

WHAT ARE AFRICAN AMERICANS BEING TOLD ABOUT THE PSA EXAM?

A CONTENT ANALYSIS OF THE MEDIA COVERAGE ON

THE PROSTATE CANCER SCREENING DEBATE

by

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(Under the Direction of Jeff Springston)

ABSTRACT

Prostate cancer is the second-most diagnosed and common cause of cancer death among men in the United States and the primary screening/early detection method, the prostate specific antigen (PSA) exam, is not completely reliable. Despite its prevalence, if prostate cancer is diagnosed early enough, it is highly treatable. This study uses two samples of mass media coverage, the 2010 calendar year and October – December 2011, to examine how the prostate cancer screening debate plays out in the media most consumed by African American males over 40 based on framing theory using both quantitative and qualitative methods. Results indicate that the media coverage of prostate cancer screening is largely neutral but there are significant differences between media outlets in the way the debate is framed. Implications, limitations, and future research are also discussed.

INDEX WORDS: Prostate cancer, men, African American, newspaper, magazine, internet, television, framing theory, prostate exam, PSA exam, health communication

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DEDICATION

I dedicate this thesis to Cam'ron, Jim Jones, Juelz Santana, and of course, Freekey Zekey.

Harlem World, USA.

TABLE OF CONTENTS

	Page
LIST OF TABLES.....	vi
LIST OF FIGURES.....	vii
CHAPTER	
1 INTRODUCTION.....	1
2 LITERATURE REVIEW.....	5
3 METHODOLOGY.....	24
4 RESULTS.....	33
5 DISCUSSION.....	49
6 CONCLUSSION.....	60
REFERENCES.....	66
APPENDICES.....	73
A: Thesis Codebook.....	73

LIST OF TABLES

	Page
Table 1: Krippendorff's Alpha Scores for Coders.....	30
Table 2: Breakdown of Articles Selected for Qualitative Analysis.....	32
Table 3: Percentages of Story Frames by Year.....	34
Table 4: Comparison of One-Sided or Two-Sided for 2010 & 2011.....	35
Table 5: Frame Percentages for the Different Media Outlets.....	36
Table 6: Frame Percentages for "Hard" versus "Soft" News.....	37
Table 7: Frame Percentages for "Hard" versus "Soft" News for Newspapers.....	38
Table 8: Frame Percentages for Mention of "Risk".....	39

LIST OF FIGURES

	Page
Figure 1: Scheufele's (1999) Process Model of Framing Research.....	6

CHAPTER 1: INTRODUCTION

Early detection through screening remains one of the best weapons in the fight against many forms of cancer. With early detection survival rates continuing to increase, organizations like the American Cancer Society (ACS) and the National Cancer Institute (NCI) promote guidelines that encourage regular screenings for breast, colorectal, cervical, and endometrial (uterine) cancer (American Cancer Society, 2012a; National Cancer Institute, 2012b). The ACS and NCI also provide information on screenings for lung, bladder, esophageal, stomach, liver, oral, ovarian, skin, testicular, and prostate cancer while cautioning that "there are no screening tests or detection methods routinely used or recommended" for those specific cancers (American Cancer Society, 2012; National Cancer Institute, 2012b).

Prostate cancer specifically is an epidemic in the United States; it is the second-most diagnosed cancer in men (after skin cancer) and the second-most common cause of cancer death among men. In 2010 alone, it was estimated that there would be 217,730 new cases of prostate cancer and it would claim the lives of 32,050 men and those numbers continued to climb in 2011 with an estimated 240,890 new prostate cancer cases and 33,720 estimated deaths (American Cancer Society, 2010; American Cancer Society, 2011a). Given the prevalence of prostate cancer, it is unfortunate that there are still many unknowns regarding the disease. The purpose of this research will be to describe the way that the mainstream media have framed the prostate cancer screening debate for a particularly at-risk population segment both before and after a major announcement about prostate cancer screening (African American males over 40).

The screening/early detection methods for prostate cancer at this point are not reliable and the subject of much debate (American Cancer Society, 2010). Currently the best weapon in the fight against prostate cancer is the controversial prostate specific antigen (PSA) exam. The PSA exam is a simple blood test initially recommended for men over 50 years of age that measures for a protein produced by the cells of the prostate gland. The amount of PSA in the blood is a biological marker of prostate cancer; while it is normal for men to have a low level of PSA in their blood, a higher/rising level of PSA is often an indicator of prostate cancer (National Cancer Institute, 2012c).

The test is controversial because a rising PSA level also can be an indicator of benign conditions -- such as prostatitis or benign prostatic hyperplasia -- leaving the exam subject to a significant number of false positives. The issue of potential incorrect diagnosis (false positive) or overdiagnosis (slow growing cancers that aren't life-threatening) becomes even more problematic as treatment for prostate cancer has harsh potential side effects including erectile dysfunction or incontinence (National Cancer Institute, 2012c).

While the PSA exam had been recommended for men over 50 years of age since its inception in the late 1980's, the controversy has only continued to grow as research on the exam's effectiveness during the past decade has become increasingly pessimistic. Just last year, researchers who conducted a 20-year longitudinal screening trial study of the PSA exam concluded that after the two decades of follow-up, "the rate of death from prostate cancer did not differ significantly between men in the screening group and those in the control group." (Sandblom et. al, 2011) In addition to those findings, this last October saw the biggest swing in the prostate screening debate when, in a widely-publicized announcement, the United States

Preventive Services Task Force concluded that "healthy men" should no longer be screened for prostate cancer using the current exam (Harris, 2011).

In light of this latest research, the American Cancer Society changed their recommendation and now currently advises that "men thinking about prostate cancer screening should make informed decisions based on available information, discussion with their doctor, and their own views on the benefits and side effects of screening and treatment" while the National Cancer Institute states that "it has not yet been shown that screening for prostate cancer decreases the changes of dying from prostate cancer." (American Cancer Society, 2011b; Harris, 2001; National Cancer Institute, 2012c)

However, of critical importance is the fact that if prostate cancer is diagnosed early enough, it is highly treatable. Research shows that if it is detected in its earliest stages, it has a 5-year relative survival rate nearing 100%. Unfortunately, if it is caught in its more advanced stages, the survival rate is significantly lower (31%) (American Cancer Society, 2010).

Many questions still exist about prostate cancer, but many of the causal factors have been discovered by research. Age remains the most important risk factor for prostate cancer; incidence rates increase in men until about age 70 and decline thereafter (American Cancer Society, 2010). Other significant factors include family history, genes, obesity, diet, smoking, prostate inflammation, and sexually transmitted infections (American Cancer Society, 2012b).

One of the most significant causal factors of prostate cancer is race; African-American men have the highest documented prostate cancer incidence rate in the world and double the mortality rate from prostate cancer than any other racial group (American Cancer Society, 2010).

Studies also have shown that for African-Americans the death rate is related to their socioeconomic status. Men who have less than 12 years of education are twice as likely to succumb to prostate cancer as compared to those with more education (American Cancer Society, 2010).

As the mainstream media impacts the lives of millions of Americans every day, this research will describe the ways the mainstream media "frames" the prostate cancer screening debate in the media most consumed by African American males over 40 (the suggested age for screening to begin for the at-risk group). While individual views on prostate cancer screening have been well documented in numerous academic studies, very little research has been conducted on mainstream media content that is most commonly consumed by this specific demographic group (African American males over 40) regarding prostate cancer screening (Myers et. al, 1998). For comparison purposes, this research will also examine the differences in the framing of the prostate cancer screening debate both before and after the latest recommendation from the United States Preventive Services Task Force. This comparison will give insight into how the framing of the prostate cancer screening debate may change after the release of major new findings.

While this research cannot prove that the media frames determine African American males decisions about screening for prostate cancer they will provide a descriptive analysis of these frames which is the first step in understanding their influence.. With this information, African American males over 40 will have a better understanding of how the media frames the prostate screening debate and how it may affect their decision-making. Journalists also will be more sensitive to the framing of this issue and potential consequences.

CHAPTER 2: LITERATURE REIVEW

Framing Theory

Given the role that the media play in millions of people's lives, the media are able to "frame" complex topics for audiences in a way that will guide their preferences regarding that topic in the future (Tversky & Kahneman, 1981). The concept of 'framing' is based on Tversky & Kahneman's (1981) study which examined the "psychology of choice." The researchers pointed out that "individuals who face a decision problem and have a definite preference might have a difference preference in a different framing of the same problem" and "(people) are normally unaware of alternative frames and of their potential effects on the relative attractiveness of options." (Tversky & Kahneman, 1981, p. 457)

As the concept has been built upon, framing has been defined in many ways by scholars. Entman (1993) described framing as "a scattered conceptualization" while McCombs, Shaw, & Weaver (1997) suggested that framing is an extension of agenda-setting theory (Entman, 1993, p. 51; McCombs et. al, 1997). One of the best known conceptualizations of "framing" comes from Scheufele's (1999) overall view of the concept as being comprised of four different processes : "frame building", "frame setting", "individual-level effects of framing", and "'journalists as audiences".

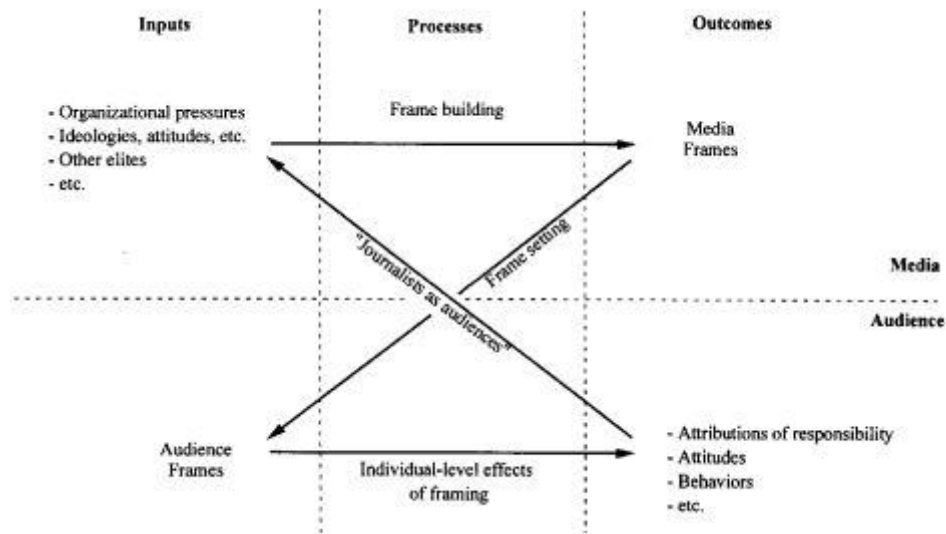


Figure 1: Scheufele's (1999) Process Model of Framing Research

In Scheufele's (1999) process model of framing research, "frame building", a concept borrowed from agenda-setting research, describes the processes that influence the creation or changes of frames applied by journalists. The second process in the model is "frame setting" which, also similar to McCombs and Shaw's (1972) idea of agenda setting, is concerned with "the salience of issue attributes" (p. 116), or essentially the importance of certain characteristics of the issue being framed (Scheufele, 1999). The third process, "individual-level effects of framing" assumes a direct link between media frames and individual level outcomes but only provides descriptions on the effects of media framing on behavioral, attitudinal, or cognitive outcomes and not an explanation as to why they are linked (Scheufele, 1999). The fourth process and final link is that of "journalists as audiences" and views journalists, much like audiences, as "cognitive misers" (p. 117) and "as equally susceptible to the very frames that they use to describe events and issues." (Scheufele, 1999)

Early framing research revolved around a variety of both macro- and individual-level decision-making processes. Shanto Iyengar (1987, 1991) showed how news stories were portrayed as isolated "episodes" rather than broader "thematic" frames in a way that weakened arguments for policy change in the 1980's while Snow & Bedford (1988) examined how "framing tasks" were accomplished for successful social movement mobilizations. Other early framing theory research has looked at consumer habits (Monroe & Chapman, 1987), quantitative reasoning (Reyna & Brainerd, 1991), and bargaining behaviors (Neale & Bazerman, 1985). For example, a study by Monroe & Chapman (1987) examined the price-perceived quality relationship. The results suggested that promotional cues such as forms of discounts (e.g. coupons, rebates, etc.) may be perceived by buyers as offering a deal due to the use of reference prices to promote these forms of discounts so that consumers will perceive that they are getting a "deal" and be more inclined to purchase the item (Monroe & Chapman, 1987).

Some of the more recent "framing"-related studies show the ability of the mainstream media to frame political issues, such as views on civil liberties or perceptions of political candidates in upcoming elections (Miller et. al, 1998; Nelson et. al, 1997; Rhee, 1997). For example, a study by Rhee (1997) looked at how news frames in campaign coverage affected how voters interpreted the campaigns and found two major frames in the coverage: strategy and issue. The findings suggested that both strategy-framed and issue-framed print news stories were effective in influencing campaign interpretations (Rhee, 1997).

In terms of health-related topics, framing research also has looked into what effects media may have on the interpretation of medical issues (Brown et. al, 1996; Meyerowitz & Chaiken, 1987; Wallis & Nerlich). A study by Meyerowitz & Chaiken (1987) used the framing

hypothesis to see if emphasizing the negative consequences of not performing a breast self-examination would be more persuasive than emphasizing the positive consequences of breast self-examination. Consistent with predictions, the subjects who were subjected to the media framed in loss language (negative) manifested more positive breast-self examination attitudes, intentions, and behaviors when compared to the other groups involved in the study.

Content Analysis

While an extensive amount of research has been conducted on prostate cancer screening, there remains a void in the literature of content analysis on the mass media's framing of prostate cancer screening. Content analysis research by numerous researchers has looked at men's perceived barriers in different areas of the world. A study by Hannover et. al (2010) found that middle-aged men in Northeastern Germany found that mainly emotional and cognitive barriers were responsible for men not being screened, especially the absence of symptoms. A study by Conde et. al (2011) looked at the barriers and facilitators of prostate cancer screening among Filipino men in Hawaii. Their results indicated that, contrary to the findings for men in Germany, the participants in this study cited lack of awareness, reticence to seek health care when feeling well, fear of cancer diagnosis, financial issues, time constraints, and embarrassment as cognitive barriers for being screened for prostate cancer (Conde et. al, 2011).

As the previous two studies have shown, cultural sensitivity is an important consideration regarding prostate cancer screening. A study by Chan et. al (2003) looked at cultural sensitivity and its role in informed decision making about prostate cancer screening. In the study, groups of African Americans, Hispanics, and Caucasians were presented culturally sensitive brochures specific for each group with information on prostate cancer screening (Chan et. al, 2003). The

main outcome measures were participants' views on the content and graphic design of the culturally sensitive brochures promoting informed decision making about prostate cancer screening. Each of the three racial groups had differences in the way they wanted information presented about prostate cancer screening. For example, Caucasians likened the size of a prostate to a walnut while Hispanics compared prostate size to that of a small lime (Chan et. al, 2003). Other differences included that African Americans wanted risk information specific to them and to know the advantages and disadvantages of the PSA exam while Hispanics emphasized how advanced prostate cancer can be symptomatic while Caucasians emphasized how early prostate cancer can be asymptomatic (Chan et. al, 2003).

Content analysis research regarding the PSA exam has also looked at the quality of the information that is available for those considering the PSA exam. A study by Korfage et. al (2010) examined the quality of the information available on the internet for consumers considering the PSA exam to see if the information was correct, balanced, and supportive of autonomous decision-making. The researchers found that of all the materials examined, over one-third did not address the issue of false positives with regards to the PSA exam and more than a quarter of them did not mention the risk of overdiagnosis and overtreatment (Korfage et. al, 2010). Overall, the researchers found that the content of roughly 82% of the materials was considered sufficiently informative according to their pre-defined criteria and a little over half of the materials was considered supportive of informed decision-making by men (Korfage et. al, 2010).

With regard to the internet and prostate cancer, a study by Owen et. al (2004) looked at the use of the internet for information and support by people with breast cancer and prostate

cancer. The study looked at public messages posted to the Breast Cancer Discussion List and to the Prostate Problems Mailing List and content analyzed them to evaluate communication styles within these two cancer types (Owen et. al 2004). The results suggested that breast cancer patients were more likely to submit multiple messages to the list and made greater use of words related to emotional disclosure and cognitive processing compared with prostate cancer patients (Owen et. al 2004). The prostate cancer patients were less likely to seek emotional support or repeated interaction with other patients and more of their communication focused on cancer-related information (Owen et. al, 2004).

A similar but more recent content analysis by Blank et. al (2010) also compared differences between breast and prostate cancer online support groups. In this study the researchers looked at prostate and breast cancer support sites on Google Groups and WebMD (Blank et. al, 2010). The results suggested that overall post-treatment survivors were the most common posters followed by spouses but the proportion of posters varied by site. For both groups the support messages were the most frequent but the type of support also varied by cancer type (Blank et. al, 2010). The breast cancer support group messages were mostly offers of emotional support whereas the messages of support on the prostate cancer sites focused on informational support (Blank et. al, 2010). Overall, the results of the research showed how different the breast cancer and prostate cancer support groups are in terms of message type and the information sought by those using them (Blank et. al, 2010). However, when considering these results it is also important to acknowledge the gender groups afflicted by these two diseases – breast cancer (female) and prostate cancer (male) – and the influence that may have had on the results.

Other types of content analysis research regarding prostate cancer have looked at the psychological issues of those afflicted with the disease. A study by Green et. al (2011) looked at the quality of life of men with prostate cancer and their partners. Participants in the study completed a questionnaire and open-ended questions on appraisal and coping. The results showed that better quality of life was associated with higher education levels (role functioning and fatigue), lower avoidant coping (emotional, social, and physical functioning and fatigue), and higher relationship satisfaction (emotional functioning). (Green et. al, 2011) A different study looking at psychological impact of prostate cancer by Kazer et. al (2011) looked at men who are undergoing active surveillance for the disease and what their needs are. The results of the study suggested that more men frequently use the internet to get information on prostate cancer and that those diagnosed with the disease made some lifestyle changes (Kazer et. al, 2011).

The PSA Exam

The basis for the PSA exam, the prostate tissue-specific antigen which later became known as "PSA", was discovered by Dr. Richard J. Ablin and his research team in 1970 (Albin et. al, 1970). In the late 1980s, after 20 years of research and growth in the understanding the relationship between PSA level and prostate cancer, testing PSA levels became an accepted method of screening for prostate cancer (Croswell et. al, 2011).

The PSA exam is conducted by a doctor who will have a small amount of blood drawn from a man's arm. The doctor will check to see if the PSA level in the blood is normal and, if the test had been conducted before, check for an increase in the PSA level compared to the last test (Center for Disease Control, 2011). As a rule, the higher the PSA level in the blood, the more

likely a person has prostate cancer (Center for Disease Control, 2011). However, many factors (including age and race) can affect PSA levels. PSA levels can also be affected by medical procedures, conditions that cause an enlarged prostate, or a prostate infection (Center for Disease Control, 2011). For these reasons, an individual's personal doctor is the best person to interpret their PSA results (Center for Disease Control, 2011).

Once the information is gathered by the doctor, a very difficult decision must be made by the patient. A very interesting study by Henrikson et. al (2009) explored whether reversibility, decision timing, and uncertainty were relevant to men deciding on treatment for localized prostate cancer. The researchers identified eight themes in total: reversibility, timing of the decision, number of options, "getting it over with," "the way I make decisions," uncertainty among experts, desire for certainty, and probability. The results provide data suggesting that men consider the reversibility, decision timing, and uncertainty in the prostate cancer treatment decision (Henrikson et. al, 2009).

Because of the issues with the exam, the prostate-specific antigen (PSA) test has become a very controversial issue with very compelling evidence on both sides. Two main issues exist with the PSA exam. First, as there is no "benchmark" PSA level that is a red flag for prostate cancer, the test is subject to many false positives which can lead to unnecessary treatment with harsh side effects that include incontinence and erectile dysfunction (National Cancer Institute, 2012c). The second issue is that it sometimes will develop very rapidly into a fatal and very painful disease, but sometimes it will develop so slowly that it will never cause the man with it to have any problems in their lifetime (Djulbegovic et. al, 2010). With this second issue, knowing when treatment is appropriate can be an extremely difficult decision.

Much of the most recent research disputes the effectiveness of the prostate screening and the reliability of the exams (American Cancer Society, 2010; National Cancer Institute, 2012c). Due to this lack of reliability, annual screenings for prostate cancer are no longer recommended universally; some research recommends screening intervals longer than one year while organizations like the American Cancer Society and National Cancer Institute now advise patients to discuss their risk factors with their physician before making the decision to be screened at all (American Cancer Society, 2010; National Cancer Institute, 2012c; Draisma et. al, 2003).

The current controversy with screening mainly stems from the fact that most adequately-powered studies lack the ability to demonstrate its benefits. Collins & Barry (1996) pointed out that the arguments in favor of prostate screening and the PSA exam are similar to the arguments years ago that were in favor of lung cancer screening which was ultimately proven to be ineffective. Ransohoff et. al (2002) echoed a similar sentiment, stating that the degree of enthusiasm for prostate cancer screening seems high "given the limited evidence of benefit and the well-documented harms of treatment."

Some scholars have gone as far as calling optimal screening strategies "elusive", while others warn that the possibility of overdiagnosis from screening should not be overlooked or underestimated (Hostetler et. al, 1996; Yao & Lu-Yao, 2002). In fact, many studies indicate that the use of prostate cancer screening has no significant impact on lowering death rates related to prostate cancer (Andriole et. al, 2009; Koning et. al, 2002; Sandblom et. al, 2011; Schroder et. al, 2009). One study hypothesized that screening only prevents roughly one prostate cancer death per 1408 screenings (Schroder et. al, 2009). Another study assigned thousands of subjects to

either annual prostate screening or usual care (control) conditions and after 7-10 years of follow-up determined that the death rate from prostate cancer did not differ significantly between the two groups (Andriole et. al, 2009). Other researchers have pointed out the lack of evidence supporting the positive impact of prostate cancer screening on life expectancy or quality of life (Durham et. al, 2003). The most recent study by Sandblom et. al (2011) suggested that after the two decades of follow-up, "the rate of death from prostate cancer did not differ significantly between men in the screening group and those in the control group."

As acknowledged in the introduction, the most recent and widely publicized recommendation from the United States Preventive Services Task Force from this past October has concluded that healthy men should no longer receive the PSA exam to screen for prostate cancer because "the test does not save lives overall and often leads to more tests and treatments that needlessly cause pain, impotence, and incontinence." (Harris, 2011)

Statistics from research bear out this last point. In 2011, the Center for Disease Control stated that if 100 men over the age of 50 take the PSA test, 85 of them will have a normal PSA (though a small number of these men will have a cancer missed by the PSA test), and 15 will have a higher than normal PSA and require further tests (Center for Disease Control, 2011). Of these 15 who require additional testing, 12 of them do not have prostate cancer while only 3 of them will have it (Center for Disease Control 20121).

While the evidence against the use of prostate cancer screening is well-founded in controlled-condition experimental research, many of the strongest arguments in favor of prostate cancer screening find their basis at the macro level of populations; epidemiological research has shown that the advent of an effective screening exam for prostate cancer has led to an increase in

detection of significant prostate cancer in individuals who will likely benefit from treatment (Farkas et. al, 1998). Other epidemiological research has lauded the advent of the PSA exam for being able to catch prostate cancer at its earlier, more treatable stages of development (Gilliand et. al, 1994). By catching prostate cancer at its earlier stages through screening, research has shown a significant decline in the incidence of advanced stage disease based on tumor grade and an increased survival of the patients based on screening's ability to detect slow growing tumors (Gilland et. al, 1994; Hankey et. al, 1999). It is also worth noting that PSA exams have been effective in identifying some men with prostate cancer who have a significantly increased proportion of organ-confined tumors compared to the use of other exams (Catalona et. al, 1993).

While the testing is not yet reliable, routine screening is still seen as offering the most cost-effective method for diagnosing prostate cancer in patients in the disease's earliest stages (Chodak & Schoenberg, 1984; Littrup et. al, 1994). Researchers also point out that the PSA exam alone is the most cost-effective prostate cancer detection method (i.e. not using it in conjunction with other exams like biopsies) (Littrup et. al, 1994). While the PSA test has its well-documented flaws, it is still considered by the medical research community to be the most cost-effective method to detect the disease in its earliest stages.

Perhaps the most important argument in favor of screening can be found in the fact that the American Cancer Society, Center for Disease Control, and National Cancer Institute still unanimously recommend early screening for at-risk populations, such as those with first-degree relatives (brothers or fathers) who have been afflicted with prostate cancer and for African-American males (American Cancer Society, 2010; Center for Disease Control, 2011; National Cancer Institute, 2011). Though much of the literature already presented points to screening

being largely ineffective, it is still considered highly effective for these two specific groups of men due to their high incidence and mortality from the disease.

African American Males and the PSA Exam

While little research examines how the media most consumed by African American males frames prostate cancer screening, African American males' attitudes regarding prostate screening have been studied extensively. Much research focuses on what factors influence African American men in their prostate cancer screening decisions (Barber et. al, 1998; Myers et. al, 1998; Sanchez et. al, 2007). Research by Barber et. al (1998) which examined community-based screening found that African American males were much less knowledgeable of the symptoms of prostate cancer and preferred private appointments more (over mass screening) when compared to the Caucasian participants. Other research by Sanchez et. al (2007) found that the main recurring themes that arose for African American males when discussing prostate cancer screenings were: 1) their knowledge of the disease and clinical services, 2) their view of prostate cancer as a threat to manhood, 3) their view of screening as a threat to manhood, 4) their self-awareness of health and well-being, 5) their view of the overall value of screening, 6) their view of the convenience of PSA screening, 7) their misunderstanding of the screening controversy, 8) their distrust of the medical community, and 9) their view on the importance of shared decision-making.

Even though African American men are screened at a much lower rate than other racial groups for prostate cancer, the issue is not one of receptiveness to screening. (American Cancer Society, 2010). In fact, numerous studies consistently found that African American males were

receptive to being screened for prostate cancer on an annual basis (Myers et. al, 1994; Richardson et. al, 2004; Robinson et. al, 1996; Smith et. al, 1997).

The most common perceived barriers for African American males for undergoing prostate screenings are socioeconomic and psychological barriers. Richardson et. al (2004) stated that "myths and (the) lack of accurate/adequate knowledge about prostate health and cancer, fear, denial, and apathy" were largely responsible for African Americans reluctance to be screened. The first barrier, socioeconomic, was cited in numerous studies by African American male participants as a major reason for not being screened (Myers et. al, 1994; Richardson et. al, 2004; Robinson et. al, 1996; Smith et. al, 1997). This theme is understandable and predictable; the harsh socioeconomic conditions experienced by some African American males make it harder for them to get screened based on a lack of locally available/affordable resources for prostate screening(Myers et. al, 1994; Richardson et. al, 2004; Robinson et. al, 1996; Smith et. al, 1997).

The other main barrier, psychological, is much more interesting for this research. Numerous studies cited psychological barriers as a reason why African American males were not being screened for prostate cancer (Myers et. al, 1994; Oliver & Grindel, 2006; Richardson et. al, 2004; Robinson et. al, 1996; Smith et. al, 1997). These psychological barriers included: a lack of knowledge/education about prostate health/screening, fear (of the exam, diagnosis, impotence from treatment, and of cancer itself), denial, apathy, embarrassment, perceived discomfort of screening, and a perceived lack of support/information from their physicians (Clarke-Tasker & Wade, 2002; Gelfland et. al, 1995; Myers et. al, 1994; Oliver & Grindel, 2006; Richardson et. al, 2004; Robinson et. al, 1996; Shelton et. al, 1999; Smith et. al, 1997).

More specifically, research by Abbott et. al (1998) examined the differences between African American and Caucasian males on prostate screening education. Their research found that the largest difference between the racial groups resulted from clinical factor knowledge; African-American men were significantly less likely to correctly identify early symptoms of prostate cancer and the basic components of a prostate checkup than the Caucasians in the study (Abbott et. al, 1998). The Barber et. al (1998) study found similarly lower levels of knowledge among African Americans regarding prostate etiology and clinical factors. Finally, a study by Oliver & Grindel (2006) examined the beliefs and attitudes about prostate cancer and its screening practices among rural African American men. The results of their research reinforced the other research studies listed above and identified six themes from the rural African American participants: disparity (a feeling of impersonal interactions with health care providers), lack of knowledge (about prostate cancer and prostate cancer screening), traditions (lack of value related to preventive care), fear (not knowing what to expect), mistrust in the system (mistrust of health care providers and the health care system), and threat to manhood (sexual and linking the screening exam to being violated). (Oliver & Grindel, 2006)

Finally, one study examined the effectiveness of a computer assisted instructional tool in order to disseminate prostate cancer risk and screening information to people of African descent in accordance with the Community Diffusion Model (Weston et. al, 2007). The results of this study suggested that the computer assisted instructional tool increased knowledge of prostate cancer in the areas of symptoms, high-risk status of men of African descent, and benefits and limitations of screening and treatment (Weston et. al, 2007).

The Role of the Media

It is well established in communication research that the media plays an integral role in forming our knowledge and attitudes towards things we have not experienced directly (Donohue et. al, 1975; Tichenor et. al, 1970; Wade & Schramm, 1969). When thinking specifically about issues of health, research has shown that the print media is considered a starting point for health-information seeking behaviors on the internet (Ho & Niederdeppe, 2008).

The mainstream media's portrayal/discussion of cancer has been the subject of much research, mostly centered around a theme of fear (Clarke & Everest, 2006; Driedger & Eyles, 2003; Henderson & Kitzinger, 1999; Niederdeppe, 2010; Wardle et. al, 1999). A study by Clarke & Everest (2006) examined the way that the print media portrays cancer to readers. Their findings suggested that the print media had latent themes that emphasized fear of cancer including that: 1) cancer and fear are frequently conflated; cancer is said to grow outside of awareness; cancer is portrayed as (almost) inevitable; cancer is associated with normal experiences; early detection is associated with diagnosis; and scary statistics are emphasized; (2) contradictions and confusion exist within and between articles; and (3) metaphors of war and battle are used frequently (Clarke & Everest, 2006).

When looking specifically at the television medium, a study by Niederdeppe et. al (2010) found that local TV news coverage may promote fatalistic beliefs about cancer prevention. The research suggested a tendency for local TV news to focus on aspects of cancer that are likely to cultivate the beliefs that everything causes cancer or that there are too many recommendations about cancer prevention (Niederdeppe et. al, 2010). This finding is particularly important to the proposed research because if the media is cultivating fatalistic beliefs about cancer prevention, it

may be cultivating similar beliefs about ways to lower fatality due to prostate cancer such as prostate cancer screening via the PSA exam or even that one will succumb to the disease no matter when it is caught (i.e. cancer as a "death sentence").

A study by Wardle et. al (1999) asked if publicity about cancer screening raises the fear of cancer. Contrary to the research by Clarke & Everest (2006) and Niederdeppe (2010), the findings of this research showed that publicity about screening did not increase worry about cancer and seemed to be more reassuring than anything (Wardle et. al, 1999). The contradictions among these studies point out the importance of this study's findings about the ways the mass media frames prostate screening for African American males over 40.

There is a gap in the literature looking at the impact of the mainstream media's framing on prostate cancer screening for one of the most afflicted groups by the disease (African American males over 40). As the mainstream media debate has evolved with new research findings, it is important to understand how the media has framed screening both before and after a new major finding. The reason for this research is the need to describe the ways the mainstream media frames the prostate cancer screening debate before and after the latest recommendation from the United States Preventive Services Task Force for this at-risk population and to discuss the possible implications of the frames.

Research Questions

This research will analyze the content of mass media stories/articles in an attempt to answer the four questions.

RQ1. *How does the mainstream media most consumed by African American males over 40 frame the issue of prostate cancer screening? Is it framed negatively, neutrally, or positively in each time frame?*

Research Question 1 is important because the way that the mass media frames the prostate cancer screening debate for African American males over 40 is the main interest of this research. Previous research has never looked at the way that the mainstream media frames the prostate cancer screening debate for this at-risk audience. The answer to this question will help to guide future research on understanding the media's impact on the prostate cancer screening debate and its implications for African American males over 40. Comparing the 2010 sample to the 2011 sample after the announcement from the United States Preventive Services Task Force will also provide an opportunity for another interesting insight.

RQ2. *Did the coverage in each timeframe generally convey both sides of the prostate cancer screening debate or just one?*

Research Question 2 is important because it takes a different approach to RQ1, rather than just trying to figure out what the overall frame is, it is concerned with determining if the mass media is presenting both sides to the prostate cancer screening debate or just one. Whether the results indicate that both sides are conveyed or just one, the findings (including comparing the 2010 and 2011 samples) will offer another interesting insight into the way that the mass media is describing the prostate cancer screening debate for African American males over 40.

RQ3. *Did differences exist in framing among the different types of media (TV, newspaper, magazine, and internet)?*

Research Question 3 will provide data with a deeper look into Research Question 1 by being able to see if there are any significant differences in the way the different media frame the prostate cancer screening debate. If there are any significant differences between television,

newspapers, magazines, and the internet, future research would definitely be needed to further investigate what those differences are and what implications they have.

RQ4. *Was there a difference in the ways "hard" news and "soft" news stories/articles were framed ?*

Research Question 4 is important because audiences encounter different types of news stories regularly, "hard" news stories and "soft" news stories. The goal of this research question will be to examine if there is any type of relationship between the way a story is framed and if it is a "hard" or "soft" news story. If there is a significant relationship then researchers may have a better understanding of how the media uses specific types of stories to frame the prostate cancer screening debate.

RQ5. *Was there a relationship between the way a story/article was framed and if prostate cancer screening-related risk was mentioned?*

Research Question 5 will examine if there is a relationship between the framing of a story/article and if "risk" related prostate screening is mentioned. Whether there is any sort of relationship or not between the mentioning of "risk" and the way an article/story is framed, this data will offer researchers an interesting look at the media's use of the concept of "risk" and how it relates to the how prostate cancer screening is discussed.

In general, these specific questions are very important for two main reasons. First, by looking at both the "frame" of the stories and to see if they convey both sides of the debate, we will have a better understanding of the way the media conveys this debate for a significant at-risk group. Second, by being able to compare two different time frames – the year of 2010 and October-December 2011 after the widely-publicized recommendation from the United States Preventive Services Task Force – we will be able to see if or how the media's coverage changed

and be able to consider the implications of the change while having the insight to forecast what may happen in the future.

CHAPTER 3: METHODOLOGY

The intent of this research was to identify and describe the mass media content on prostate cancer screening consumed by African-American males both before and after a major health policy change. The two samples for the proposed research were comprised of: 1) a "baseline" sample that covers the year of 2010 beginning on January 1 and ending on December 31, and 2) a "comparative" sample that begins on October 1 and ends on December 31 of 2011, following the finding by the United States Preventive Services Task Force which said "healthy men should no longer be screened for prostate cancer." (Harris, 2001) All four of the mainstream media outlets (TV news, internet, magazine, and newspaper) are parts of both samples.

The outlets were selected based upon their national popularity with the target audience. The articles/stories in the sample were selected based on two main criteria: 1) the article/story discussed prostate cancer screening, and 2) the article/story appeared in one of the most popularly consumed media outlets by African American males over 40 (the target audience). The most consumed media outlets by African American males over 40 in 2010 were determined based on ratings data from GfK MRI (magazines), Scarborough (newspapers), and Google (internet); the TV news story category was so limited that all potential stories that discussed prostate cancer were initially included before further filtering to just those that discussed the prostate cancer screening debate.

For the 2010 "baseline" sample, a total of 59 stories/articles from 2010 from the most consumed media by African American males over 40 were content analyzed, including 18 internet articles, 5 magazine articles, 2 TV news stories, and 34 newspaper articles. For the 2011 "comparative" sample, a total of 62 stories/articles from 2011 from the most consumed media by African American males over 40 were content analyzed, including 5 internet articles, 3 magazine articles, 5 TV news stories, and 49 newspaper articles.

The newspaper ratings data for African-American males over 40 were provided courtesy of Scarsborough Research. The newspapers included in the sample were: the *Atlanta Journal-Constitution*, *Chicago Sun Times*, *Chicago Tribune*, *Daily News (New York)*, *Detroit Free Press*, *Houston Chronicle*, *Los Angeles Times*, *New York Times*, *Newsday (New York)*, *USA Today*, and *Wall Street Journal*. These newspapers were selected based on having the highest national readership among the target demographic (African-American males over 40). While these newspapers only reflect urban readership, almost one-third of the stories came from news wire services and likely would have appeared in near identical form in many newspapers not covered in the sample in both urban and rural markets.

Newspaper articles were obtained via searching the LexisNexis database. The source set was queried three different times using a combination of search terms and a date range for both the samples. The first query for the 2010 sample was for "prostate AND detection OR screening" returned 233 total results ordered chronologically in descending order. After determining that this was not narrow enough, the search terms were changed to "'PSA test!' OR 'PSA exam!' OR 'prostate' w/p (screen! OR detect! OR diagnos!)" which returned 162 total articles. Unfortunately the results returned were still not ideal for content analysis and were

narrowed once again for a third searching using the terms ""PSA test!" OR "PSA exam!" OR "prostate" w/10 (screen! OR detect!). This search returned the best results for the purposes of this research with a total of 75 documents before going through and eliminating results that did not meet the criteria set for being a part of the sample. The search terms used for the final search for articles for the 2010 were also used for the 2011 "comparative" sample that had dates limited to October 1 – December 31, 2011.

The magazine ratings data for African American males over 40 was courtesy of GfK MRI. The ratings information was used for searching the LexisNexis database for articles on prostate cancer screening from all of 2010 and October – December 2011. The magazine search was limited to articles from *Black Enterprise*, *Ebony*, *Essence*, *Men's Health*, *Newsweek*, and *Gentlemen's Quarterly (GQ)*. These magazines were selected as they rated among the highest of all magazines for readership in our targeted African-American male 40+ demographic group across national ratings.

Magazine articles were also obtained using the LexisNexis database. The source set was queried two times using a combination of search terms and date range for both of the samples. The first query for the 2010 sample was for ""PSA test!" OR "PSA exam!" OR "P.S.A. test!" OR "P.S.A. exam!" OR prostate w/100 screen! OR diagnos! OR detect! OR cancer " returned 23 total results ordered chronologically in descending order. After determining that this was not narrow enough, the search terms were changed to "prostate" w/p ("screen!") OR "PSA exam!" OR "PSA test!". This search returned the best results for the purposes of this research with a total of 5 documents that all met the criteria set for being a part of the sample. The search terms used for

the final search for articles for the 2010 were also used for the 2011 "comparative" sample that had dates limited to October 1 – December 31, 2011.

The TV news stories were obtained from the Vanderbilt Television News Archive which archives nationally broadcasted evening news segments on *ABC*, *CBS*, *NBC*, *CNN*, and *Fox News*. The Vanderbilt Television News Archives were searched for the term "prostate cancer." Of the 9 stories in 2010 that discussed prostate cancer, only 2 discussed prostate cancer screening. Those two news stories were broadcasted on *ABC News* and *CNN*. The same process was followed for the 2011 sample, returning a total of 5 TV news stories from *Fox News*, *ABC News*, *CBS News*, *NBC News*, and *CNN*.

The internet ratings data were obtained via using Google search for articles/information from the calendar year 2010 for the "baseline" sample and from October 1 – December 31, 2011 for the "comparative sample". The internet articles included in the sample were from the most popular web-results for searches on "prostate cancer" and "prostate cancer screening." The results from the first two pages of search results from the specified sample's time frame were selected as part of the sample while accounting for overlap between articles from both of the search terms. By doing this one can reasonably assume that when a member of the target audience is looking for information on either "prostate cancer" or "prostate cancer screening" these results would be read as they are the most popularly viewed and are the first results that arrive upon searching.

For the 2010 "baseline" sample, the sample included 18 articles from the official websites for the *American Cancer Society (ACS)*, *Center for Disease Control (CDC)*, *National Cancer Institute (NCI)*, the *Mayo Clinic*, and *MedicineNet.com*. For the 2011 "comparative" sample,

only 5 articles met the criteria to be included in the sample; the search results for the 2011 "comparative" sample returned many of the same articles from the 2010 "baseline" sample so only the articles from the new time frame were included in the 2011 "comparative" sample. The 2011 "comparative" sample articles came from *CNN.com*, *Scientific American*, the United States Preventive Services Task Force, *Reuters*, and the Harvard Health Blog.

A coding worksheet was set up using Microsoft Excel with one column identifying the coder of the article, four columns of descriptive information on each article (media type, media outlet specific, the date of the article, and the headline), and thirty-four columns based on the codebook variable categories. The coding instrument was developed by the author and designed so that each piece of content was coded for 29 characteristics including the type of media, specific media outlet, sources within the reference, and content descriptions. The first set of descriptive codes examined if the stories were one- or two-sided (both sides of the screening debate presented) and the overall "frame" of the content (negative, neutral, or positive). Other descriptive characteristics include the story type ("hard" or "soft" news), if prostate cancer is the main topic, the sources that are quoted in the article (e.g. doctors, advocates, researchers, etc.), if statistics were used to make an argument/enhance a frame, if risk was mentioned (if so, if it was put in quantitative or relative terms), if a celebrity was quoted, and if an information referral was provided in the content.

Across the top of the spreadsheet ran these labels: Coder, Media Type, Media Outlet Specific, Date, Headline, One- or Two-Sided, Story Frame (Negative, Neutral, or Positive), Story Type (Hard or Soft), Prostate Cancer Main Topic, Sources 1-8, Source Quote Ratings (Negative, Neutral, Positive) 1-8, Source Descriptions 1-8, Statistics, Mention of Risk,

Quantitative or Qualitative Risk, Celebrity, Celebrity Quote (Negative, Neutral, Positive), and Information Referral. The codebook can be seen in Appendix A.

Over a period of three months, from August – October 2011, two coders, graduate students in health communication at the University of Georgia, were trained on a weekly basis to content analyze the articles. Training continued until their intercoder reliability scores were consistently perfect or near perfect on the practice sets for all coding categories.

Twenty percent (13) of the 59 stories/articles for the 2010 "baseline" sample and twenty percent (12) of the 62 stories/articles in the "comparison" sample were randomly selected for double coding to determine agreement among coders. To determine said intercoder reliability, Krippendorff's alpha was used to determine the ratio of agreements to the total number of coding decisions. The main advantage of using Krippendorff's alpha is that it accounts for agreements that may have happened due to chance. The goal was to achieve an alpha of .80 or higher in all of the coding categories.

In all combined categories the intercoder reliability was at an acceptable level for the two coders. The Krippendorff's alpha scores for the two coders for all of the categories selected for use in the final analysis are broken down in Table 1:

Table 1 <i>Krippendorff's Alpha Scores for Coders</i>			
Category	2010 "Baseline" Sample	2011 "Comparative" Sample	2010 & 2011 Samples Combined
One- or Two-Sided	.8120	.8392	.7586*
Frame	.9060	.8415	.9406
Story Type	.8203	.7579*	.7921*
Mention of Risk	.8485	.7579*	.8367
*Indicates a score of less than .8000, but reliable enough to still tentatively draw conclusions from the data.			

For all of the categories used in final analysis, the Krippendorff's alpha scores for the two coders were all at acceptable levels. Four scores were below the threshold of .8000, however none of those four scores were lower than .7579 so they could still be considered reliable enough to tentatively draw conclusions while taking their slightly lower scores into consideration.

For the remaining articles, disagreements between the two coders were settled by systematically rotating which coder I took an answer from. By utilizing this process it assured there would be no bias in the answers selected for data analysis and the reliable Krippendorff's Alpha scores offer further optimism in trusting this selection process.

It should also be noted that the codes for the sources quoted in the articles were not subjected to Krippendorff's Alpha reliability testing. Initially they were going to be tested but if one coder coded differently than the other for a single source it completely threw off all of the following source categories even if/when the rest of the source codes were unanimously agreed upon by both coders. For example, if all sources were coded perfectly except one of the coders

coded a speaker as Source 2 that the other coder did not, Source Codes 3-8 would all be offset and the reliability scores would not be an accurate depiction of the reliability of the coders. For that reason their Krippendorff's Alpha reliability scores for sources quoted were not accurate and were therefore omitted. Any and all conclusions drawn using the data regarding the sources will be qualified due to the lack of an accessible Krippendorff's Alpha score for intercoder reliability.

Qualitative analysis was also utilized in order to obtain a deeper understanding of some of the ways that the mainstream media most consumed by African American males over 40 were framing the prostate cancer screening debate. Twelve articles were selected for in-depth qualitative analysis by the author with particular focus placed on examining the types of language used. Twelve articles of 121 were selected based on the following selection criteria: representation for each year (2010 "baseline" and 2011 "comparative" sample), representations of both 'hard' and 'soft' news, and representations for positive, negative, and neutral frames. When there was more than one article to choose from in order to meet a criterion, the longest article was selected. Once the selections were made, it was verified that the sample had one piece of content from each of the four media that this research looked at (newspapers, magazines, TV news, and internet). For a breakdown of the articles selected for qualitative analysis, see Table 2 below.

Article Title	Year	"Hard" or "Soft" News	Frame	Medium
"Prostate Cancer Test Does Help, Research Finds..."	2010	Hard	Positive	Newspaper
"Caution Urged on Testing for Prostate Cancer: New..."	2010	Hard	Neutral	Newspaper
"The Great Prostate Mistake"	2010	Hard	Negative	Newspaper
"Afraid of Prostate Test? Don't Be. 'Do It!'"	2010	Soft	Positive	Newspaper
"Taking Control; Assess Your Body's Condition by the..."	2010	Soft	Neutral	Newspaper
"Keys to a Healthy Life"	2010	Soft	Negative	Magazine
"Feds' Advice to Lay Off Test Draws Ire from Prostate..."	2011	Hard	Positive	Newspaper
"Prostate Cancer Screening Harmful to Men?"	2011	Hard	Neutral	Television
"Panel: Don't Get Prostate Cancer Screenings"	2011	Hard	Negative	Magazine
"Why I'll Continue to Screen for Prostate Cancer"	2011	Soft	Positive	Newspaper
"Prostate Cancer Screening: The Pros and Cons"	2011	Soft	Neutral	Internet
"Prostate Cancer Screening May do More Harm Than..."	2011	Soft	Negative	Internet

CHAPTER 4: RESULTS

RQ1: How does the mainstream media most consumed by African American males over 40 frame the issue of prostate cancer screening?

This research was interested in how the mainstream media frames the prostate cancer screening debate for African American males over 40. The stories/articles in each sample were coded as either (1) negative, (2) neutral, or (3) positive. In terms of frequencies, the majority of articles in this sample were coded as neutral (n = 30).

In terms of framing, this research compared the 2010 "baseline" sample to the 2011 sample of stories after the United States Preventive Services Task Force said that they would no longer recommend the PSA exam for "healthy men." For the 2010 "baseline" sample, the majority were framed neutrally (50.8%) while 25.4% were framed positively and 23.7% were framed negatively. For the stories/articles coded in the 2011 "comparative" sample (n = 62), a plurality of the content about prostate cancer screening were framed neutrally (45.2%) while 30.6% were framed negatively and 24.2% were framed positively.

The next consideration for Research Question 1 was to see if there was a significant difference between the two samples in terms of framing. To determine this, a Chi-Squared test was performed. The difference between the framing of prostate cancer screening stories/articles was not statistically significant between the 2010 "baseline" sample and the 2011 "comparative" sample after the new recommendation from the United States Preventive Services Task Force ($\chi^2 = .753, p > .05$). Though the 2011 stories were framed more negatively, but it was not significantly different than before the new announcement. This may have been a result of a

small sample size as the differences seemed large; there were 6.9% more negatively framed stories and 5.6% less neutrally framed stories in the 2011 "comparative" sample when compared to the 2010 "baseline" sample.

Frame	2010 (n = 59) %	2011 (n = 62) %
Negative	23.7	30.6
Neutral	50.8	45.2
Positive	25.4	24.2
Total	99.9*	100

$\chi^2 = .753, p > .05$
*Columns don't always equal 100% because of rounding errors.

RQ2: Did the coverage in each timeframe generally convey both sides of the prostate cancer screening debate or just one?

Research Question 2 was interested in seeing if the mass media stories/articles were giving "both sides" of the debate or if they were just "one-sided" about the prostate cancer screening debate. The stories/articles in each sample were coded as being either (1) one-sided arguments or (2) two-sided and conveying both sides of the argument. For the stories/articles coded in the 2010 "baseline" sample (n = 59), they were much more often one-sided than two-sided; 61% (36) of the stories were one-sided while only 39% (23) of the stories conveyed both sides of the prostate cancer screening debate (two-sided). Conversely, we can immediately see a real difference in the number of sides conveyed when looking at the descriptive statistics and frequencies for the 2011 "comparative" sample (n = 62). After the United States Preventive Services Task Force came out with their new recommendation that "healthy men" should no longer be screened for prostate cancer the debate fires were stoked; unlike the 2010 "baseline"

sample when the stories on prostate cancer screening were often one-sided, an overwhelming majority of the stories in the 2011 "comparative" sample were two-sided (72.6%, n = 45) in conveying both sides of the debate and very few were only one-sided (27.4%, n = 17).

The next consideration for Research Question 2 was if there was a significant difference between the number of sides conveyed when comparing the 2010 "baseline" sample and the 2011 "comparative" sample after the new recommendation from the United States Preventive Services Task Force. A chi-squared test was conducted to see if there was a significant difference between the two samples. The results indicate that the "sidedness" between the two samples was statistically significantly different ($\chi^2 = 13.863, p < .05$); the stories/articles consumed the most by African American males over 40 after the United States Preventive Services announcement that "healthy men" should not be screened were significantly more "two-sided" than the stories/articles from the "baseline" sample of 2010.

Table 4 <i>Comparison of One-Sided or Two-Sided for 2010 & 2011</i>		
Sides Conveyed	2010 (n = 59) %	2011 (n = 62) %
One-Sided	61	27.4
Two-Sided	39	72.6
Total	100	100
$\chi^2 = 13.863, p < .05$		

RQ3: Did differences exist in framing among the different types of media (TV, newspaper, magazine, and internet)?

Research Question 3 was looking to see if there were any significant differences in the framing of the content of the stories/articles regarding prostate cancer screening by the different media sources. In order to test this, a Chi-Squared test was conducted looking at the frame

percentages for the articles/stories based on the media they were from (television news, newspaper, magazine, or internet). There was a statistically significant difference between each media in terms of framing ($\chi^2 = 25.136, p < .05$). While sample size considerations should be considered, we can see that television (n = 7) never had a positively-framed story, the internet articles (n = 23) were largely framed neutrally, magazines (n = 8) were framed neutrally the majority of the time and had an equal number of negative and positive frames, and newspapers (n = 83) had no dominant frame and nearly the exact same number of articles framed negatively, neutrally, and positively.

Frame	TV (n = 7) %	Internet (n = 23) %	Magazine (n = 8) %	Newspaper (n = 83) %
Negative	14.2	8.7	25	33.7
Neutral	85.8	87	50	33.7
Positive	0	4.3	25	32.6
Total	100	100	100	100

$\chi^2 = 25.136, p < .05$

RQ4: Was there a difference in the ways "hard" news and "soft" news stories/articles were framed ?

This research question was interested in looking to see if there was a difference in the way 'hard' news and 'soft' news stories/articles about prostate cancer screening were framed. In order to determine this, a Chi-Squared test was conducted to examine if there was a significant relationship between a story being a 'hard' news story or a 'soft' news story and the overall framing of the story.

The results showed that there was a statistically significant relationship between the story type ('hard' or 'soft') and the way the story/article was framed ($\chi^2 = 11.220, p < .05$). "Hard" news stories were much more likely to be negatively framed (48.7%) whereas "soft" news stories were more likely to be framed positively (35.9%) with regards to prostate cancer screening. "Hard" news stories were also much less likely to be positively-framed (12.8%) and "soft" news stories were much less likely to be negatively-framed (20.3%).

Frame	"Hard" News (n = 39) %	"Soft" News (n = 64) %
Negative	48.7	20.3
Neutral	38.5	43.8
Positive	12.8	35.9
Total	100	100
$\chi^2 = 11.220, p < .05$		

A deeper secondary analysis looked at only the newspaper medium to compare 'Hard' versus 'Soft' news when looking at framing regarding prostate cancer screening to see if results were similar. Newspapers were selected for secondary analysis because 'Hard' and 'Soft' news stories are easy to delineate; conventional newspaper stories are 'Hard' news while 'Soft' news articles are often in the form of editorials or "Letters to the Editor." Unlike the other media, the sample size was also large enough this media (n = 83) to make reasonable assumptions. Much like when including all the different media, a Chi-Squared test was conducted to see if there was a significant relationship between the type of news story ('Hard' or 'Soft') and the way the article was framed.

The results showed that there was also a statistically significant relationship between the type of news story ('Hard' or 'Soft') and the way it was framed for newspapers that was even stronger than the relationship in all media ($\chi^2 = 14.748, p < .05$). As the table shows, 'Hard' news stories were much more likely to be negatively framed (60%) and much less likely to be positively framed (16.7%) whereas 'Soft' news stories were much more likely to be positively framed (41.5%) and much less likely to be negative framed (18.9%). The proportion for each of these specific categories were also larger than when all the media were analyzed together showing a greater impact of frame based on 'Hard' or 'Soft' news for newspapers when compared to the other media in total.

Frame	"Hard" News (n = 30) %	"Soft" News (n = 53) %
Negative	60	18.9
Neutral	23.3	39.6
Positive	16.7	41.5
Total	100	100
$\chi^2 = 14.748, p < .05$		

RQ5: Was there a relationship between the way a story/article was framed and if prostate cancer screening-related risk was mentioned?

Research Question 5 examined if there was a relationship between stories/articles mentioning "risk" regarding prostate cancer screening and the way the stories/articles were framed. In the codebook a 'mention of risk' is defined as the "mention any factor that increases/lowers prostate cancer risk" and that this research "only care(s) about any factor that either increases/lowers prostate cancer risk OR mentions the risk of developing prostate cancer." A Chi-Squared test was conducted to test the relationship. Stories were coded as either

mentioning "risk" related to prostate cancer screening (1) or not mentioning "risk" related to prostate cancer screening (0).

The results showed that there was a statistically significant relationship between the story/article's framing of prostate cancer screening and if risk was mentioned ($\chi^2 = 13.541, p < .05$). As Table 7 shows, neutrally framed stories were much more likely to mention risk (66.7%) while positively framed stories were much less likely to mention risk (11.8%). There was also a higher proportion of stories that didn't mention "risk" being negatively framed (31.4%) than stories that did mention "risk" being negatively framed (21.6%).

Frame	Mention of "Risk" (n = 51) %	No Mention of "Risk" (n = 70) %
Negative	21.6	31.4
Neutral	66.7	34.3
Positive	11.8	34.3
Total	100	100
$\chi^2 = 13.541, p < .05$		

Qualitative Analysis

A variety of themes emerged when using qualitative analysis to examine these twelve stories/stories. First, when comparing the 2010 "baseline" sample to the 2011 "comparative" sample, the 2010 sample used much more "certainty" language than the 2011 sample. "Certainty" language can be characterized as confident language with a general lack of qualifiers (e.g. maybe, may, etc.). One article is titled 'Afraid of Prostate Test? Don't Be. 'Do It!' and definitively states that "the most important thing to know about prostate cancer is that early detection saves lives." Another article from the 2010 "baseline" sample definitively claimed that

"PSA testing can't detect prostate cancer" and that "it can't distinguish between the two types of prostate cancer" referring to slower- and faster-growing forms of the disease. Other articles used certainty language to establish their strong stance against the PSA exam with two stating that "testing should absolutely not be deployed to screen the entire population of men over the age of 50 and that the uses of the PSA exam are "limited."

Conversely, the stories from October – December of 2011 were much more hedged than certain. "Hedging" language is characterized by the use of qualifiers and hedges for authors to express a lack of certainty. Many articles acknowledged the complicated nature of the screening debate in stating that "medicine is not, after all, a cookie-cutter field" and that this controversy presents the type of situation that "drives people crazy because it's so confusing." Building upon the same sentiment, other articles said plainly that "cancer screening is complex" and that "this is one of those (situations) where one size does not fit all."

The word "may" in particular was very commonly used for hedging in the 2011 "comparative" sample articles. The title of one article was hedged in stating 'Prostate Cancer Screening May Do More Harm Than Good' while many others stated that the test "may not be worth the consequences." Other articles utilized different hedging language, e.g., one written by a doctor describes prostate cancer as "almost always asymptomatic at first" and that "nearly all" patients would rather test for the cancer than not. The same article stated that "not all studies showed the same dramatic results" and that new screening tests "could end up being more predictive than the PSA."

While the differences between the two samples were based on the type of language, the differences between the "hard" and "soft" news articles were based more on tone. One main

feature of the "soft" news articles/stories about prostate cancer screening was the emphasis on personal empowerment, regardless of frame. "Soft" news articles/stories in favor of screening encouraged the audiences with titles that said 'Do It!' and other titles focused on making audiences feel more efficacious through titles about 'Taking Control' or the 'Keys to a Healthy Life.' In terms of "taking control," one article stated that "the good news is that you can take control over your health by knowing the significance of your numbers (PSA) and how they stack up." The empowerment theme was very common regardless of frame, other articles empowered audiences to use the information about the PSA exam and their family history to "make needed changes" that can "save your life."

The other common theme of "soft" news stories was the more conversational and advising tone. Articles emphasized to audiences the importance of assessing "your body's condition by the numbers and taking measures to improve" and that "ignorance is definitely not bliss when it comes to your body." Many of the authors identified with their audiences by placing themselves in the same group with statements like "If we cast aside the PSA, fewer men will become impotent or suffer the discomfort of additional testing," "we would be fools not to use it (the PSA exam)," and even wondering "Are we as a society prepared to pay attention to scientific evidence?" Lastly, in some articles authors would utilize their personal experiences to enhance their conversational tone with the audience, in one article a doctor stated that when he sees a high PSA score for one of his patients that "it doesn't mean I robotically order a biopsy" while in another article a prostate cancer survivor explained how he encourages his friends to get the exam because "I want them to know it's worth the minor inconvenience of taking the test to get peace of mind."

As one would expect, the "hard" news stories were exactly the opposite. Rather than attempting to encourage audiences and appeal to them through a conversational tone, "hard" news stories were much more fact-oriented and less conversational. The "hard" news stories/articles in the samples relied on using facts and statistics to make their argument in favor, against, or in a neutral manner when discussing prostate cancer screening. In the "hard" news stories and articles, arguments were stated as facts and there was no attempt made to connect with the audience with anything other than scientific evidence. For example, most negatively framed articles/stories built their argument around the statistics on false positives from the PSA exam and the consequences of overtreatment while most positively framed articles emphasized how studies show that mortality rates from prostate cancer have declined significantly since the PSA exam became popular and how it is still the only early detection method for the disease.

In terms of the way that prostate cancer screening was framed specifically, the qualitative analysis turned up some very interesting results. The differences between positively and negatively framed articles were particularly striking. While both mentioned "risk" in varying amounts, the way that "risk" was discussed was very different. Negatively framed articles/stories had a "glass half empty" outlook to the risk associated with prostate cancer screening. While acknowledging the importance of early detection, negatively framed articles would refute the importance due to "risk." One article pointed out that "No major medical group recommends the PSA blood tests, despite the conventional wisdom that finding cancer is a good thing." Other negatively framed articles would use statistics when taking this approach to the concept of "risk." One article stated that "American men have a 16 percent lifetime chance of receiving a diagnosis of prostate cancer, but only a 3 percent chance of dying from it." Many articles cited the study the FDA relied upon which pegged the mortality rate from prostate cancer at 3.8%, calling it

"only a 3 percent chance" while another simply pointed out, "Still, 3.8 percent is a small number."

When "risk" was mentioned by positively framed articles/stories however, the authors took a much more "glass half full" approach in acknowledging the risk but putting it into perspective. In terms of the "risk", articles from 2010 and 2011 framed it as a "minor inconvenience" and describe the "risk" as part of the "art of medicine." Another article by a doctor acknowledged the risk of screening but stated that "I suppose it's no surprise that nearly all my patients would rather test for cancer than cross their fingers and hope they're healthy." When positively framing the risks associated with the PSA exam, other stories/articles pointed out the dire consequences of not screening. One author grimly noted that if the PSA exam is used less, fewer men will be over-treated and suffer the negative consequences, but "More men will die."

One particular strategy that both negatively and positively framed articles/stories have in common is the use of hyperbolic language. As prostate cancer screening is a contentious issue and is hotly debated in the media, the language used in the articles/stories reflected the tension felt by both sides in attempting to convince African American males over 40 to lean toward a certain side in the debate.

The positively framed articles reasoned in favor of the exam with language like the simple point that "cancer kills," how the exam "saves lives," and that it is "by far the best tool" for "facing the dreaded disease" and better than having a man "cross their fingers and hope they're healthy." In taking up the case of the prostate cancer advocate groups, stories/articles would hit on the point that these groups fear the new federal recommendations from the United

States Preventive Services Task Force because skipping screening "will doom some men to die" and "may deter many from being vigilant about their health." In trying to strip away credibility from the Task Force, other articles pointed out how "the same Task Force received crushing criticism two years ago when it advised against mammograms" and how doctors are "angered" by the "reckless new recommendations" from the Task Force.

The perceived importance of everything associated with the PSA exam is raised by this hyperbolic language. "Red flags" from high PSA scores, being tested in a "sleek" mobile testing unit, the description of the breadth of favorable research as "large long-term studies" or as "landmark studies," and the mere concept of advising against the PSA exam is to "cast it aside on a whim" and that doing so "is a bad public policy that appears to treat life with little regard." Previous research gave doctors a good idea of when to be concerned about a high PSA score so they don't "obsess about one reading" and that "if the PSA continues to rise, my concern continues to rise with it." While negatively framed articles will point to the low mortality rate, the positively framed articles point out that prostate cancer is responsible for more than 30,000 deaths and "the second leading cause of cancer death among American men." Also in the positively framed articles/stories survivors are quoted as saying "I have no doubt it saved my life" and doctors proclaimed that the PSA exam is still "by far the best tool" they have for "detecting this dreaded disease." One article states that discontinuing the use of the exam "takes us back to prostate cancer literally being a death sentence."

The negatively framed articles are similarly hyperbolic. One particular article, written by Dr. Ablin who discovered the PSA, is titled 'The Great Prostate Mistake.' He describes the use of the PSA exam as "a hugely expensive public health disaster" and describes the issue as one he

is "painfully familiar with as he is "the man who discovered PSA in 1970." He explains that "the test is hardly more effective than a coin toss" and how it can't distinguish between different types of prostate cancer, "the one that will kill you and the one that won't." Dr. Ablin further mentions how men with a low PSA score may still be "harboring dangerous cancers" as well. In terms of decisions after the PSA exam, patients are "almost always pushed into surgery, intensive radiation, or other damaging treatments." In wondering why the exam is still used, Dr. Ablin sees drug companies as "peddlers" for the ineffective test and describes the American Urology Association's positive recommendation for the PSA exam as "shameful."

Even when the value of the PSA exam is actually acknowledged, such as if a man's score is "skyrocketing" it "could mean cancer," the value is later refuted. Many articles/stories point to this argument of value by taking an economic approach in pointing out that the PSA exam "adds to the unnecessarily high cost of health care, which is already threatening the health of the U.S. economy." Finally, in acknowledging the benefits, one author stated that " the benefits – the number of lives saved – are very small at best, nonexistent at worst."

Aside from a predictable use of hedging language, neutrally framed articles also utilized hyperbole – or a strategic lack thereof – in their arguments about prostate cancer screening in two different ways. First, they often strategically avoided hyperbolic statements to attempt to maintain neutrality on the issue. Rather than using language that sounds desperate and dire to convince audiences to take a side on the issue, most of the descriptions in the neutrally framed articles were simple, factual, and devoid of any "exciting" language. As time has passed, authors have seen "a growing shift from the more simplistic days when doctors told men to go get screened, then we'll deal with it" and that "one isolated abnormal reading doesn't give the true

picture." In attempting to discuss the controversy in the most neutral terms possible, articles will describe the PSA exam as "just a simple blood test" but that in the new findings "the government task force suggests the test for too many men leads to more harm than good."

In neutrally framed articles/stories the medical experts also played a significant role in maintaining that balance through avoiding hyperbole. The focus here is on the importance of patients being informed about the PSA exam. In one story/article a doctor is quoted emphasizing the importance of patients being educated "Here's my advice, don't have this test done until you understand what may follow after that; what all the risks and benefits are." This patient empowerment through information about the PSA exam is critical because "it is a personal decision that every man needs to make."

In terms of the use neutral hyperbole, articles described the announcement from the Task Force as a recommendation that was "sure to roil an already bubbling controversy" over the value of screening and an "earthquake" in the debate over men and prostate cancer that will provoke a "firestorm of response." The other way that neutrally framed articles utilized hyperbolic language was by evenly balancing it for both sides of the argument. The new findings call into question "whether the blood test actually saves lives" but that "treatment in the right hands can limit the harm." Other articles point out that early detection and treatment can prevent the "deadly metastatic disease" and that if you don't catch the cancer early "you can miss out on the chance of a cure." However, the articles would later balance the previous statements by stating that the practice of active surveillance is "akin to playing Russian roulette" and that the side effects from unnecessary treatments that alter patients' quality of life are "hard to justify"

and that men's likelihood of dying from non-prostate cancer related reasons are "14 times greater than dying of prostate cancer."

Those last few statements seem dramatic, but the negatively framed articles/stories were particularly unique in their use of "drama" when compared to the other two frames. The negatively framed articles/stories describe the PSA exam as "the overselling and overpromise of screening technology in cancer" and that the "phenomenon of so-called experts" have "misled the public about the evidence supporting" the PSA exam's effectiveness like it was an sinister plot "for profit." Those in favor of the exam have been "jumping the gun", "acting in a manner unsupported by evidence" and "ignoring words of caution" to support a test that is being "peddled" by drug companies.

These doctors in favor of the PSA exam "opposed rigorous studies" that could have proven that the PSA exam was ineffective so the test was put into mass use "well before anyone bothered to initiate studies to find out whether such screening saves lives." When referring to the research that did occur, the stories/articles point out that 48 men would need to be treated to save one life which means that's 47 men "who, in all likelihood, can no longer function sexually or stay out of the bathroom for long." Dr. Ablin concluded his piece by saying that discontinuing use of the PSA exam "would save billions of dollars and rescue millions of men from unnecessary, debilitating treatments." Negatively framed articles sometimes dramatically compared those in favor of the exam to religious zealots, calling them "true believers" that conduct mass screenings "with evangelical fervor." An article concludes by raising a "disturbing question" in wondering if our society is "prepared to pay attention to scientific evidence."

Where negatively framed stories utilize a sense of "drama" to reinforce their stance, positively framed stories use more "simple pleas" with the audiences emphasizing the importance of early detection. For example, a man is quoted in an article in support of PSA screening by just saying "Do it." because "Cancer kills." Another article quotes an activist as stating that "the important thing to know about prostate cancer is that early detection saves lives" and "99% of men survive prostate cancer when it's caught early." Other articles focus on how prostate cancer is "almost always asymptomatic at first" so the PSA exam is the "best way to find it." Several articles argue some form of the idea that "many men will learn of their prostate cancer well after it is curable" and since the PSA exam is currently the best early detection method, "we would be fools not to use it." Finally, doctors point out that "most of us feel better overtreating than undertreating" and that, contrary to other arguments, the reduced mortality rate from the PSA exam is "more than comparable to what screening has done for breast cancer and colorectal cancer" and that "the most important thing to know about prostate cancer is that early detection saves lives."

In many ways these results from qualitative analysis reinforce findings from the quantitative results of this research. The specific details of this reinforcement will be examined in the discussion section.

CHAPTER 5: DISCUSSION

RQ1: How does the mainstream media most consumed by African American males over 40 frame the issue of prostate cancer screening?

The main focus of this research was concerned with how the mass media most consumed by African American males over 40 is framing the prostate cancer screening debate. African American males are afflicted with prostate cancer at twice the rate of any other racial group despite research indicating that they are receptive to being screened for prostate cancer on an annual basis (American Cancer Society, 2011; Myers et. al, 1994; Richardson et. al, 2004; Robinson et. al, 1996; Smith et. al, 1997). The results indicated that the stories/articles most consumed by African American males over 40 were most often framed neutrally; the majority of the 2010 "baseline" sample was framed neutrally (50.8%) and most of the 2011 "comparative" sample was also framed neutrally (45.2%).

These findings indicate that the framing of the prostate cancer debate by the media consumed most by the target audience cannot be blamed for the disparity in screening rates. The articles were largely framed neutrally; the proportion that do take a position (positive or negative) on the PSA test was nearly equal (1.7% difference in 2010, 6.2% difference in 2011). This finding was not expected but with no prior research on the framing of prostate screening by the mainstream media it is not surprising either.

The differences in the frames between 2010 and 2011 were not statistically significant, but the proportions of negative and neutral frames did change a considerable amount that may have been statistically significant with a larger sample than 121 stories/articles. The 2010

"baseline" sample (n = 59) was (23.7%) negatively framed and (50.8%) neutrally framed whereas the 2010 "comparative sample (n = 62) was more (30.6%) negatively framed and less (45.2%) neutrally framed. The proportion of negatively framed stories/articles went up by 6.9% while the proportion of neutrally framed articles dropped by 5.6%. The positively framed article/story proportion remained virtually unchanged with only a 0.2% difference. The rise in negatively framed content and drop in neutrally framed content can be partially explained by the United States Preventive Services Task Force's anti-PSA exam recommendation

RQ2: Did the coverage in each timeframe generally convey both sides of the prostate cancer screening debate or just one?

Research Question 2 was concerned with whether the content of each article was "one-sided" or "two-sided" in their discussion of the prostate cancer screening debate. The issue of prostate cancer screening is a debate so this research essentially wanted to know if the media most consumed by African American males over 40 was laying out both sides of the debate. An article could be considered "two-sided" as long as it made reference to each side of the debate. The results were statistically significant as in the 2010 "baseline" sample the stories/articles were significantly more "one-sided" (61% "one-sided" versus 39% "two-sided") whereas the stories/articles in the 2011 "comparative" sample were significantly more "two-sided" (72.6% "two-sided" versus 27.4% "one-sided").

This statistically significant difference could potentially be explained when considering the concept of media objectivity. During the year 2010 when the "baseline" sample was collected there had been no major findings with the PSA exam in a few years and all the latest major research findings were indecisive regarding the PSA exam's effectiveness. In 2010 both

"sides" may have been entrenching their positions as either being pro- or anti-PSA exam and felt less ethical responsibility about conveying the other side of the debate since the strongest arguments were based on perception. However, even after the Task Force's issued a recommendation strongly against the use of the PSA exam, it still said that the exam was effective for at-risk populations. After this recommendation in October 2011 the media may have felt it was their objective and journalistic responsibility with the national spotlight on the prostate cancer screening debate to make sure to mention the pro-PSA arguments more than they would have felt before the major announcement. While the Task Force's recommendation was certainly a "game changer" in the prostate cancer screening debate, the findings were still not definitive proof that the PSA exam is completely ineffective so the controversy will certainly continue into the foreseeable future.

RQ3: Did differences exist in framing among the different types of media (TV, newspaper, magazine, and internet)?

Research Question 3 asked whether the media were framing the debate differently depending on the media platform, i.e., television news, magazines, newspapers, and the internet. While it might be expected that there would be little difference in the frame proportions among the various media, one could argue that media over time has become more fragmented than ever with many new available outlets. However, with the increasing corporate consolidation and conglomeration of media, another school of thought might expect that all of frame proportions across the different media would be close because many of the media outlets are owned by the same parent companies and would be encouraged to take the same framing approach to the controversy. This research asked if there was a difference in the framing of the prostate cancer screening debate based on which media platform was being used.

The differences among all four media (television news, internet, magazines, newspapers) were statistically significant. Some surface-level analysis shows that television (n = 7) never had a positively-framed story, the internet articles (n = 23) were largely framed neutrally, magazines (n = 8) were framed mostly neutrally and their proportion of frames was the most similar to the overall sample, and newspapers (n = 83) had no dominant frame and nearly the exact same number of articles framed negatively (33.7%), neutrally (33.7%), and positively (32.6%). Sample size concerns definitely need to be taken into consideration when discussing these results, but they do indicate that different media outlets are framing the prostate cancer screening debate differently.

These results are not so surprising. Research has shown that television has become a highly sensationalized medium so a complete lack of positively-framed stories (14.2% negative, 85.8% neutral, 0 % positive) on television in both the 2010 "baseline" sample and 2011 "comparative" sample makes logical sense since the latest research was all against the effectiveness of the PSA exam, however limited sample size for this finding (n = 7) should be noted (Vettehen et. al, 2008). Research has also shown that the internet is considered by many as the best mainstream media source for personal health information so the overwhelming majority (87%) of stories about prostate cancer screening being framed neutrally could be somewhat reassuring for those concerned about media bias regarding health information (Ho & Niederdeppe, 2008). Magazines are catered to very specific audiences so the proportions for each frame (50% neutral, 25% positive, 25% negative) being the most similar to all media types was an interesting finding, however sample size (n = 8) considerations are important for this medium. Finally, the majority of content in this study came from newspapers and was fairly evenly distributed across negative (33.7%), neutral (33.7%) and positive frames (32.6%). Unlike

the other media outlets, newspapers regularly provide opportunities for non-media members to express opinions (e.g. editorial sections, "letters to the editor", etc.) so it also makes sense that the largest proportion of positively-framed articles about prostate cancer screening came from this medium since the other mediums do not traditionally provide outlets for civilians to voice their opinions.

RQ4: Was there a difference in the ways "hard" news and "soft" news stories/articles were framed ?

Research Question 4 looked at the difference between the way content about prostate cancer screening was framed and if it came from a "hard" or "soft" news story/article. The results indicated that "hard" news stories were much more likely to be negatively framed (48.7%) towards prostate cancer screening (38.5% neutral, 12.8% positive) whereas "soft" news stories were more likely to be framed positively (35.9% versus 43.8% neutral and 20.3% negative) with regards to prostate cancer screening.

A secondary analysis limited the data to just the newspaper medium in also looking for differences in framing about prostate cancer screening depending on if it was from a "hard" or "soft" news story. The differences between "hard" and "soft" news were even more pronounced with the majority of "hard" news stories from newspapers being framed negatively (60% versus 23.3% neutral and 16.7% positive) and most of the "soft" news stories from newspapers being framed positively (41.5% versus 18.9% negative and 38.6% neutral) than the proportions from the overall media.

These results can be potentially explained because "soft" news stories are often personal interest stories; for a "soft" news story to be part of this research it had to be about prostate

cancer screening from the designated time frame (Henderson & Kitzinger, 1999). This relationship seems to make sense; more often than not the "soft" news stories were stories either about prostate cancer survivors whose lives were saved by the exam, people who lost a loved one to prostate cancer, or an editorial from a doctor advocating for the importance of early screening because it can save lives. Conversely, "hard" news stories take a more serious and urgent approach to news and are not as concerned with "entertaining" readers (Henderson & Kitzinger, 1999). The combination of the fact that "hard" news stories are more concerned with just giving facts and that all of the recent major research findings along with the recommendation from the United States Preventive Services Task Force during the time frame were anti-PSA exam can also potentially explain the differences for frame proportions between "hard" and "soft" news.

RQ5: Was there a relationship between the way a story/article was framed and if prostate cancer screening-related risk was mentioned?

The results for Research Question 5 were statistically significant in looking at a story/article's framing of prostate cancer screening and if "risk" related to prostate cancer screening was mentioned. Based on proportions, stories that mentioned "risk" were much more likely to be framed neutrally (66.7%) than any other frame and the proportion of negatively framed articles (21.6%) was nearly twice as great as positively framed articles (11.8%). However, the proportions of negatively (31.4%), neutrally (34.3%), and positively framed stories (34.3%) that did not mention "risk" were nearly identical.

These findings could potentially be explained because mentioning "risk" would seem important when presenting both sides of the debate. The risk of prostate cancer screening is inherently a part of the anti-PSA argument but it is also a requirement to accurately depict the controversy. Since the "risk" of prostate cancer screening is an argument against screening, it

also makes sense that the proportion of negatively framed stories/articles that mention "risk" was nearly twice as great as the proportion of positively framed stories/articles that mention "risk."

The near identical proportions of negative (31.4%), neutral (34.3%), and positive frames (34.3%) in articles/stories that did not mention "risk" related to prostate cancer screening was more surprising. It would be expected that positively framed stories/articles about prostate cancer screening would be much less likely to mention "risk" related to prostate cancer screening whereas negatively framed stories/articles would be much more likely to mention said "risk." However, this finding may be due to error from the limited sample size of articles that did not mention risk (n = 70).

Qualitative Analysis

The qualitative analysis was able to uncover a variety of interesting themes when the content was given a closer look. When comparing the 2010 "baseline" sample and the 2011 "comparative" sample longitudinally, the first main theme that emerged from the qualitative analysis was that the 2010 "baseline" sample articles had more certainty in their language whereas the "comparative" sample articles were more likely to use hedging (uncertain) language.

As alluded to in the results section, when considering the concept of journalistic integrity this finding makes sense and reinforces the results from the quantitative analysis. In 2010, no new large findings had been released in a few years so each side (either pro- or anti-PSA exam) may have been further entrenching their arguments by making them sound more "certain" and definitive about being "right" in the debate. However, in 2011 after the United States Preventive Services Task Force came out with their recommendation that "healthy men" should no longer be

screened for prostate cancer, a reasonable explanation would be that a heightened sense of journalistic integrity resulted in part because the enormous impact of the announcement.

Despite the anti-PSA exam recommendation, the Task Force still acknowledged that the exam is not completely ineffective; the continued lack of a definitive ending to the prostate cancer screening debate possibly made journalists feel the need to responsibly use more hedged and less certain language when discussing the findings. The quantitative data on the significant relationship on stories/articles being "one-sided" or "two-sided" and the time frame (2010 or 2011 after the Task Force announcement) also support this conclusion. In the 2010 "baseline" sample the articles were much more "one-sided" while the articles in the 2011 "comparative" sample were more often "two-sided" in discussing both the "pros" and the "cons" of prostate cancer screening.

Another interesting finding from the qualitative analysis was the difference in tone between "hard" and "soft" news articles/stories. "Soft" news stories about prostate cancer screening placed a particular emphasis on personal empowerment regardless of frame and had a much more conversational/advising tone. This relationship was also reinforced by a combination of findings from the quantitative analysis. First, "soft" news stories were much more likely to be framed positively than negatively. When taking that into consideration, this qualitative finding makes sense because "personal empowerment" articles would almost need to be framed positively by default; feelings of personal empowerment almost always come from people being encouraged to make positive change in their life.

For "hard" news stories, the qualitative analysis showed that they were exactly the opposite of the "soft" news stories. "Hard" news stories were much more fact-oriented and less

conversational. The quantitative analysis also reinforced this relationship because "hard" news stories were most likely to be framed negatively and the least likely to be framed positively.

The use of hyperbolic language by negatively and positively framed articles also emerged as a significant theme during the qualitative analysis. Previous research has shown that the use of hyperbolic language is common in news reporting about cancer causes and prevention (Niederdeppe, 2011). The negatively and positively framed stories also utilized a lot of hyperbolic language in order to enhance their points. This makes sense as research has shown that the use of hyperbole allows an author to express an attitudinally extreme position and increase their perceived dynamism (Hamilton & Hunter, 1998). Through the use of hyperbolic language, the authors of these positively and negatively framed articles/stories were able to attempt to move audiences closer to their more "extreme" position in the debate.

The qualitative analysis did show that hedging language was more common in neutrally framed articles. With the prostate cancer screening debate unsettled even in light of the latest recommendation from the United States Preventive Services Task Force, the neutrally framed articles mirrored this ongoing uncertainty by regularly qualifying their statements and straying away from any "certain" pronouncements about the PSA exam.

Another theme that emerged was the negatively framed articles specifically attempted to seem more "dramatic." This idea builds upon the use of hyperbolic language, but the negatively framed articles in particular seemed more "dire" and "desperate" in their arguments than the neutrally or positively framed articles. This strategy makes sense as research has shown that humans give greater weight to negative entities due to negative potency, the concept that negative entities are stronger than the equivalent positive entities (Rozin & Royzman, 2001).

Whether intentionally or not, the authors of the negatively framed articles were creating a greater sense of "drama" in order to enhance their negative framing of prostate cancer screening.

A theme that was unique to the positively framed articles was the use of "pleas" with the audience and a focus on the importance of early detection. The way the "pleas" were used allowed the article to gain the sense of speaking directly to the reader in encouraging them to either be screened or support the use of the PSA exam. Research has shown that by using this strategy of "pleas" and focusing on the perception of communicating directly with the reader, it can encourage the audience to action and enable them to discover meanings within themselves (Elliot, 1990). By utilizing this strategy, the positively framed articles made audiences feel more empowered to act upon the arguments in the article and form pro-PSA exam sentiments.

Finally, a theme emerged when qualitatively analyzing the way that articles handled the concept of "risk" as it related to prostate cancer screening. The results indicated that negatively framed articles were much more likely to take a "glass half empty" pessimistic approach to "risk" whereas positively framed articles were much more likely to take a "glass half full" optimistic approach. For example, while positively framed articles would describe risk as an inevitable part of screening, negatively framed articles would focus on the harsh consequences of this inevitable "risk." As the "risk" related to the PSA exam is the key component in the prostate cancer screening debate this finding makes perfect sense. "Risk" has a negative connotation when it comes to medical procedures, so the negatively framed articles taking a "glass half empty" approach while the positively framed articles took a "glass half full" approach is logical. The quantitative data also reinforced this finding; if an article mentioned "risk" it was almost twice as likely to have been negatively framed than positively framed.

In summation, research has shown that the media plays an integral role in forming our knowledge and attitudes towards things we have not experienced directly (Donohue et. al, 1975; Tichenor et. al, 1970; Wade & Schramm, 1969). Other research has indicated that the media may be cultivating fatalistic beliefs about cancer prevention in audiences (Niederdeppe et. al, 2010). This data indicates that the media has framed the prostate cancer screening debate neutrally in the media most consumed by African American males over 40. The majority (50.8%) of the 2010 "baseline" sample content was framed neutrally and a plurality (45.2%) of the 2011 "comparative" sample content was also framed neutrally. These findings make sense as the issue of prostate cancer screening remains an ongoing controversy with no definitive recommendations other than the newest from the United States Preventive Services Task Force that "healthy men", a somewhat arbitrary categorization to start with, no longer be screened for prostate cancer. As this research only focused on media content, it is impossible to try to accurately predict what kind of decision an African American male over 40 might make regarding screening for prostate cancer after describing this media.

CHAPTER 6: CONCLUSION

Implications

The framing of the content was generally neutral (with both positive and negative frames nearly equally represented) but differences were discovered for: (1) the likelihood that media would convey both sides of the debate which was greater after the United States Preventive Services Task Force announcement in October 2011 than before, (2) the frames varied across different media platforms (television news, internet, magazine, newspaper), (3) the way "hard" and "soft" news frame the screening debate, and (4) the way "risk" related to prostate screening is framed.

The fact that the framing of the prostate cancer screening controversy was generally neutral was not expected at the outset of this research. The mainstream media in the United States seems to be as sensationalized and hyperbolic as ever and it would be expected that the framing of a controversial issue could become very one-sided (most likely negative). While the sensationalism is a reality, perhaps with a very controversial issue and heated debate like this one the polarization of the issue from both sides leaves the overall frame still very neutral. However, research shows that we can't always assume individuals will just choose the most popular media outlets (since people are selective of their media outlets) but rather they often choose to get their news from outlets that already share their same viewpoints (Blumler & Katz, 1974). While this research selected the mainstream media most consumed by African American males over 40, it did not look more specifically at fragments within that specific group to see if certain portions of

the population are affected more by the media than others based on even more specific media selection.

For the media outlets framing the screening debate differently, the implications are very considerable as this research found statistically significant differences between the framing of the prostate cancer screening debate when comparing television news, the internet, magazines, and newspapers. While the sample size was very limited, these findings could definitely have enormous long-term implications when considering differences in how much news African American males over 40 consume from these different media and the impact that could have on their inclination to be screened for prostate cancer. Also of important consideration is that since people have different access to various media outlets based on socioeconomic levels, location, etc., the difference in the way the screening debate is framed in each media outlet becomes even more important. While the majority of the content is still neutral regardless of outlet, television news presented no positively-framed stories and newspapers had virtually as many negatively- and positively-framed articles as neutrally-framed. No individual media looks as though it could sway an individual to a certain side (positive or negative) about prostate cancer screening, but continual exposure to only one of these media may alter how inclined an individual may be to picking a side in the debate (e.g. someone relying solely on television news would be much less inclined to become pro-PSA than someone relying on the other media outlets based on this data).

The other most interesting finding from this research was the statistically significant difference in the media going from predominantly "one-sided" to predominantly "two-sided" in its coverage of prostate screening before and after the announcement from the United States Preventive Services Task Force. In terms of being "one-sided" or "two-sided," the results

showed that the news content become much more balanced *after* the new recommendation from the Task Force. It would be interesting to see if this trend continues in the future or if it was just a short term effect resulting from the new recommendation of the Task Force. Until the research definitively proves that the PSA exam is either effective or ineffective it will continue to be very important for the media to lay out both sides of the debate for African American males over 40 so they can make informed decisions.

This research has described how the media most consumed by African American males over 40 was largely framed neutrally. While differences still exist between the different media, the majority of the content from the most popular outlets consumed by the target audience was not leaning toward either side in the debate.

Limitations

This study had limitations. First, based on the timeframes selected for each sample, the data is subject to sample size issues. Only 121 stories/articles were coded in this data analysis. The timeframes seemed large enough at the outset and were selected due to feasibility concerns but prostate cancer is not a very popular media topic relative to other cancers (Slater et. al, 2008). The final sample size was generally small and the data may not be representative.

Personal bias could have played a role in the coding process as well. The coders were not African American males over 40 so the data could have been perceived and processed differently than how the African American males over 40 would have perceived it. While this is not expected to have made much of an impact on the results, it is certainly worth considering.

In terms of television content, the only artifacts that were easily available were from the Vanderbilt Television News Archive which only collects artifacts from news broadcasts for *ABC*, *CBS*, *NBC*, *CNN*, and *Fox News*. During the time frames prostate cancer screening may have been discussed on popular African American channels/shows (e.g. Black Entertainment Television) and those artifacts were not part of the samples for analysis.

Due to time constraints, after the announcement by the United States Preventive Services Task Force in October 2011, the timeframe had to end on December 31 for feasibility of the research. In the months that have followed there may be different proportions of negatively or positively framed stories on prostate cancer screening that could influence the proportions of the framed articles/stories in the 2011 "comparative" sample.

Internet ratings for the specific demographic of African American males over 40 were not available. The best option available for research was a Google search to see what content in general was the most popular according to Google's algorithm when individuals were searching for either "prostate cancer" or "prostate cancer screening" during the specified time frames. For this reason, we cannot be positive that all of the specific stories/articles that African American males over 40 read on the internet from these timeframes were represented in the samples.

This study also did not incorporate other popular forms of media, old (radio) and emerging (podcasts and blogs). While these media are not quite as popular or impactful as the media included in the study, they very well could have an impact on African American males over 40 and their decision to be screened (or not) for prostate cancer.

Future Research

Future research may expand on this research in a variety of ways. First and foremost, a deeper look at the way that each media frames the prostate cancer screening debate is needed. The results showed that during this time frame television had no positively-framed stories, newspapers were equally likely to use negative, neutral, and positive frames, magazines most closely resembled the general coverage, and the internet coverage was mostly neutral. These significant differences among media platforms warrant future research.

Also, instead of just looking at two separate short time periods, future research could look at longer timeframes and even correlate with prostate cancer screening rates to see if there is any relationship between the way the controversy is being framed and screening rates.

A critical opportunity for future research presents itself when examining the way that African American males over 40 are responding to this type of content. Research directly focused on the target audience and their reaction to content could provide insights into their thought processes when considering arguments made by the media and also look to see which media in particular has the greatest impact on both knowledge and intention either to be screened for prostate cancer or not.

This research also could be enhanced by interviews with reporters for television, magazine, internet, and newspaper outlets. Learning how reporters write about prostate cancer screening and how they choose their story approach would provide valuable insight to understanding how stories about this controversy end up being framed (intentionally or

unintentionally). Interviews could be conducted with wire service reporters who have considerable influence in the way the mainstream media outlets report on a story.

Other future research could spend much more time focusing on a qualitative approach. The qualitative methods used in this research were helpful in giving a glimpse of the nuances that readers are subjected to, but were unlikely to give anything near the entire picture. A study that is much more focused on qualitative methods would be able to dig deeper to see the subtle differences in the way the articles/stories are framed.

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APPENDIX A: THESIS CODEBOOK

Codebook

News stories reporting on prostate cancer screening are not always just informative and sometimes the author has a bias in favor or against it. Prostate cancer research is always being built upon; for every research study that shows that prostate cancer screening is ineffective, it seems that there is another research study that says that it is. It has been and continues to be a very controversial issue.

However, what everyone can agree on is that African-American males over 40 should discuss prostate cancer screening with their doctors and determine if they are at particular risk. The African American population is afflicted at a much greater rate than any other race (American Cancer Society, 2011). Research shows that African American males are receptive to being screened for prostate cancer, but there is still a large discrepancy in those who actually do (American Cancer Society, 2011; Denmark-Wahnefriend et. al, 1994; Myers et. al, 1998).

The goal of this content analysis will be to examine how the media frames prostate cancer screening for African American males over 40 in hopes of determining if that plays any sort of role in the reason that they don't get screened.

Frame of the Article

The main interest of the article and the first thing you code will be the author's framing (positive/neutral/negative) of **prostate cancer screening only** on a scale from 1 to 3.

Before you rate the article, you must determine if it is a "**one-sided**" article that only argues/presents the arguments on one side of the debate or if it is a "**two-sided**" article. If the article only presents one side of the argument, you will code it a "1" for "one-sided", and if it presents both sides of the argument, you will code it a "2" for "two-sided".

Important Note: *An article can be "one-sided" or "two-sided" and remain neutral. A "one-sided" neutral article would not present arguments on either side but rather just facts and statistics about prostate cancer screening whereas a "two-sided" neutral article would evenly present arguments from both sides without drawing conclusions or attempting to persuade the reader as to which side is better.*

REMEMBER: An article can be two-sided even if it is all mostly one-sided but makes a half sentence mention of the other side. As long as the other side is presented in any way, it is "two-sided."

1 = ONE-SIDED STORY

2 = TWO-SIDED STORY

After determining the "sides" of the article, you will rate the article's overall portrayal of prostate cancer screening as being "positive", "neutral", or "negative." A rating of "1" means that the article is "**negative**" in terms of its use of information and portrayal of prostate cancer screening while a rating of "3" means that the article is "**positive**" in terms of its use of information and portrayal of prostate cancer screening. A rating of "2" indicates "**neutral**" and the author either does not lean a particular way in particular (a balanced presentation of facts and statistics) or presents both sides evenly in regards to prostate cancer screening. When deciding on a rating for a given article, it is important to consider the following question:

- Are there "positive" arguments *and* "negative" arguments, just one-sided arguments, or neither? **Remember:** An argument on a particular side alone does not make the entire article either "positive" or "negative"; make sure to take the overall frame/argument of the article into account when determining which side it leans to if any.

Important Note: Be sure to only consider the arguments presented about prostate cancer screening *only* when rating as "positive", "negative", or "neutral." That is the focus of this research.

1 = NEGATIVELY FRAMED STORY

2 = NEUTRALLY FRAMED STORY

3 = POSITIVELY FRAMED STORY

CRITICAL NOTE: The final frame you give a story should be your "gut feeling" on how you feel about prostate screening after reading it.

Examples of Positive/Negative Frames

POSITIVE (PRO-SCREENING) FRAME:

Example: "... that the problem had been detected early enough to be cured with a relatively simple procedure."

Example: " What you missed is that while prostate-specific antigen (PSA) tests and digital rectal exams are not perfect, they are the diagnostic tools we currently have."

Example: " Prostate cancer screening with yearly digital rectal exams and P.S.A. determination saves lives."

Example: " Until we have them, we must be careful to encourage men to speak openly with their physicians, not scare them away. Doctors and patients cannot make informed treatment decisions if they never know cancer is present."

Example: " If we abandon P.S.A. screening, our only chance of finding early-stage, potentially curable prostate cancer is through use of the even more inaccurate digital rectal exam."

Example: " Without these reforms, people will continue to delay getting needed preventative care such as screenings that can detect early prostate, colon and breast cancers and prevent early death."

Example: " I tell every one of them: "You take the test. It's free, it's here and it's just a blood test.""

Example: " A PSA TEST saved my life."

Example: "Take advantage of the test. One vial is all it takes."

NEGATIVE (ANTI-SCREENING) FRAME:

Example: " Shamefully, the American Urological Association still recommends screening, while the National Cancer Institute is vague on the issue, stating that the evidence is unclear."

Example: " Even then, the test is hardly more effective than a coin toss."

Example: " ... after two big studies last year called into question whether the prostate-specific antigen, or PSA, blood test actually saves lives."

Example: " The latest study found routine screening led to more than 1 million men diagnosed with prostate cancer between 1986 and 2005 who likely did not benefit from the subsequent treatment."

Example: " Since then, studies have shown that most prostate cancers are so slow growing that most men die with prostate cancer rather than because of it."

Example: "Doctors should note that the PSA test can't always help distinguish between deadly cancers, which need to be treated, and relatively harmless, slow-growing cancers."

Example: " Treatment can lead to impotence, incontinence, pain and even death. "

Example: " Routine prostate cancer screening can lead to harmful and unnecessary treatment and doctors should make the risks clearer to patients"

Example: " For years, communities across the country have hosted health fairs where men can be tested for prostate cancer. It's a bad idea and should be stopped in many cases...."

Example: "We know one in six men will be diagnosed with prostate cancer but only one in 40 men will die of prostate cancer," Mohler said.

Example: " A study of 76,000 American men, published last year, concluded annual PSAs didn't save lives."

Type of Story

What kind of news story is it? Is it a "hard" news story or a "soft" news story? Each category can be defined as follows:

"Hard" News Story: Urgent, serious news that tends to appear on the front page of newspapers, it is the "news of the day" and takes a *factual* approach. A hard news story takes a factual approach: What happened? Who was involved? Where and when did it happen? Why?

Hard news reporting uses clean and uncluttered writing. It may start with a summary lead that describes what happened, where, when, to/by whom, and why (the journalist's 5 W's). The lead must be brief and simple, and the purpose of the rest of the story is to elaborate on it.

"Soft" News Story: Roughly defined as news that is not time-sensitive, "soft" news is mostly characterized by personal interest stories like profiles of people, programs, or organizations. A "soft" news story tries instead to entertain or advise the reader. You may have come across newspaper or TV stories that promise "news you can use." Examples might be tips on how to stretch properly before exercising, or what to look for when buying a new computer.

"Soft" news is most often background information or human-interest stories.

Not Applicable: The internet articles you come across will fall into this category. If it is a pamphlet, brochure or other form of information that is not "news" you will code it with a "99".

NOTE: An article about new guidelines/recommendations for prostate cancer screening that is NOT an opinion article IS "hard news."

1 = "HARD" NEWS STORY

2 = "SOFT" NEWS STORY

99 = NOT APPLICABLE

Prostate Cancer Main Topic

Was prostate cancer the main topic of the article or was it secondary to another topic? A good indicator that the article's main topic was prostate cancer would be if it was in the title or if the majority of the article was focused on it.

0 = PROSTATE CANCER WAS NOT THE MAIN TOPIC

1 = PROSTATE CANCER WAS THE MAIN TOPIC

Sources

Sources and Types of Source Citations

Articles discussing prostate cancer screening will often cite a variety of sources. Your job is to code what sources are cited in the articles you read based on the categories below.

This research is interested here in what sources are directly quoted or cited, if their quote/citation was regarding prostate cancer screening, and if so, if it was "positive", "negative", or "neutral."

There are two ways that sources might get cited. One way is by *simply mentioning a person* and their affiliation. Another way is by *directly quoting a person* in the article. For quotations, this research is only looking for statements with quotation marks around them or directly attributed to a *single person* (e.g., John Smith stated that...). General attributions of statements to a group of people do not count. For instance, if an article were to say something like, "Researchers said that the findings were hopeful..." we would *not* want that to be counted as a quote. Only statements denoted by quotation marks or directly attributed to a single person count as quotes.

You may also code a single person as belonging to more than one category. For example, if there was a doctor commenting on a study that he/she was not involved in and that person was also a cancer survivor, you could code him/her as BOTH a doctor not involved in the study and a testimonial.

NOTE: If a person's role is not made perfectly clear, for example, if they are not clarified specifically as a "Doctor", then code them as "Unknown."

As a general rule of thumb, if you aren't POSITIVE about what code they should be, code them as "Unknown."

The source category codes for this project are as follows:

- 1- **Scientist or Doctor (Directly Involved in Research Study) (SCIEN/DOC INV.)**
- 2- **Scientist or Doctor (Not Directly Involved in Research Study) (SCIEN/DOC N.I.)**
- 3- **Government Official (GOV)**
- 4- **Pharmaceutical Representative (PHARM)**
- 5- **Advocate (ADVOC)**
- 6- **Testimonial (e.g., person who has been screened, is considering screening, or has spoken to their physician about screening) (TESTIM)**
- 7- **Close to Testimonial (e.g., family member or friend of someone who has considered screening, spoken to their physician about screening, or to someone who succumbed to or survived prostate cancer) (CLOSE TO TESTIM)**
- 8- **Unknown (UNKNOWN)**
- 99- **NO SOURCE**

You will put the specific source category in the "SOURCE_(number)" box; if they fall into number source categories you will multiple "SOURCE_(number)" boxes.

If there are no sources quoted, place a "0" in the both boxes for each source.

If the source comments on prostate cancer screening, you will rate *the entirety* of their quotes as being "negative", "neutral", or "positive".

NOTE: Record all quotes in order of appearance always. If a person has numerous quotes in one article, they are only coded as one person and rate all their statements together as negative/neutral/positive.

99 = NO SOURCE COMMENT/QUOTE

1 =SOURCE COMMENT/QUOTE WAS NEGATIVE REGARDING SCREENING

2 = SOURCE COMMENT/QUOTE WAS NEUTRAL REGARDING SCREENING

3 = SOURCE COMMENT/QUOTE WAS POSITIVE REGARDING SCREENING

IMPORTANT NOTE: Remember, much like the overall article, if a person has more than one quote treat it the same way and go with the overall "feel" of the quotes when rating for negative, neutral, or positive.

Use of Statistics

Does the article use statistics (numerical, quantitative information) as evidence for its prostate cancer screening argument/frame? If YES, a "1" should be marked down under "STATISTICS", if not mark down a "0".

Example: "Statistics show that while 1 in 6 men develop prostate cancer at some point in their life, only 10% will actually die because of it."

In summary, we are only looking for **numerical, quantitative information** that is used as evidence for an argument for prostate cancer screening.

If the statistics are not making an argument in any way regarding prostate cancer screening.

0 = NO STATISTICS

1 = STATISTICS

Mention of Risk

Does the article mention any factor that increases/lowers prostate cancer risk? Given the target audience of this research (African-American males over 40), this is of particular interest.

IMPORTANT NOTE: For this category, we only care about any factor that either increases/lowers prostate cancer risk OR mentions the risk of developing prostate cancer. The word "likelihood" is often a good indicator in terms of development.

Example 1: "African-American men are at increased risk, as are men who have a first-degree relative with prostate cancer."

Example 2: "Men have a 1 in 6 lifetime chance of developing prostate cancer."

Note: For this category, the word risk does *not* have to be explicitly used (see: **Example 2**).

0 = NO MENTION OF RISK

1 = MENTION OF RISK

Was the mention of risk put in quantitative or relative terms?

Quantitative Risk Example: Richard J. Ablin reports that American men have "only" a **3 percent chance** of dying from prostate cancer.

Relative Risk Example: Men with a score of 2.0 or higher at age 60 were **26 times more likely** to eventually die of the disease than 60-year-old men with scores below 1.0.

ESSENTIALLY: Quantitative is when risk is mentioned with a specific percent, relative is when a likelihood is given but you have no idea what it means (relative to what? 26 times more likely than what originally?)

1 = Quantitative Risk Used

2 = Relative Risk Used

3 = BOTH Quantitative and Relative Risk Used

99 = NO MENTION OF RISK

Use of Celebrity

Does the article mention a celebrity in the discussion of prostate cancer screening in some way?

This research is *not* interested in the mention of a celebrity succumbing to prostate cancer or having had it when they passed away, just regarding prostate cancer screening.

NOTE: Don't code the host of a talk/news program or a person who makes regular appearances on that program as a "celebrity."

Example: " When asked about the issue, (celebrity) said that getting screened for prostate cancer potentially saved his life."

REMEMBER TO CODE A CELEBRITY QUOTE AS A "SOURCE" AS WELL.

0 = NO USE OF CELEBRITY

1 = USE OF CELEBRITY

If a celebrity was quoted, was it in favor (positive), against (negative), or neither (neutral) regarding prostate cancer screening?

1 = CELEBRITY QUOTE WAS "NEGATIVE"

2 = CELEBRITY QUOTE WAS "NEUTRAL"

3 = CELEBRITY QUOTE WAS "POSITIVE"

99 = NO CELEBRITY QUOTE

Information Referrals

Does the article mention information resources for more information on prostate cancer screening?

Example: " For more information on prostate cancer screening, visit www.healthcare.gov or www.tdi.state.tx.us for details from the Texas Department of Insurance..."

Note: A statement that a doctor can provide more information would *not* count as an informational referral. This research is looking for referrals in which members of the target audience can actively use the recommended resource upon finishing reading.

0 = NO INFORMATION REFERRALS

1 = INFORMATION REFERRALS

FINAL NOTE: If you come across an article that does not mention prostate cancer screening at all, please bring it to my attention before coding it. It most likely will be removed but may have been included for a reason.