eligible to participate in this study if you are (a) African American (b) male (c) 40-60 years of age (d) No diagnosis of Prostate Cancer (e) Minimum Education of a High School Diploma (f) able to speak and read English. Participation is also voluntary; “You are free to decide not to participate in this study or to withdraw at any time without adversely affecting your relationship with the investigator, the University of Illinois, or your course assignments or grades”.

Your responses during the focus group session will be audio taped for transcription by the investigator. By signing this document you are consenting to have your responses recorded. Consenting to the recording is mandatory for participation in this study. To maintain confidentiality, you will not be required to provide your name or any other identifying information during the interview recordings. You will be asked not to mention any names in your responses to the question items. You are not required to answer any questions that make you uncomfortable. In addition, because data will be collectively analyzed your name will not be associated with your responses. The interview should take approximately 1-hour to complete. Your decision on whether or not to participate will not result in any loss or gain of benefits to which you are otherwise entitled.

**Will my study-related information be kept confidential?** Yes, but not always. In general, we will not tell anyone any information about you. When this research is discussed or published, no one will know that you were in the study. However, laws and university rules might require us to disclose information about you. For example, if required by laws or University Policy, study information which identifies you and the consent form signed by you may be seen or copied by the following people or groups:

- The university committee and office that reviews and approves research studies, the Institutional Review Board (IRB) and Office for Protection of Research Subjects;
- University and state auditors, and Departments of the university responsible for oversight of research;
- Federal government regulatory agencies such as the Office of Human Research Protections in the Department of Health and Human Services;

We will ask everyone in the focus group to respect the privacy of other participants and to treat anything said in the group as confidential. However, please remember there is no guarantee that other participants will cooperate.

The benefits you will receive by participating in this survey are an increase in your level of Prostate Cancer awareness, along with information and knowledge of national health policy recommendations. On the other hand, in examination of personal behaviors, some questions may make you feel uncomfortable. As a result, resources about local health providers will be available, of which you will receive a copy. Results of this study could potentially be submitted for publication in academic journals and/or conference presentations. The risks are not greater than those encountered in daily life. As a survey participant, you have the right to ask questions about the content and collection of the study information. Please address any questions or concerns about this study via phone or email to Dr. Reginald Alston at (217) 333-XXXX or [alston@illinois.edu](mailto:alston@illinois.edu) and Matthew Nesbitt at (217) XXX-XXXX or [mlnesbit@illinois.edu](mailto:mlnesbit@illinois.edu). If you have any questions about your rights as a research participant that has not been answered by the investigator, you may

contact the University of Illinois at Urbana Champaign, Institutional Review Board at (217) 333-2670 or irb@illinois.edu. Thank You.

- I am 40 years of age or older.
- I have read and understand the above consent form and voluntarily agree to participate in this study.
- I will be given a copy of this consent form for my records.

\_\_\_\_\_  
Participant Signature

APPENDIX C

PROSTATE CANCER SURVEY

**CUES TO HEALTH ACTION QUESTIONNAIRE**  
**TEXAS TECH UNIVERSITY HEALTH SCIENCES CENTER - SCHOOL OF NURSING**

**MARKING INSTRUCTIONS:** USE A #2 PENCIL ONLY (OR SOFTER). FILL IN THE BUBBLES IN A SOLID DARK SQUARE. IF YOU CHANGE A MARK ERASE COMPLETELY. SEE EXAMPLES.



USE NO PENCIL ONLY

PLEASE COMPLETE BOTH SIDES OF THIS FORM

A. Below are 5 actions that a person might use to improve their health. Please choose just ONE of those actions that might apply to you as a way to improve YOUR health. Use that action as your own example while you answer the questions below.

- THE 5 HEALTH ACTIONS ARE:**
- REDUCE THE FAT IN MY DIET
  - BEGIN OR INCREASE THE AMOUNT OF MY DAILY EXERCISE
  - STOP SMOKING CIGARETTES
  - REDUCE WEIGHT BY IMPROVED EATING AND EXERCISE
  - BEGIN TO USE STRESS MANAGEMENT TECHNIQUES REGULARLY

B. Now, thinking about the action you chose as your example, choose the number that tells how likely different methods of encouragement are to prompt you to take the action. The numbers are the same for each item. The numbers mean the following:

- 0 = NOT AT ALL
- 1 = POSSIBLY LIKELY
- 2 = MODERATELY LIKELY
- 3 = VERY LIKELY

**SAMPLE:** Suppose the action you chose is "INCREASING THE AMOUNT OF DAILY EXERCISE". The item you are rating is shown below.

"Hearing about the action from a person I admire" (0) (1) (2) (3)

The darkened bubble shows that item marked #1 = POSSIBLY LIKELY. This means that you think that this item is "POSSIBLY LIKELY" to prompt you to take the action. NOW MARK EACH OF THE 32 ITEMS BELOW AS YOU THINK EACH ONE WOULD PROMPT YOU TO TAKE THE ACTION. There is no correct answer; what is important is your idea about what the effect of the item would be for you.

	NOT AT ALL	POSSIBLY LIKELY	MODERATELY LIKELY	VERY LIKELY
1. General public service announcement on radio	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Advertisement for a product or service related to this health action, on radio	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Information about your health indicators, such as B/P or cholesterol measures, received at a health fair or screening	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Information on a T.V. talk show	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Information on T.V. news or news magazine show	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Advertisement for a product or service related to this health action, on T.V.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Public service announcement on T.V.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. News story in a newspaper	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. Newspaper advertisement for a product or service related to this health action	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. Book	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. Article or personal quiz in a magazine	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. Newsletter from a business or organization	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. Material you or a friend or family member find on the Internet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. Information provided at church or church group	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. Information provided at a club or association meeting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

PLEASE TURN OVER AND COMPLETE THE REVERSE SIDE

	NOT AT ALL	POSSIBLY LIKELY	MODERATELY LIKELY	VERY LIKELY
16. Information provided at a convention or workshop you attended	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17. Specific advice from a health care provider based on information about your health status	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18. Specific advice from a friend, based on information about your health status	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19. Specific advice from a close family member, based on information about your health status	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20. General advice from a health care provider (NOT based on specific information about your health status)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
21. General advice from a friend (NOT based on specific information about your health status)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22. General advice from a close family member (NOT based on specific information about your health status)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23. Agreeing with or promising a friend that you will begin the action, with a specific plan	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24. Agreeing with or promising a close family member that you will begin the action, with a specific plan	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25. Agreeing with your health care provider that you will begin the action, with a specific plan	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
26. Feeling better or feeling good physically after beginning to take the action	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
27. Feeling better or feeling good mentally after beginning to take the action	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
28. Being complimented about taking the action by someone whose opinion you value	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
29. Feeling bad or uncomfortable physically when you do not engage in the action	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
30. Feeling bad or uncomfortable mentally when you do not engage in the action	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
31. Feeling bad or uncomfortable physically after a health crisis	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
32. Feeling bad or uncomfortable mentally after a health crisis	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**MARK THE ITEMS THAT BEST DESCRIBE YOU**

<b>GENDER</b>		<b>AGE CATEGORY</b>	
<input type="checkbox"/> FEMALE <input type="checkbox"/> MALE		<input type="checkbox"/> 18-30	<input type="checkbox"/> 61-70
<b>EDUCATION LEVEL</b>		<input type="checkbox"/> 31-40	<input type="checkbox"/> 71-80
(Choose the ONE that shows the HIGHEST level you completed)		<input type="checkbox"/> 41-50	<input type="checkbox"/> 81 or MORE
<input type="checkbox"/> Finished grades through 8	<input type="checkbox"/> Attended more than 2 years but less than 4 years of college	<b>WHERE YOU LIVE</b>	
<input type="checkbox"/> Finished grades through 12	<input type="checkbox"/> Attended 4 or more years of college	<input type="checkbox"/> Rural area or small city considered rural	
<input type="checkbox"/> Attended 0-2 years of college		<input type="checkbox"/> Larger city or area considered urban	

**THANK YOU FOR HELPING WITH THIS STUDY!**

FORM 10 - 5/1999 BY DEAN WATKINS @ TEXAS TECHNOLOGICAL CENTER

## APPENDIX D

### FOCUS GROUPS QUESTIONS

1. Do you believe that churches are an effective place to receive information about health Prostate Cancer Screenings in men?
2. Which form of media is best for receiving information about Prostate Cancer Screenings, encouraging you to take action (t.v, radio, internet, flyer, etc)?
3. What forms of media do you dislike and would be less prone to participate in the action of Prostate Cancer Screenings?
4. What the best setting/place to receive health information? At home, church, medical facility, or a within the community?
5. Which setting would you dislike receiving information about Prostate Cancer Screenings and be less prone to take the suggested action?
6. From whom do you feel would be best in receiving Prostate Screening information and taking their suggested action (Pastor, Community Leader, Family member, Spouse, etc.)?
7. How do you believe that one's culture affects one's receptivity to health information and performing the suggested action?

APPENDIX E

RECRUITMENT FLIER

# LOOKING FOR AFRICAN AMERICAN MEN



## ARE YOU?

- Between the ages of 40-60
- Live within Champaign-Urbana community
- Have a minimum High School Diploma
- No diagnosis of Prostate Cancer

**If so,  
we want to talk to you!!!  
(15-minute survey  
participation)**

**For more information, please call Matthew Neshitt at  
217-530-XXXX**

**THIS STUDY IS SPONSORED BY :**  
UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN  
DEPARTMENT OF KINESIOLOGY & COMMUNITY HEALTH  
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