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Identifying the Beliefs and Barriers to Mammography in Rural African Women

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This is to certify that the doctoral study by

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May 2016

Abstract

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MSN, Drexel University, 2007

WHNP MCP Hahnemann University 2002

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Project Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Abstract

Breast cancer is the most commonly diagnosed cancer in African American (AA) women and is the second leading cause of cancer related deaths in the United States among AA women ages 40 to 55 years of age. The 5-year breast cancer survival rates for AA women (78%) are lower than those of Caucasian women (90%). The purpose of this project was to describe the benefits, and barriers toward screening mammograms for breast cancer in AA women living in the Southside Health District in Virginia. The subscales of The Champion's Mammography Beliefs and Attitudes Questionnaire (MBAQ,1999), which is based on the health belief model variables of perceived benefits and barriers, guided this project. A convenience sampling of AA women (n =112) from 10 different churches in Brunswick and Mecklenburg County, Virginia completed the Champion's MBAQ after participating in a educational program based on the Susan G. Komen breast self-awareness messages. Descriptive analyses revealed that 54% of the participants either agreed or strongly agreed with the perceived benefits to getting a screening mammogram, whereas 75 either agreed or strongly agreed with the perceived benefits to getting a screening mammogram, whereas 7% either agreed or strongly agreed with the perceived barriers to getting a screening mammogram. The results of this project are consistent with the literature and support the idea that it is imperative to educate AA women about screening mammograms in places where they socialize. This project contributed to social change in nursing practice by enhancing the awareness that early screening among AA women that early screening mammograms save lives.

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Dedication

I would like to dedicate my DNP Project in the memory of my deceased parents Oliver and Margaret Harper. To my deceased brother Oliver Jr. and sisters Miriam and Mary Lee gone but not forgotten.

Acknowledgments

To God, be the glory! I can do all things through Christ who strengthen me. I appreciate all the people in my life that helped make this DNP project a success. I am grateful for the guidance from Dr. Eileen Fowles, who was my mentor and chair of the DNP committee who guided me through this long journey. I extend my gratitude to Dr. Phyllis Morgan, member of my DNP project, for her insights and direction. I express my gratitude to Dr. Jonas Nguh Walden University research reviewer. I am grateful to Dr. Victoria Champion for giving me permission to use her research instrument. I acknowledge with gratitude the willingness of the churches in Brunswick and Mecklenburg County to participate in this study. I would like to thank all of the pastors and their congregation.

A special thank you to my husband, Curtis for his support, and putting up with me through this long journey. I am thankful for my daughters, sisters, brothers and a special friend Annie that encouraged me to never give up.

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Section 1: Nature of the Project

Introduction

Cancer is a major health problem in Virginia (Massey Cancer Center, 2014). While the rate of cancer in Virginia is slightly below the national average, cancer was the leading cause of death in 2007, surpassing heart disease (Massey Cancer Center, 2014). Breast cancer is the most commonly diagnosed cancer in African-American (AA) women and the second most common cause of death for AA women aged ages 40 to 55 years of age (American Cancer Society, 2015; Belin, Washington, & Greene, 2006). Community indicators support the increase risk of cancer (Massey Cancer Center, 2014). In the three counties that encompass the Southside Health District (SSHD); Brunswick, Mecklenburg and Halifax counties the female breast cancer, age-adjusted incidence rate is 117.8 compared to entire state of Virginia at 124.3 (Virginia Department of Health 2012). Virginia has a higher mortality rate (23.5) for breast cancer than average for the United States (22.2) (American Cancer Society, 2014.

The 5-year breast cancer survival rates continue to be low for AA women at 60%, compared to 69% for Caucasian women (American Cancer Society, 2014). Delay in breast cancer screening is a significant factor for late-stage diagnosis of breast cancer in AA women (Gullatte, Brawley, Kinney, Powe, & Mooney, 2009). The America Cancer Society (2014) projected that 27,000 AA women will be diagnosed with new cases of breast cancer, and about 6,000 will die. Early screening mammograms are necessary to reduce death rates among AA women. Mammography screening reduces breast cancer mortality by 35% to 50% (Adams, 2007). Some factors contributing to the delay of care

in AA women includes religiosity, spirituality, and fatalistic beliefs (Gullatte, Brawley, Kinney, Powe, & Mooney, 2009). Social and economic disparities are also barriers to early care (American Cancer Society, 2015).

Having screening mammograms can lower the risk of premature death from breast cancer (American Cancer Society, 2015). The number of AA women who go in for breast cancer screening continues to be low (American Cancer Society, 2015). This project addressed the use of breast cancer education to increase the use of screening mammograms. The researcher used the Health belief model (HBM) as a foundation for this project. In order to understand the importance of having a screening mammogram, AA women must be educated about breast cancer. In this project, I addressed the benefits, and barriers experienced by AA women in rural Virginia about screening mammograms.

Background and Context

The incidence of AA women being diagnosed with breast cancer is a major concern in Virginia. From 2005-2009, breast cancer was the number one cancer in the state of Virginia. The incidence of breast cancer in AA women in the United States during 2006-2010 was 118.4/100,000, however, AA women in Virginia had a higher incidence rate (127.3/100,000). Furthermore, between 2006-2010, the mortality rate from breast cancer for AA women in Virginia was higher than the national rate (33.2 per 100,000 vs. 30.8 per 100,000, respectively) Virginia has the highest breast cancer incidence and mortality rate by race and ethnicity in the United States (American Cancer Society, 2014). There is a critical need to increase the rate of screening mammography in AA women in Virginia

as a strategy to increase early identification and treatment of breast cancer in AA women and, subsequently reduce the mortality rate due to breast cancer in AA women in Virginia.

There are numerous factors affecting AA women in relation to breast cancer screening. Some factors that affect AA women are: (a) delay in early screening mammograms, (b) no insurance coverage for mammography, and (c) lack of transportation to mammography sites. The delay in having early screening mammograms results in late-stage diagnosis for AA women. The "gold standard" for early detection of breast cancer is screening mammograms (Lee-Lin et al., 2014). The Health belief model (HBM) has been used in numerous research studies to predict health behaviors in relationship to one's health belief patterns. Therefore, the HBM was selected as the framework for this project to understand AA women's benefits and perceived barriers to care in the SSHD in Virginia.

Problem Statement

The purpose of this project was to describe the benefits, and barriers toward screening mammograms for breast cancer in AA women living in the SSHD in Virginia. Previous research has identified two variables from the HBM perceived benefits and barriers associated with screening mammograms. Staging cancer is pivotal for proper treatment. The HBM proposes that the benefits variable will have a positive outcome in regards to having a screening mammogram, and the perceived barriers variable will have a negative result in regards to not having a screening mammogram (Champion, 1999). If a cancer is diagnosed at the local stage, there is a better outcome and survivor rate. There

is limited research examining the reasons behind the delay of screening in AA women in SSHD. Most of the previous studies used samples of women living in large cities rather than women living in rural areas. AA women have a lower rate of mammogram screening and are more likely to delay testing than the general population (American cancer Society, 2014). The low rate of screening was among women with less education, lower income and no insurance (Virginia Department of Health, 2012). The percentage of breast cancer being diagnosed at the early stage is lower in the AA women than in Caucasian women. Usually, breast cancer has a five-year survival rate of 98% if diagnosed early (Virginia Department of Health, 2012). Consequently, the mortality rate for AA women residing in SSHD, for 2005-2009, was 36% compared to the state of Virginia at 33.6% (Virginia Department of Health, 2012).

Purpose Statement/ Project Objectives

The purpose of this project was to describe the benefits, and barriers toward screening mammograms for breast cancer in AA women living in the SSHD in Virginia The researcher's goal with this project was to understand AA women's attitudes about mammograms and to address the benefits and barriers surrounding the importance of having a mammogram. This researcher addresses the gap in nursing practice that exists in the SSHD regarding late-stage breast cancer in relation to not having mammograms. A barrier that increases the gap in practice is AA women fear having a diagnosis of cancer once the screening is performed. In addition, there is fear that treatment will not be successful once cancer has been diagnosed (Kelley, 2011). The objectives of the project

are as follows: (a) Identify benefits AA women living in rural Virginia have for obtaining mammograms, (b) identify the barriers for AA women having a free or discounted screening mammogram, and (c) provide information to AA women about risk factors, myths, facts, barriers, and statistics regarding breast cancer.

Significance and Relevance of Practice

The total age-adjusted mortality rate for cancer in SSHD is higher than Virginia (203 versus 180.9 per 100,000 residents) (Virginia Department of Health, 2012). Female breast cancer is the number one cancer diagnosed in SSHD with the annual count of 68%, representing the average number of new female cancer cases per year in SSHD from 1999 to2008 (Virginia Department of Health, 2012). In the United States, African Americans have the highest mortality rate for most cancers over any other racial and ethnic group (Cancer Facts & Figures for African Americans, 2013-2014). According to the health district in Virginia, the locations of Chesterfield, Portsmouth, and Hampton have the highest incidence rates for breast cancer among all 35 health districts (Virginia Department of Health, 2012). The highest breast cancer mortality rates in the Virginia health community were: Western Tidewater, Portsmouth, and Piedmont (Virginia Department of Health, 2012). The lowest mammogram screening rates in Virginia were: Cumberland Plateau, Rappahannock/Rapidan, and West Piedmont (Virginia Department of Health, 2012).

During 1975-2009, the death rates for all cancers combined continued to be higher among African Americans than Caucasians. African American men at 31%, yet 15%

higher for AA women (Cancer Facts & Figures for African Americans, 2013-2014). The odds are against African Americans with the life expectancy to be 70.6 percent for African American men vs. 76.1 years for Caucasian men. For AA women life expectancy is 77.2 percent vs. 80.9 for Caucasian women (Cancer Facts & Figures for African Americans, 2013-2014). The causes of the disparities were associated with the socioeconomic status which included: lower education, lower income, and inequities in work.

The recommendation for screening mammograms for women age 40 and older, is to be screened annually (American Cancer Society, 2013). In order to reduce the mortality of breast cancer, early mammogram screening is required to detect cancer earlier, and improve prognosis (Bleyer & Welch, 2012). Screening mammograms have made a tremendous difference in the United States. There has been a doubling in the instance of early-stage breast cancer being detected each year, as evidenced by rates increasing from 112 to 234 cases per 100,000 women (Bleyer & Welch, 2012). The rate of women with late-stage cancer has decreased by 8 percent from 102 to 94 cases per 100,000 women, as a result of screening mammograms (Bleyer & Welch, 2012). The overall five-year survival rate for breast cancer in 2002-2008 among AA women was 78 percent compared to 90 percent of Caucasian women (American Cancer Society, 2013). This difference is related to the stage of cancer at detection.

Project Question

What are the perceived benefits and barriers regarding screening mammograms as identified by AA women in rural Virginia?

Evidence-Based Significance of the Project

Implementing evidence-based practice (EBP) is imperative to improve successful clinical outcomes (Overholt & Johnston, 2006). This project supports the notion that educating AA women about having early screening mammograms saves lives. There are several barriers to screening mammograms AA women have, including: (a) fear, (b) lack of awareness, (c) limited income, and (d) restricted access to care. According to Fouad et al. (2010), an additional barrier includes the difference in tumor biology between Caucasian women and AA women. African American women tend to be diagnosed with a more aggressive form of breast cancer (Sisters Network Inc., n.d.). These barriers often lead to late-stage breast cancer detection and poor survival rates among AA women (Sisters Network Inc., n.d.). Doctoral nursing graduates have an enormous responsibility in educating women about the importance of risk factors for breast cancer in their practice.

Educating business owners, peer educators, and community workers could play a pivotal role in promoting screening mammograms for AA women (Earp et al., 2002). Few studies have addressed the breast cancer mortality rate of AA women in rural Virginia.

Implications for Social Change in Practice

Reduction of late-stage breast cancer diagnosis among women is a priority for Healthy People 2020 (Healthy People 2020, n.d.). The revised objective for Healthy People 2020 is to continue to monitor the trends in cancer incidence, and mortality rates (Healthy People 2020, n.d.) The goal is to reduce the number of new cancers diagnosed yearly, and decrease the number of deaths from cancer in the United States by ten percent (Healthy People 2020, n.d.) Healthy People 2020 is also looking to increase the number of women using the most recent guidelines for screening mammograms recommended by the United States Preventive Service Task Force (USPSTF).

Educating AA women about the risk factors for breast cancer is pivotal due to their cultural beliefs and lack of knowledge (Kelley, 2011). The most common risk factors regarding breast cancer, is being an aging woman (Susan G. Komen, n.d.) Educating AA women about breast exams and normal findings can assist in early diagnosis of breast cancer (Kelley, 2011). Unfortunately, most AA women living in rural areas are under insured or have low income; therefore, making it difficult to obtain a screening mammogram (Kelley, 2011). Other barriers in rural areas include lack of transportation to sites offering mammography, and limited education about breast cancer, especially early detection (Kelley, 2011). A potential strategy to recruit AA women to overcome these barriers, is to provide educational classes at churches (Kelley, 2011). Nursing practice can advocate by moving from traditional settings to where people conjugate. Hopefully, this will motivate more AA women to have early screening mammograms.

Definitions of Terms

For the purpose of this study, the following terms are defined as follows:

African- American women: an American of black African descent (Dictionary, 2010).

Adenocarcinoma: Cancer that starts in the glandular tissue that makes and secretes a substance (i.e. breast milk) (American Cancer Society, 2013).

Breast Cancer: Malignant tumor that starts to grow out of control in the breast (American Cancer Society, 2013).

Breast Cancer Risk Factors: Anything which increases the likelihood of developing cancer. Risk factors can be modifiable or non-modifiable (American Cancer Society, 2013).

Cancer: The out of control growth of abnormal cells with damaged DNA. (American Cancer Society, 2013).

Carcinoma: Cancer which begins in the epithelial cells. (American Cancer Society, 2013).

Carcinoma in situ: Non-invasive, contained cancer in an early stage. (American Cancer Society, 2013). *Compliance:* Adapting to a rule or set standards (America Cancer Society- Free definitions by Babylon, n.d.)

Complier: Person who adapts to rules and standards (American Cancer Society- Free definitions by Babylon, n.d.)

Estrogen Receptor: Are molecules that function as a cell's "welcome mat" for estrogen

circulating in the blood. Breast cancer cells without receptors are called estrogen - receptor negative and breast cancer cells with receptors are called estrogen- receptor positive receptors (American Cancer Society, 2013).

Estrogen Receptor Negative (ER-) are unlikely to respond to hormone therapy (American Cancer Society, 2013).

Estrogen Receptor Positive (ER+) are more likely to respond to hormone therapy (American Cancer Society, 2013). Hormone receptor-positive breast cancers tend to grow more slowly and are much more likely to respond to hormone therapy than breast cancers without these receptors (American Cancer Society, 2013)

HER2/neu status: Too much of a growth-promoting protein (American Cancer Society, 2013).

Mammogram: X-ray of the breast (American Cancer Society, 2013)

Non-cancerous breast conditions: Benign breast tumors such as fibroadenomas and intraductal papillomas. (American Cancer Society, 2013)

.*Non-Compliance*: Not adapting to rules or standards (American Cancer Society- Free definitions by Babylon, n.d.).

Normal breast: Composed of mainly lobules, ducts, and stroma. (American Cancer Society, 2013).

Non-Complier: Person not adapting to certain rules or standards (American Cancer Society- Free definitions by Babylon, n.d.).

Receptors: Proteins located in or on cells that can attach to certain substances, such as hormones, that circulate in the blood. (American Cancer Society, 2013).

Southside Health District: Area comprised of three medically underserved counties located along the Virginia-North Carolina state line.

Stages of Breast Cancer: Describes the extent of cancer in the breast (American Cancer Society, 2013).

Stage 0 Breast Cancer: Cancer cells are still within the duct (American Cancer Society, 2013).

Stage 1 Breast Cancer: Cancer cells have not spread beyond the breast (American Cancer Society, 2013).

Stage II Breast Cancer: Cancer cells have spread to the lymph nodes under the axilla of the same side as the breast cancer (American Cancer Society, 2013).

Stage III Breast Cancer: Cancer cells have spread to the chest wall or skin (American Cancer Society, 2013).

Stage IV Breast Cancer: Cancer cells have spread to the bone, liver, brain, or lung (American Cancer Society, 2013).

Assumptions

The project included the following assumptions: (a) educating AA women about the essential need to follow the (USPSTF) recommendations for breast cancer screening could bring positive results, (b) there is a positive expectation that AA women will decide to have a screening mammogram, (c) after receiving the educational program, AA women will believe preventive care regarding breast cancer is better than intervention, (d) education about screening mammograms is a strategy that could increase the use of screening mammograms.

Limitations

There are three weaknesses or limitations in this project that may decrease the generalizability and results of this study. The project included the following limitations: (a) the geographic location could prevent participants from attending the educational session due to living in a rural area and having no transportation to the church (site of the educational program), (b) some participants may still have the same negative belief after the educational class regarding screening mammograms and (c) the data collection could be misleading if some of the participants are found to be illiterate. The sample of predominately AA women could limit the generalizability to other races and ethnicities.

Scope

The scope of this project was limited to African American churches in the SSHD. It is imperative to realize there are many cultural differences between races and ethnic groups. For African Americans, religion and spirituality play a pivotal role in their beliefs

and perceived barriers about mammograms (Adams, 2007). Furthermore, African Americans use their religious practices to assist in coping with illness (Adams, 2007). In rural southern states, AA women are a population that is difficult to reach to provide health education (Kelley, 2011). Therefore, providing educational classes in churches regarding screening mammograms could be a successful way to recruit AA women in the project. Some barriers to recruiting AA women in the project could be a mistrust of research (exemplified by the Tuskegee study) which is prevalent in the AA population (Kelley, 2011). According to Adams (2007), there is limited research on the difference in beliefs and behaviors among AAs in rural communities regarding screening mammograms.

Summary

Breast cancer is the most commonly diagnosed cancer in AA women. If AA women have screening mammograms, as recommended by the American Cancer Society, breast cancer can be detected at an earlier stage, improving treatment. In 2014, more than 200,000 women and 2000 men in the United States were diagnosed with breast cancer (American Cancer Society Cancer Facts and Figures, 2014). In addition, nearly 40,000 women died from the disease in 2014 (American Cancer Society Cancer Facts and Figures, 2014). This project provided easily understood educational information and materials to AA women living in rural Virginia. The following chapter presents the results of the literature search, breast cancer screening methods, mammography, barriers and theoretical framework.

Section 2: Review of Scholarly Evidence

Introduction

The purpose of this project was to describe the benefits, and barriers toward screening mammograms for breast cancer in AA women living in the SSHD in Virginia. The scholarly literature review will be presented in the context of the incidence and mortality rate of breast cancer among AA women. This section discusses the disparities in treatment for AA women in rural areas, Breast Imaging Reporting and Data System (BI-RADS), self-breast exams, BReast CAncer (BRCA) 1 and BReastCAncer (BRCA) 2. , religious practices aimed at mammogram screening, and educational knowledge. Lastly, there is a discussion of the use of the HBM in relationship to benefits, and barriers surrounding screening mammograms.

Literature Search Strategy

A comprehensive search was conducted using seven search engines, including: Pub Med, Google Scholar, Cumulative Index to Nursing and Allied Health Literature (CINAHL), Walden Library Database, Medline, Cochrane Database of Systematic Reviews, and the United States government websites. The following terms were used as key search words: *AA women, breast cancer, breast cancer screening, barriers to mammogram, beliefs and benefits to mammograms, Virginia Department of Health Cancer Registry and Center of Statistics.* Articles use in this study were peer-reviewed and no more than ten years old. Articles discussing AA women's perception of screening mammograms and disparities in breast cancer were included. The literature search

retrieved 1,500 journal articles, books, studies, briefs, and federal government documents. The titles of these articles were reviewed to determine whether they met inclusion criteria, which resulted in 500 articles of relevance. The search was narrowed to 100 articles and studies related to breast cancer, AA women benefits, and barriers to screening mammograms.

Breast Imaging Reporting and Data System

The American College of Radiology developed the Breast Imaging Reporting and Data System (BI-RADS) in 1992 to standardize reporting to assist in the communication of mammographic interpretation (Geller et al., 2002). The purpose of the BI-RADS categories are quality control. The BI-RADS tool evaluates the signs and symptoms of breast disease in women (Geller et al., 2002). The American College of Radiology's primary concern is to communicate to providers, in a consistent understandable format, the mammogram findings, the probability of cancer, and recommendation for course of action (Geller et al., 2002,). The BI-RADS results are as follows: incomplete (0), negative (1), benign (2), probably benign (3), suspicious (4), or highly suggestive of malignancy (5) (Jones et al., 2007).

Breast Self-Exam

Fouladi et al. (2013), concluded that if women, regardless of age, performed breast self-exams (BSE) and mammograms, 90% of patients could be cured of breast cancer with early detection. In this study, the HBM was used to predict the intentions of women to perform screening mammograms (Fouladi et al., 2013). A sample of 380 women, aged

30 and older, were referred to healthcare centers to assess the use of mammogram screening. The results of logistic regression showed 27% of women performed BSEs; however, only 6.8% of them used mammograms for screening of breast cancer (Fouladi et al., 2013).

BRCA1- BRCA2 Testing

According to Armstrong & Evans (2014), carriers of the BRCA 1 and BRCA 2 have a higher lifetime risk of developing breast cancer, around 65-85%. According to the Sisters Network (2014), the BRCA 1 and BRCA 2 genes are damaged or mutated genes that place women at higher risk for breast cancer. The average person without mutated genes has around a 12% risk of developing breast cancer. There are certain racial/ethnic populations that have a higher prevalence of the BRCA 1 and BRCA 2, including Ashkenazi Jewish descendants. Other ethnic communities with higher incidence of these genes include: Norwegian, Dutch, and Icelandic people (National Institutes of Health, n.d.). However, there is limited data to indicate the prevalence of harmful BRCA 1 and BRCA 2 in AA women, Hispanics, Asian Americans, and non-Hispanic Caucasian (National Institutes of Health, n.d.). Therefore, it is imperative women with the BRCA genes obtain screening mammograms earlier.

Mammography

According to the American Cancer Society (2013), screening tests are used to detect some cancers at earlier stages when there is a higher rate of survival. In addition, the American Cancer Society recommends women have an annual mammogram starting at 40 years of age (American Cancer Society, 2013). Several studies found early

mammogram screening to make a difference in staging breast cancer when diagnosed early. Mammography screening increases detection of early stage breast cancer (Taplin et al., 2004). Implementing screening mammograms early could reduce the percentage of women diagnosed with late-stage disease (Taplin et al., 2004).

Reports suggested AA women had a lower rate of screening mammograms(Susan G. Komen, 2015). Furthermore, those lower rates were associated with an increased number of AA women being diagnosed with late-stage breast cancer (Susan G. Komen, 2015). Today, AA women and Caucasian women have about the same rate of screening mammogram use (Susan G. Komen, 2015). In 2010, the percentage of women age 40 and above receiving a mammogram increased to 67 % from 49% (American Cancer Society, 2013).

Mammography often detects breast cancer before women have any symptoms, even though the sensitivity is lower for younger women and women with dense breast (American Cancer Society, 2015). The screening habits of AA women are affected by several factors, such as: lack of breast cancer knowledge, culture beliefs, lack of medical coverage, and lack of early detection to screening to mammograms (Adams, 2007).

Mammography Use

Disparities in mammography use among AA women are characterized by socioeconomic factors, such as: income, education, and demographic area. Historically, AA women and women of other racial/ethnic minority groups obtained mammograms at rates lower than the general population (Legler et al., 2002). As a strategy for reducing

breast cancer mortality, women need to follow the (USPSTF) mammogram screening guidelines for women aged 40 years and older. Despite the widespread availability of mammography screening, adverse breast cancer outcomes persist for AA women, including diagnosis in the later stage of the disease when compared to Caucasian women (Jones et al., 2007).

Factors Influencing Mammography

Hodges & Videto (2011), state that knowledge alone does not change behavior. One's cultural attitude and beliefs play a pivotal role in increasing the use of screening mammograms. Each culture has its own beliefs surrounding breast cancer and screening mammograms. Therefore, it is imperative to focus on cultural traditions when educating about screening mammograms. In the AA population, one needs to address the fatalism concept before change can happen. Fatalism is the belief that what happen has already been decide and cannot be change.

Lannin et al. (1998) found AA women with late-stage breast cancer were reluctant to have treatment for fear that their husband or partner would leave them if they knew there was a diagnosis of breast cancer. In addition, AA women felt they were no longer physically attractive and did not want to become a burden financially or emotionally.

Bailey et al. (2000) found that AA women cultural beliefs influences their use of screening mammograms because of their shared values, behaviors, customs and learning.

Champion et al. (2004) assessed how breast cancer fear was related to obtaining mammography. Fear was divided into small, moderate, and high levels based on past

research. The study concluded fear is associated with participation in screening mammograms and suggested emotional arousal to be the major cause of the fear.

Perceived Benefits of Mammograms

Jones et al. (2007) reported it was significantly more common for AA women to be inadequately informed about their mammogram results than Caucasian women. AA women may not be receiving the full benefit of screening mammograms due to inadequate communication of results, particularly when mammography results are abnormal when compared to Caucasian women. The difference is poor communication between primary care providers and minority patients (Jones et al. (2007).

(Earp et al., (2002) reported that the North Carolina breast cancer screening program designed a community-based trial to determine the effectiveness of a lay health advisor to educate disadvantaged AA women about screening mammograms. The results concluded lay health advisor interventions were an effective method to increase the use of screening mammograms among underserved AA women in rural areas, as evidenced by a 6% increase in screening mammogram use (Earp et al., 2002).

Harris & Gibson (2011) tested a culturally appropriate intervention with over 35 AA women from churches and community organizations. The intervention was to participate in a survey on breast health knowledge, beliefs, fear, fatalism, and mammogram screening. The assumed finding was to see a significant difference in fatalism and fear as a result of the intervention. In addition, it was also expected that spirituality/religiosity and fatalism would be negatively correlated before and after the

forum. The quasi-experimental pre-/post intervention design showed the decrease was not significant. The forum did decrease the AA women breast cancer fatalism, even though it was not significant (Harris & Gibson, 2011).

Perceived Barriers to Mammograms

Spirituality

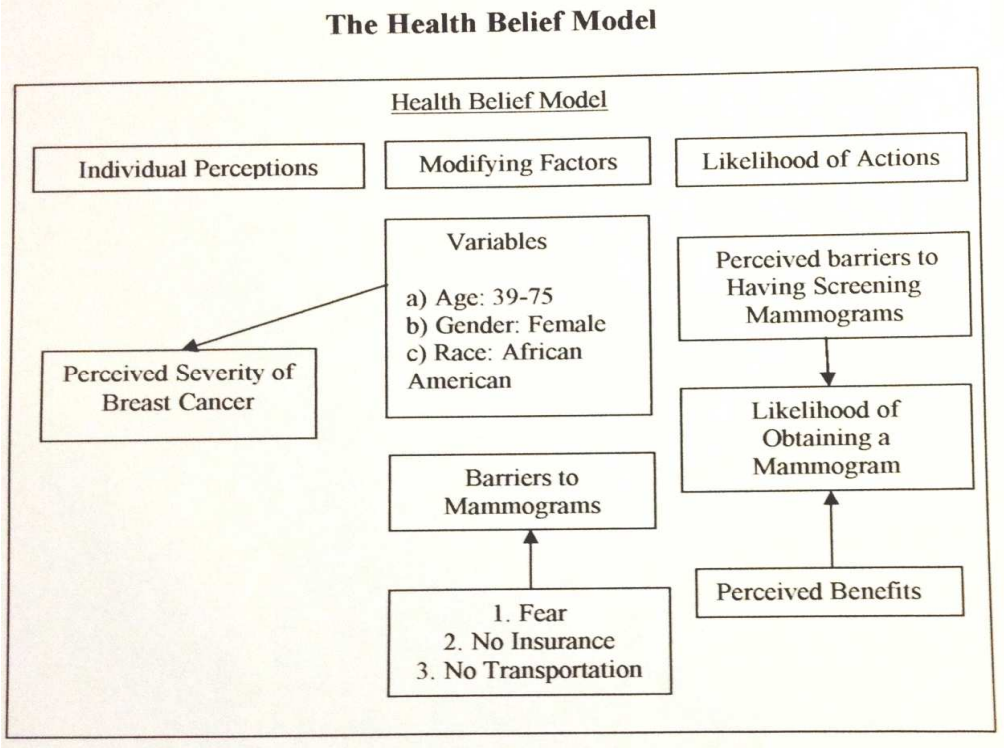
Hamilton, Carter, & Lynn, (2010), suggest that the conceptual framework the Perceived Support from God Scale was developed to capture how Christian African Americans cope with cancer or life- threatening illnesses. African Americans dealing with cancer maintain a personal relationship with God whenever stressful situations develop Hamilton, Carter, & Lynn, (2010). AA women survivors of cancer believe God is in control, and there is a reason for going through the situation (Hamilton, Carter, & Lynn, 2010). Spirituality among some AA women continues to be a powerful motivation when dealing with life experiences, which may provide a reason for not having a mammogram (Hamilton, Carter, & Lynn, 2010). Hamilton et al. (2010) determined that spirituality has a significant effect on the way AA women think about mammograms.

Other Barriers

Earp et al. (2002) reported breast cancer screenings are lower in disadvantaged women who live in rural areas, have lower socioeconomic status, and are uninsured. Other barriers relate to being uneducated, being without health insurance, and being socioeconomically (Earp et al. (2002) disadvantaged.

Theoretical Framework

The theoretical framework guiding the DNP project was the HBM (see Figure 1). The HBM proposes a person's health-related behavior is based on their perception of four critical areas. The four areas are: (a) severity of potential illness, (b) perceived susceptibility, (c) benefits of taking a preventive action, and (d) barriers to taking the action (Janz & Becker, 1984). The HBM hypothesizes a health-related action depends upon the simultaneous occurrence of those four factors. The purpose of using the HBM is to help individuals realize they have risk factors for health problems and to try to persuade those individuals to change their behaviors and actions (Janz & Becker, 1984). The HBM's primary framework is to continue to explain and predict the acceptance of health and medical care recommendations (Janz & Becker, 1984). Individuals are hard to convince they are at risk of certain diseases due to their lifestyles. The HBM, as defined in the following model, shows the four predictors of one's perception of a health problem. The HBM played a pivotal role in educating and understanding the beliefs of AA women regarding their breast cancer screening behaviors. Understanding AA women's beliefs surrounding screening mammograms can show providers the reasons AA women are having or not having screening mammograms. Janz & Becker (1984), recommends considering the HBM as part of health educational programs. The HBM was modified to address beliefs, benefits, and barriers to AA women obtaining screening mammograms. (See Figure 1, below)



Summary

This literature search focused on understanding the beliefs and perceived barriers of AA women living in rural areas toward screening mammograms. Furthermore, there was discussion of the disparity between Caucasian women and AA women regarding the mortality rate of breast cancer. The use of the HBM was used to understand the health beliefs and benefits of AA women in Virginia in relation to screening mammograms. The following chapter will identify and describes the methods that were used to explore the health beliefs and barriers of AA women in the SSHD regarding screening mammograms. These methods include the research design, sample, setting, procedures, data collection, educational program, instrumentation, and data analysis.

Section 3: Approach

Introduction

The purpose of this project was to describe the benefits, and barriers toward screening mammograms for breast cancer in AA women living in the SSHD in Virginia. The DNP candidate provided educational classes for AA women in churches to address the research practice gap in breast cancer screening (see Appendix A). To evaluate the effectiveness of the educational classes, the Champion benefits and barriers scale was used after obtaining written permission (see Appendix B). This chapter addresses the project design, method, sample, and procedure. This section describes data collection, human rights, educational programs, instrumentation, reliability, validity, data analysis, and summary.

Project Design/Methods

The researcher used a descriptive design with survey methodology to address the project question. A survey, the Champion Mammography Beliefs and Attitudes Questionnaire(MBAQ) was administered to AA women in different churches following educational classes regarding breast cancer and screening mammograms (Champion, 1999) . Surveys are useful in gathering data through self-report (Burns & Grove, 2009). This survey allowed the collection of information from AA women about their beliefs, benefits, and barriers to mammogram screening. This study described the characteristics of the participants including: race, age, marital status, level of education, and employment (see Appendix C).

Sample

A convenience sample of AA women living in Brunswick and Mecklenburg Counties in Virginia was asked to participate in this study. The sample was limited to AA women between the ages of 39 and75-years old. According to the American Cancer Society (2013), there is evidence to suggest aggressive tumor characteristics are more prevalent in AA women than Caucasian women. Furthermore, for AA women under the age of 45, the mortality rate of breast cancer is higher than Caucasians (American Cancer Society's African -American 2013-2014 Cancer Facts Study). In addition, other studies suggest socioeconomic status may influence the biological behavior of breast cancer. According to Sisters Network, in 2014, more than 27,000 new cases of breast cancer are expected to occur among AA women, and of those, about 6,000 will die. The exclusion criteria excluded the participants who are under the age of 39 or over the age of 75. In addition, AA women unable to read or write fail to sign the consent, and not living in Brunswick or Mecklenburg County will also be excluded from the study.

Setting

The DNP project targets two rural counties, Brunswick and Mecklenburg counties in SSHD. Brunswick County is located in the eastern portion of the SSHD. Brunswick County total population in 2010, was 18,419 (US Census Bureau). This area covers 569 square miles, with Lawrenceville being the largest township and county seat. According to US Census, Brunswick County ranks 9th for poverty among the elderly. Brunswick county is a sister county to rural Mecklenburg county. Mecklenburg County is

located in the middle of the SSHD. The population in 2010 was 32,727 (US Census Bureau). Mecklenburg County ranks 23rd in Virginia for poverty. In addition to high poverty rates, both counties lack public transportation, have reduced access to medical care, a large number of uninsured residents, and high unemployment rates (US Census Bureau). Only two hospitals service the SSHD area: Virginia Commonwealth University-Community Memorial Hospital, based in South Hill (Mecklenburg), and Halifax Health Systems Hospital, located in South Boston (Halifax County). There are five major university-based medical centers within a 2½ hours drive. There are 400 churches in the surrounding counties, and a convenience sample of 10 churches was selected to participate in finding AA women to take part in the study. The study consisted of five churches from Brunswick County and five churches from Mecklenburg County, all selected at random.

Procedures / Data Collection

A convenience sample was obtained by inviting AA women to a church educational program regarding breast cancer and early mammogram screening. Data collection began when all procedures for this study had been approved by the Walden University Institutional Review Board approval number and date 09-03-15-0360446. Second, a letter permitting use of the MBAQ was obtained from Dr. Victoria Champion. Third, a letter of cooperation and information describing the purpose of the study to the pastors of each church was mailed, emailed, or delivered by hand prior to the study. Fourth, informed consent was obtained from the AA women participants in the study before conducting the educational classes. In addition, the participants were asked

whether they have had a mammogram prior to the class. If the answer is yes, they received a questionnaire coded “A’' If the answer was no, they received a questionnaire coded “B.” The purpose of the coding allowed the project leader to offer information related to local health care providers who offer free mammograms. Fifth, the potential participants were asked to complete the demographic information relating to race, age, marital status, level of education, and employment. Finally, potential participants were requested to read the directions on the MBAQ questionnaire and complete the questionnaire by circling the most accurate level of agreement or disagreement with the items.

Educational Program

The educational classes used the information obtained from the American Cancer Society literature (American Cancer Society, 2013), and the Susan G. Komen Breast Health Basics Breast Cancer information (Susan G. Komen, n.d.). The educational program included the four breast self-awareness messages. The four breast self-awareness messages included the following: (a) know your risk, (b) get screened, (c) know what is normal for you, and (d) make healthy lifestyles choices. The standard for patient education mostly consists of verbal and written information. In addition, there was a discussion about late-stage breast cancer. There were educational packets given to each participate during the class. The class was one hour at each church with questions and answers at the end of each class. The class size varied among the churches.

Instrumentation/Reliability/Validity/Protection of Human Subjects

For the quantitative portion of this study, the (MBAQ), was administered to all women attending the educational program. Written permission to use the MBAQ was obtained prior to the utilization of the questionnaire. The revised Champion's scale contains 11 items distributed in three different dimensions: susceptibility (3 items), benefits (5 items), and barriers (11 items) (Huaman, Kamimura-Nishimura, Kanamori, Siu, & Lescano, 2011). A five-point Likert scale (1= strongly disagree to 5= strongly agree) was used to score the response options (Huaman et al., 2011, p. 2). The MBAQ was initially validated by Champion using a cohort of 804 women age 50 and above who were members of a Health Maintenance Organization in Indiana (Huaman et al., 2011, p. 2). The validity and reliability of the scale results were optimal. Champion's Scale confirmed the predictions, which include: Cronbach-Alpha coefficients of 0.75 (susceptibility), 0.72 (benefits) and 0.86 (barriers) (Huaman et al., 2011, p. 1). In addition, the concurrent validity showed an association between barriers and mammography screening using bivariate (22.3 ± 6.7 vs. 30.2 ± 7.6; $p < 0.001$) and multiple regression analysis (OR = *n* 0.28, 95 % Cl = 0.18-0.43). Those age 50-60 years (OR = 2.35, 95 % Cl = 1.19-4.65), with a history of prior Papanicolaou test (OR = 3.69, 95% Cl =1.84-7.40), and knowledge about breast cancer and mammography (OR = 3.69, 95% Cl =1.84-7.40) were also independently associated with mammography screening use (Huaman et al., 2011, p. 1). The questionnaire took approximately ten minutes to

complete. The MBAQ was an appropriate and reliable tool to use for assessing mammogram screening among rural AA women in Southside, Virginia.

Confidentiality was maintained by not having names on the MBAQ. Only the researcher has access to the study materials. The questionnaires were kept in the researcher's home, in a locked file cabinet for the duration of the study. At the conclusion of the study, all questionnaires will be kept for five years. After five years the questionnaires will be shredded. The computer used for the SPSS was password protected at all times.

Data Analysis

The descriptive non-experimental data analysis was performed using the Statistical Package for the Social Sciences (SPSS,2012) version 2.1 for statistical analysis. The first step was to analyze the participant's age. The questionnaires from AA women younger than 39 years of age or older than 75 years of age were eliminated from the analysis. The second step was analyzing the counties in which the participant resided. Questionnaires from any participants not living in Brunswick or Mecklenburg counties in Virginia was eliminated from this analysis. The third step was to score participant responses on the MBAQ.

Summary

Some identified barriers for not having screening mammograms include: (a) delay in medical care, (b) spirituality, (c) fatalism, (d) beliefs and attitudes, (e) lack of insurance, (f) lack of trust towards the health care system, (g) fear of treatment, (h) lack of education, (i) inequalities, (j) social and economic disparities, (k) lack of discussion

from providers regarding mammograms, and (l) lack of transportation (American Cancer Society, 2015; Makuc, Breen, & Freid, 1999; Gullatte, Brawley, Kinney, Powe, & Mooney, 2009). Research suggests AA women are less likely to use screening mammograms, which contributes to health disparities in the United States (Hodges & Videto, 2011). Eliminating health disparities is one of the goals of Healthy People 2020 (Healthy People 2020, n.d.). Increasing mammogram screening rates in AA women residing in rural areas of SSHD, can play a pivotal role in the early detection of breast cancer. In addition, decreasing late-stage diagnosis of breast cancer can decrease the mortality rate for AA women. Describing knowledge and beliefs of AA women, regarding mammography, is a necessary first step in developing community and church-based efforts to increase participation in mammography in the future. The following chapter presents the finding with evidence support, tables, and narration of the MBAQ results.

Section 4: Findings, Discussion, and Implications

Introduction

The purpose of this project was to describe the benefits, and barriers toward screening mammograms for breast cancer in AA women living in the SSHD in Virginia. The objectives of the project were to: identify the reasons that AA women in the rural SSHD have for not having a screening mammogram. In addition, provide information to AA women about risk factors, myths, facts, barriers to care, and statistics regarding breast cancer. The project question was: What are the perceived benefits and barriers regarding screening mammograms as identified by AA women in rural Virginia? The goal of the project was to educate rural AA women about having early screening mammograms to decrease late-stage breast cancer diagnoses.

An increase in the incidence of late-stage breast cancer in AA women was an identified problem related to not having early screening mammograms (Massey Cancer Center, 2014). To address the problem of the SSHD having the highest mortality rate of breast cancer in Virginia, this project implemented educational classes on breast cancer and early screening mammograms in five rural churches in Brunswick and five rural churches in Mecklenburg County Virginia. Using a quantitative approach, the (MBAQ) revealed a positive message that educating AA women in the SSHD can increase mammography screening rates in Virginia amongst AA women.

Finding and Discussion

Finding with Evidence Support

Current literature states that AA women in Virginia have a higher mortality rate (23.5%) for breast cancer than the United States (22.2%). Massey Cancer Center, 2014). One reason for this poorer survival outcome is the stage of cancer detection (Massey Cancer Center, 2014). In addition, AA women have a higher breast cancer death rate and shorter survival rate of any racial or ethnic group (Massey Cancer Center, 2014). Developing an educational session to encourage AA women in rural areas to take charge of their breast health was the focus of this research project. This project supported the existing literature by finding that AA women have a lower incidence of breast cancer but a higher mortality rate from breast cancer in Virginia.

One hundred and forty-two AA women attended the breast cancer educational program at churches in rural Brunswick and Mecklenburg County, Virginia, and 112 AA women completed the (MBAQ)designed to measure participants' perception on screening mammograms for breast cancer were included in this analysis. Reasons for removal for analysis were too old (*n* =14), too young (3), (Caucasian1), failure to return survey (5) did not complete survey (1).

Table 1. Counties in Virginia: (*n* =112 AA women)

Counties	Frequency	%
Brunswick	40	35.7
Mecklenburg	72	64.3
Total	112	100

Note. AA women in the SSHD in Virginia who participated in the study were from two counties.

The data indicate that Mecklenburg County had a larger amount of participants.

Table 2. Brunswick County Churches **(***n* =40 AA women)

Names	Frequency	%
Bethany	10	8.9
Family Jeshuah	7	6.3
Rising Star	9	8.0
Poplar	9	8.0
First Baptist	5	8.0
Total	40	35.7

Note. AA women in Brunswick County Virginia

Table 3. Mecklenburg County Churches (*n* =72 AAwomen)

Names	Frequency	%
Concord	24	21.4
Greater Union	3	2.7
Open Door Mission	5	4.5
Bethlehem Baptist	23	20.5
North View	17	15.2
Total	72	64.3

Note. AA women at churches in Mecklenburg County Virginia.

Table 4. Race of Participants	(*n*)	(%)
African- American Women	112	100

Note. The rural Virginia women who participated in the study were all African - Americans from Brunswick and Mecklenburg County, Virginia.

Table 5. Age of Participants (*n* =112 AA women)

Age Group	Frequency	%
36-45	7	6.3
46-55	19	17.0
56-65	48	42.9
66-75	38	33.9
Total	112	100

Note. AA women in the SSHD in Virginia who participated in the study identified their ages according to four groupings. The data indicate that the average age of the 112 AA women in the SSHD in Virginia who participated in the study was between 56-65 years, with an age range from 36-75.

Table 6. Marital Status (*n* =112 AA women)

	Frequency	%
Married	65	58
Never married	11	9.8
Partner	1	9
Divorced, Widowed, Separated	35	31.3
Total	112	100

Note. The data indicate that most of the AA women who participated in the study were married with only one AA woman with a partner.

Table 7. Highest Education (*n* =112 AA women)

	Frequency	%
Less than high school	9	8.0
GED or high school	32	28.6
Some college	29	25.9
Associate Degree	11	9.8
Bachelor Degree	11	9.8
Master's Degree	15	13.4
Doctorate	2	1.8
Other	3	2.7
Total	112	100

Note. AA women in the SSHD in Virginia who participated in the study identified their educational degree according to eight groupings. Overall, the highest level of education of the AA women in Brunswick and Mecklenburg County, Virginia was a GED or high school education, with two women having earned a doctorate; and 29 women reported having some college or technical degree.

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Table 8. Employment (*n* =112 AA women)

	Frequency	%
Unemployed	9	8.0
Employed	46	41.1
Disable	10	8.9
Retired	47	42.0
Total	112	100

Note. The data indicate that most of the AA women who participated in the study were retired.

Table 9. Frequencies of Responses to Benefits Subscale (*n* = 112 AA women)

Question	Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree
1. When I get a mammogram, I feel good about myself.	76	28	5	0	3
2. When I get a mammogram, I don't worry as much about cancer.	6	42	16	12	36
3. Having a mammogram or x-ray of the breasts will help me find lumps easily.	65	30	9	4	4
4. Having a mammogram or x-ray of the breast will decrease my chances of dying from breast cancer.	52	32	10	12	6
5. Having mammograms or x-ray of the breasts will decrease my chances of requiring radical or disfiguring surgery if breast cancer occurs.	39	28	26	11	8
6. Having a mammogram will help me find a lump before it can be felt by a health professional or me.	42	36	13	13	8

Note. Table 9 presents date concerning the six benefits of having a screening mammogram

On average, 67.9% AA women strongly agreed that when getting a recommended mammograms, they felt good about their self, where 2.7% strongly disagreed. Approximately 37.5% of AA women agree that they do not worry as much about cancer, where 5.5% strongly disagree. On average 58 % of AA women strongly agree that having a mammogram will help find a lump easily, where 3.6% strongly disagree. Approximately 46.4% of AA women strongly agree that having a mammogram decrease the chances of dying from breast cancer, where 5.4% strongly disagree. Majority AA women strongly agree 34.8% strongly agree that having a mammogram will decrease the chance of requiring a radical or disfiguring surgery if breast cancer occurs where 7.1% strongly disagree. Approximately 37.5% of AA women strongly agree that a mammogram will help find a lump before it can be felt by a health professional or themselves.

Table 10 presents data concerning the five barriers of having a screening mammogram. On average, 42.9 % of AA women disagree that having a routine mammogram would make me worry about breast cancer, where 8 % was unsure. Approximately 51.8 % of AA women strongly disagree that having a mammogram would be embarrassing, where 3.6 % was unsure. On average 51.8. % of AA women strongly disagree that having a mammogram takes too much time, where 2.7% was unsure. Approximately 45.5. % of AA women disagree that having a mammogram would be painful, where 6.3% was unsure. On average 43.8% of AA women strongly disagree that having a mammogram will cost too much money, where, 8.9% was unsure.

Table 10 Frequencies of Responses to Barriers Subscale for Participants (*n* =112)

Question	Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree
1. Having a routine mammogram or x-ray of the breast would make me worry about breast cancer.	14	15	9	48	26
2. Having a mammogram or x-ray of the breast would be embarrassing..	9	7	4	34	58
3. Having a mammogram or x-ray of the breasts takes too much time.	7	6	3	38	58
4. Having a mammogram or x-ray of the breast would be painful.	9	22	7	51	23
5. Having mammograms or x-ray of the breasts would cost too much money.	11	9	10	33	49

According to the data collected from this study highlight the importance of educating AA women about early screening mammograms to decrease the morality rate of breast cancer in Virginia.

Finding with Framework Support

This project was conducted to describe the benefits and barriers that AA women express for delaying or postponing having or not having a screening mammogram for breast cancer in the Southside Health District. The benefits of having early screening mammogram decrease the mortality rate for AA women in Virginia. A barrier that increases the gap in the practice is that AA women have a fear of being diagnosed of breast cancer. In addition, the fear that treatment will not be successful. To illustrate how AA women feel about the benefits and barriers of screening mammograms, the MBAQ was utilized in the project.

Recommendation for Practice

This educational project was initiated as an attempt to decease the disparity of AA women breast cancer mortality rate in the SSHD in rural Virginia. Providing breast cancer information to address the high mortality rate of late-stage breast cancer via using the church population can increase the use of early screening mammograms.

Applicability of Finding

The applicability of these finding showed positive results for an increase use of screening mammograms. The project consisted of a convenience sample of adult AA women parishioners in rural churches in Brunswick and Mecklenburg County, Virginia. After educational intervention was presented to the AA women, a survey about the benefits and barriers to screening mammograms was given. A change of knowledge was noticed after the data was analyzed.

Implication for Social Change in Practice

The implication for social change in practice is that educating AA women about breast cancer could decrease the fear and avoid late-stage diagnosis. The stage of breast cancer at diagnosis is the most important prognostic indicator in breast cancer. In addition, advanced -stage breast cancer is associated with higher rates of recurrence and lower rates of survival. (Fayanjun, Jeffe, Elmore, Ksiazek, & Margenthaler, 2013). The expected outcome from this project will be to decrease the rate of breast cancer in the SSHD in Virginia. Promoting more community outreach efforts to increase early screening mammograms to AA women where they socialize could decrease the morality rate in the two rural counties in Virginia.

Project Strengths and Limitation

Strengths

The strength of this study is the use of the MBAQ, which showed views of AA women beliefs toward screening mammograms. Moreover, despite the large number of churches in the SSHD only 142 AA women attended the educational program that was held at ten different churches in Brunswick and Mecklenburg County. The finding of the study identified that most of the women in the study felt good about having a screening mammogram.

Limitation

The biggest limitation of this project was traveling to the five churches at night in the dark back woods of Brunswick County. The most pivotal barriers for AA women in rural areas are economic factors, such as lack of transportation to educational classes, lower income, and lack of health care.

Analysis of Self

I believe that I have become a change agent for my community. I have gain knowledge, and skills to be a leader. The doctoral level health care goals are to eliminate health disparities, to promote patient safety and excellence in practice, and to improve patient and healthcare outcomes (AACN", 2006). My vision for change in the practice where I work was to decrease the morality rate of breast cancer in AA women in the SSHD in Virginia. As a scholar, I have to be discipline and committed to this long life-term of learning for professional growth.

Summary

AA women bear a disproportionate burden of breast cancer mortality in Virginia (Massey Cancer Center, 2014). This study shows that AA women in rural Virginia strongly agree that the benefit from having a screening mammogram make one feel good about their selves. Education about late-stage breast and early screening plays a pivotal role on the influence of breast cancer screening practices. Breast cancer knowledge could be a great predictor of AA women having early screening mammograms. Of the 112 AA women in the study only two never had a mammogram. The following chapter presents how the dissemination of the study will be conducted.

Section 5: Scholarly Product for Disseminate

Summary of Findings

For dissemination of this project, the researcher will give a PowerPoint presentation at the VCU- Community Memorial Hospital Cancer Center monthly meeting. Dissemination of knowledge learned is pivotal for advanced practice nurses. Providing material effectively, and communicating knowledge to colleagues, nurses, interdisciplinary colleagues, and stakeholders via PowerPoint is one strategy to present the research project evidence into clinical practice. A PowerPoint presentation enhances the presentation and can be useful as a reference. Allowing question from the audience during and after the presentation allow the audience to interact with the presenter.

Those attending the meeting will be: Dr. Tzann Fang, MD, Hendrick Cancer and Specialty Care Center, Lisa Moss, Oncology Nurse Practitioner, Mary Harden, Nurse Director of Oncology. The monthly meetings are held to discuss new cases of cancer diagnoses, clinical trials and treatments. Since implementing this project, VCU-Community Memorial Hospital has had an increase in mammogram screenings.

This PowerPoint presentation will give the cancer center the opportunity to see the results of the outreach that what was done in the SSHD in Virginia about identifying the beliefs and barriers to mammography in rural African American women using the Champion Benefits and Barrier Scale for Mammography Screening Questionnaire.

The purpose of the project was to describe the benefits, and barriers toward screening mammograms for breast cancer in AA women living in the SSHD. In addition,

the project was used to disseminate evidence-based practice information pertaining to breast cancer and screening mammograms to decrease the morality rate of rural AA women in Virginia.

Background, Purpose, and Nature of Project

Breast cancer is the most commonly diagnosed cancer in AA women and the second most common cause of death for AA women (American Cancer Society, 2015). The major health problem in Virginia is cancer (Massey Cancer Center, 2014). In the state of Virginia the leading cause of death in 2007 was cancer, surpassing heart disease (Massey Cancer Center, 2014). Virginia cancer incidence rate was 443.2 for newly diagnosed cancers per 100,000 residents and ranked 38th of 50 states and the District of Columbia, however, this rate is slightly lower than the national average of 455.7 (Massey Cancer Center, 2014). In the state of Virginia, there was an average of 32,769 residents diagnosed with cancer with 13,891 succumbing to the disease (Massey Cancer Center, 2014).

Problem Statement

The purpose of this project was to describe the benefits, and barriers toward screening mammograms for breast cancer in AA women living in the SSHD in Virginia. AA women have positive or negative opinions about mammogram screening and these beliefs could determine whether or not to have a screening mammogram. Therefore, it is imperative to educate AA women about the recommended guidelines of screening mammography.

Sample Size

A convenience sample of AA women living in Brunswick and Mecklenburg County Virginia was asked to participate in this study. The sample was limited to AA women between the ages of 39-75-year-old. The sample size was 112 AA women in rural SSHD in Virginia.

Setting

The DNP project targeted two rural counties: Brunswick and Mecklenburg counties in the SSHD. Brunswick County is located in the eastern portion of the SSHD. Total population in 2010, were 18,419 (US Census Bureau). This area covers 569 square miles with Lawrenceville being the largest township and county seat. According to US Census (2010), Brunswick County ranks 9th for poverty among the elderly. Brunswick County is a sister county to rural Mecklenburg County, Virginia.

Procedure and Data Collection

Data collection began when all procedures for this study had been approved by the Walden University Institutional Review Board approval number 09-03-15-0360446 Second, a letter permitting use of the MBAQ was obtained from Dr. Victoria Champion(Appendix A). Third, a letter of cooperation and information describing the purpose of the study to the pastors of each church was mailed, email, or delivered by hand prior to the study. Fourth, informed consent was obtained from the AA women participants in the study before conducting the educational classes (Appendix B). In addition, the participants were asked whether they have had a mammogram prior to the

class. If the answer is yes, they will receive a questionnaire coded “A'' If the answer is no, they will receive a questionnaire coded “B”. The purpose of the coding allowed the project leader to offer information related to local health care providers who offer free mammograms. Fifth, the potential participants were asked to complete the demographic information relating to race, age, marital status, level of education, and employment (Appendix C). Finally, potential participants were requested to read the directions on the MBAQ questionnaire and complete the questionnaire by circling the most accurate level of agreement or disagreement with the items.

Results

On average, 67.9% AA women strongly agreed that when getting a recommended mammogram, they felt good about themselves, where 2.7% strongly disagreed. Approximately 37.5% of AA women agreed that they do not worry as much about cancer, where 5.5% strongly disagreed. On average 58 % of AA women strongly agreed that having a mammogram will help find a lump easily, where 3.6% strongly disagreed. Approximately 46.4% of AA women strongly agreed that having a mammogram decrease the chances of dying from breast cancer, where 5.4% strongly disagreed. Majority AA women strongly agreed 34.8% strongly agreed that having a mammogram will decrease the chance of requiring a radical or disfiguring surgery if breast cancer occurs where 7.1% strongly disagreed. Approximately 37.5% of AA women strongly agreed that a mammogram will help find a lump before it can be felt by a health professional or themselves.

On average, 42.9 % of AA women disagreed that having a routine mammogram would make me worry about breast cancer, where 8 % was unsure. Approximately 51.8 % of AA women strongly disagreed that having a mammogram would be embarrassing, where 3.6 % was unsure. On average 51.8. % of AA women strongly disagreed that having a mammogram takes too much time, where 2.7% was unsure. Approximately 45.5 % of AA women disagreed that having a mammogram would be painful, where 6.3% was unsure. On average 43.8% of AA women strongly disagreed that having a mammogram will cost too much money, where, 8.9% was unsure.

According to the data collected from this study highlight the importance of educating AA women about early screening mammograms to decrease the morality rate of breast cancer in Virginia.

Conclusion

AA women bear a disproportionate burden of breast cancer mortality in Virginia (Massey Cancer Center, 2014). This study shows that AA women in rural Virginia strongly agreed that the benefit from having a screening mammogram is that it makes one feel good about themselves. Education about late-stage breast cancer and early screening plays a pivotal role on the influence of breast cancer screening practices. Breast cancer knowledge could be a great predictor of AA women having early screening mammograms.

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Appendix A: Educational Material

1. **What is breast cancer?**

Breast cancer is a disease where cells in the breast tissue divide and grow without the normal control.

2. **What causes breast cancer?**

We really don't know.

3. **EARLY DETECTION SAVES LIVES!**

When breast cancer is confined to the breast, the five-year survival rate is 99 percent.

4. **How do we let others know the importance of early detection?**

YOU!

5. **Breast Self Awareness**

a. Know your risk

b. Get screened

c. Know what is normal for you

d. Make healthy choices.

6. **KNOW YOUR RISK**

a. Talk to your family about your family health history.

b. Talk to your doctor about your personal risk of breast cancer.

7. **Risk Factors**

a. The most common risk factors are being female and getting older

b. Other risk factors include having a family history of breast cancer or certain other cancers, an inherited genetic mutation, carcinoma in situ, dense breasts, and radiation exposure at a young age, reproductive factors...

c. There is no risks factors that you can control and others you cannot change

8. **GET SCREENED**

a. Ask for your doctor which screening tests are right for you if you are at higher risk.

b.Have a mammogram every year at age 40 if you are at average risk

c. Have a clinical breast exam at least every 3 years starting at age 20, and every year starting at age 40.

9. **Clinical Breast Exam**

a. Clinical breast exam by a health care provider at least every 3 years starting at 20, and every year after 40.

10. Mammography in the U. S.

a. Best screening tool widely available for finding breast cancer early

b. Screening every year at age 40 for women at average risk

c. If a woman is under 40 has a family history or other concerns, she should talk with her doctor

d. Can be used as a diagnostic test for women (and men) at any age

11. **Know what is normal for you**

a. Know how your breasts look and feel

b. Report changes to your health care provider right away.

12. **Breast Self-Exam (BSE)**

a. A tool that may help you learn what is normal for you

b. Any changes should be reported to your health care provider

13. **Breast Changes that should be evaluated by your doctor**

a. Lumps, hard knots or thickening

b Unusual swelling, warmth or redness

c. Change in size or shape of breast

d. Dimpling or puckering of the skin

e. Itchy, scaly sore or rash on nipple

f. Puffing in of nipple or other parts of the breast

g. Pulling in of nipple or other parts of the breast

h. Sudden nipple discharge

i. Pain in one spot that does not go away

14. **Make Healthy Lifestyles Choices**

a. Maintain a healthy weight

b. Add exercise into your routine

c. Limit alcohol intake

d. Limit postmenopausal hormone use

e. Breastfeed, if you can

15. **Finding Low Cost or Free Screening Services**

a. Free Clinics

Appendix B

Champion Benefits and Barriers for Mammography Utilization Survey

Directions: for each item, please circle the number that applies to you. Completing this survey is an informed consent for the DNP project. Please do not write your name on the questionnaire.

	Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree
Benefits					
1. When I get a recommended mammogram I feel good about myself.	1	2	3	4	5
2. When I get a recommended mammogram I not worry as much about breast cancer	1	2	3	4	5
3. Having a mammogram or x-ray of the breast will help me find lumps early.	1	2	3	4	5
4. Having a mammogram or x-ray of the breast will decrease my chances of dying from breast cancer.	1	2	3	4	5
5. Having a mammogram or x-ray of the breast will decrease my chances of requiring radical or disfiguring surgery if breast cancer occurs.	1	2	3	4	5
6. Having a mammogram will help me find a lump before it can be felt by health professional or myself.	1	2	3	4	5

Barriers					
1.Having a routine mammogram or x-ray of the breast would make me worry about breast cancer.	1	2	3	4	5
2. Having a mammogram or x-ray of the breast would be embarrassing.	1	2	3	4	5
3. Having a mammogram or x-ray of the breast takes too much time.	1	2	3	4	5
4. Having a mammogram or x-ray of the breast would be painful.	1	2	3	4	5
5. Having a mammogram or x-ray of the breast would cost too much money.	1	2	3	4	5

Appendix C

DEMOGRAPHICS QUESTIONNAIRE

Please tell me about yourself. Do not put your name on the form. Your responses will remain confidential. Please put an **X** to the appropriate response.

1. What is your race?
   ------ Black or African- American
   -------Caucasian or Caucasian
   -------Other

2. What is your age?
   ------ 30-35
   -------36-45
   -------46-55
   -------56-65
   -------over 65
3. What is your marital status?
   ------ Married
   -------Never married
   -------Partner
   -------Divorced, widowed, separated

4. What is your highest level of education?
   ------ Less than high school
   -------GED or high School
   -------Some college or Technical school
   -------Associate Degree
   -------Bachelor Degree
   -------Master Degree
   -------Doctorate
   -------Other---------- Please specify
5. What is your employment?
   ------ Unemployed
   -------Employed
   -------Workers Compensation
   --------Disable
   --------Retired