Increasing Breast Cancer Screenings of African American Black Women

Submitted by

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Abstract

Research shows that African American Black women have a high breast cancer mortality rate due to lack of breast cancer screenings. This quality improvement (QI) project evaluated if culturally-appropriate materials/education increased breast cancer screening rates of African American Black women living in a community in the southern portion of NJ. Kurt Lewin's theory of change encouraged African American Black women to change to healthier lifestyles by encouraging breast cancer screenings. Research also shows that the use of culturally-appropriate tools in clinical settings can improve patient outcomes for this population. Leininger's theory of culture care promoted clinical awareness of the African American Black culture of the community. This quantitative project used a pre-intervention/post-intervention design which addressed the problem statement: While literature indicated that African American Black women have lower participation in breast cancer screenings, it was not known in a community in the southern portion of NJ, if culturally-appropriate materials/education increased breast cancer screening rates. Analysis of the data answered the clinical question: for African American Black women in the southern portion of NJ, did culturally-appropriate materials/education increase breast cancer screening rates? The *p*-value of 0.067 did not demonstrate that culturally-appropriate materials/education increased breast cancer screenings rates of the project participants. The results based on the sample size of 4, were not statistically significant. This QI project could be implemented and tracked for a longer period of time to increase the sample size and provide a more substantial basis for practice change.

Keywords: African American Black women, breast cancer screenings, culturally-appropriate education, quality improvement, Susan G. Komen Foundation, mammograms

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Table of Contents

List of Tables

List of Figures

Chapter 1: Introduction to the Project

African American Black women have the lowest rates for obtaining breast cancer screenings of any ethnicity, which contributes to-the highest mortality rates amongst women diagnosed with breast cancer (Mayfield-Johnson, Fastring, Fortune, & White-Johnson, 2016). Breast cancer screening, inclusive of mammograms, remains the most effective method to detect breast cancer before it enters advanced stages and becomes difficult to treat (American Cancer Society, 2016; Clayton & Tariman, 2018). The purpose of this project was to evaluate if the intervention of culturally-appropriate materials/education benefited African American Black women in the southern portion of NJ by helping them to understand the importance of breast cancer screenings using cultural norms (Susan G. Komen Foundation, 2015a) (see Appendices A, B, C, D, E, F, G, H, I, J for culturally-appropriate materials/ education).

The focus of this project was to educate African American Black women to improve on breast cancer awareness and increase breast cancer screening rates. Addition of culturally appropriate materials/education was a quality improvement program evaluation project for the cancer center's outreach program (see Appendix K for IRB determination letter). Education was offered at a local church which was in the same community as the targeted sample. Seven days later, a mobile mammogram van was scheduled to provide breast cancer screenings.

This chapter discusses the background, significance and purpose of the project in detail. In addition, sections of this chapter introduce the problem statement, clinical question, project design and methodology. The chapter also includes definitions for commonly used terms in the body of this paper, identifies the assumptions, and culminates with a summary and organization of the remainder of the project.

Background of the Project

Evidence-based research confirms that since the 1990s incidences and mortality rates of breast cancer have decreased due to advanced methods of early screening, detection, improved medical care and treatments, except in African American Black women (American Cancer Society, 2016). Research demonstrated that African American Black women were more often diagnosed with breast cancer in the late stages of detection because of poor participation in breast cancer screenings (Davis, Cadet, Moore, & Darby, 2017). This remains troubling as breast cancer is the leading cause of cancer-related deaths for American women 20 to 59 and is predicted to increase 45% by 2030 (Gray et al., 2017). According to the Breast Cancer Prevention Partners (2016), African American Black women are more likely to die of breast cancer than are Caucasian women. African American Black women also have the highest breast cancer mortality rate (31%) among any ethnic group in America (Breast Cancer Prevention Partners, 2016). Increasing breast cancer screening rates for this population may save lives (Patel et al., 2014).

The incidences of breast cancer in African American Black women are lower than in Caucasian women (American Cancer Society, 2016). Nevertheless, African American Black women's mortality rates due to breast cancer remain 40% higher than Caucasian women. These differences create a health gap in this population (American Cancer Society, 2016). One of the complex reasons for this health gap is that African American Black women have lower participation in breast cancer screenings and are more prone to be in the late stages of breast cancer when first diagnosed (Davis et al., 2017). This QI project focused on culturally appropriate education to reach African American Black women in the community of the southern portion of NJ to increase breast cancer

screenings, thus improving their chances of early detection and treatment of breast cancer.

Problem Statement

Literature indicates that, historically, African American Black women have lower participation in breast cancer screenings (Davis et al., 2017; Gray et al., 2017; Patel et al., 2014). However, it was not known if the addition of culturally appropriate education increased breast cancer screening rates for African American Black women in a community in the southern portion of NJ. Many complex interrelated factors contribute to low rates of breast cancer screenings in the population of African American Black women (Davis et al., 2017). Several of these factors include lack of understanding of the importance of breast cancer screenings, lack of education about the mammogram procedure, lack of awareness of breast cancer health guidelines, and cultural beliefs (Davis et al., 2017).

The Susan G. Komen Foundation (2015a) reports that it is important to consider how cultural beliefs, as an important part of communication, impact understanding of health and wellness when educating African American Black women about breast cancer. Davis et al. (2017) also noted that understanding the cultural norms of the African American Black community is an important part of communication. There is a definite need for this project to help decrease the high rate of death from breast cancer among African American Black women in the southern portion of NJ by promoting breast cancer awareness through culturally appropriate education. The southern portion of NJ was selected because it is among the highest in the nation (Robles-Rodriguez, 2018) for breast cancer related deaths. Breast cancer related deaths in the southern portion of NJ were 27.6 per 100,000 persons, significantly higher than the national rate of 21.6 per 100,000

(see Table 1) (Robles-Rodriguez, 2018). There was a need to increase breast cancer screening rates within the African American Black population in the southern portion of NJ to save lives by reducing breast cancer related fatalities (Patel et al., 2014).

Purpose of the Project

African American Black women living in the southern portion of NJ are less likely than African American Black women in other localities in NJ to participate in breast cancer screenings leading to higher mortality rates (27.6/100,000 compared to 23.5/100,000 for NJ) (Roble-Rodriguez, 2018). The cancer center's outreach program in a community of the southern portion of NJ conducted a project in March 2018 targeting African American Black women and Latinas to increase their breast cancer screenings rates, without culturally appropriate materials/education (see Appendix L). As a result of the cancer center's outreach program's project, a total of two African American Black women responded from the targeted community and received breast cancer screenings in the clinic (Robles-Rodriguez, 2018). The cancer center's outreach program's database stored results of the 2018 project which showed 1,246 mailings (see Figure 1) to African American Black women in the community of the southern portion of NJ (Robles-Rodriguez, 2018). Out of 1236 mailings/ invitations, 2 African American Black women received breast cancer screenings with mammograms in the targeted community. The conclusion of the pre-intervention project showed the breast cancer screening rates of African American Black women in the community of the southern portion of NJ as 0.16 % (Robles-Rodriguez, 2018). The data results of the March 2018 pre-intervention project were compared to the results of this post-intervention QI project conducted in 2019.

The purpose of this QI quantitative, quasi-experimental project was to evaluate if culturally appropriate materials/education added to the cancer center's outreach program

would increase breast cancer screening rates of African American Black women lining in the same community located in the southern portion of NJ. Breast cancer screening rates of the participants in this QI project provided post-interventional data (Sylvia & Terhaar, 2014). Thus, comparison of the March 2018 breast cancer screening rates and the rates from this QI project was used to better understand the impact of culturally-relevant materials/education on participation in breast cancer screenings for African American Black women in a community in the southern portion of NJ (Sylvia & Terhaar, 2014).

For the purposes of this QI project, inclusion of culturally appropriate materials/education acted as the independent variable and was projected to increase breast cancer screening rates (dependent variable). Moreover, inclusion of culturally appropriate education in the cancer center's outreach program was expected to promote healthy lifestyle choices for African American Black women and increase understanding regarding the importance of seeking breast cancer screenings. Evidence-based culturally-appropriate materials/educational curriculum and Breast Self-Awareness for Black and African American Communities, designed by the Susan G. Komen Foundation (2015a), underpinned the solicitations, mailings, handouts and education in this post-interventional project (see Appendices A, B, C, D, E, F, G, H, I, J). Additionally, the educational session was coordinated and taught by the program investigator in conjunction with the director of the cancer center's outreach program and the leader and founder of the Sister Will You Help Me breast cancer community support group (see Appendix J).

The culturally appropriate education: "Outreach and Education to Faith-Based Organizations: Tips for Planning" and "Educator Tips" developed by the Susan G. Komen Foundation (2016, 2019) guided the project investigator in development of the project (see Appendix H and Appendix M). The Susan G. Komen Foundation (2015a,

2015b, 2016, 2019) curriculum is evidence-based and reliable, as these educational tools reflect the current body of scientific knowledge (see Appendix N). The "Know Your Girls" culturally-appropriate education supports African American Black women by helping them to take care of their breast health through awareness of the risks, perception of their bodies, receiving early breast cancer screenings and talking with their healthcare providers (see Appendix G). Questions were answered by a panel including instructors and member of Sister Will You Help Me cancer support group.

This QI project was expected to add to the body of scientific knowledge related to increasing breast cancer screenings for African American Black women. First, this QI project developed culturally appropriate education delivery used to teach African American Black women in the southern portion of NJ about the importance of participation in breast cancer screenings. Next, results of this project had practical outcomes that improved current communication and education between the cancer center's outreach program and the African American Black community which raised awareness about breast cancer in the southern portion of NJ. Additionally, findings from this project was projected to save lives by increasing breast cancer screenings of African American Black women in a community in the southern portion of NJ.

Clinical Question

The following clinical question guided this quantitative project: for African American Black women in the southern portion of NJ, did the addition of culturally appropriate education increase breast cancer screening rates? The clinical question was derived from the problem statement. Previous literature has indicated that historically African American Black women have lower participation in breast cancer screenings (Davis et al., 2017; Gray et al., 2017; Patel et al., 2014). However, it was not known if the

addition of culturally appropriate education increased breast cancer screening rates for African American Black women in the southern portion of NJ.

The purpose of this quantitative quasi-experimental project was to evaluate if adding culturally appropriate education to community outreach initiatives on breast cancer awareness increased breast cancer screening rates of African American Black women in a community in the southern portion of NJ. For the context of this project, the independent variable was the culturally appropriate education which was presented to African American Black women as part of a cancer center's outreach program. The dependent variable was breast cancer screening rates of African American Black women in the southern portion of NJ, numerically measured by the number of women who responded to the independent variable by getting breast cancer screenings. Differences in breast cancer screenings of African American Black women was calculated using pre-intervention/post-interventional data to compare breast cancer screening rates. The breast cancer screening rates from the pre-intervention project in March 2018 was compared with the post-intervention breast cancer screening rates which addressed the problem statement and answered the clinical question.

Advancing Scientific Knowledge

Current literature by Mayfield-Johnson et al. (2016) and Davis et al. (2017) reported that health care projects in African American communities should be inclusive of education specifically focused on the cultural norms and beliefs of African American persons to bolster community awareness. Following these recommendations, this post-intervention QI project included culturally appropriate education about breast cancer to promote awareness in the African American community of the southern portion of NJ. Similarly, this project added to the body of empirical knowledge by demonstrating the

importance of using culturally appropriate materials/education about breast cancer screenings for African American Black women in the southern portion of NJ. Educating African American Black communities on the importance of breast cancer screenings using culturally appropriate materials/education was an improvement in the health care practice of the cancer center's outreach program.

The addition of knowledge from the results of this project was important. During the completion of the literature review, many sources revealed an abundance of articles and community projects addressing breast cancer disparities in African American Black women (Davis et al. 2017; Mayfield-Johnson et al. 2016; Patel et al. 2014). However, there was a gap in the literature addressing the concept of culturally appropriate education to increase breast cancer screenings in the cancer center's outreach program's field of practice. Moreover, the cancer center is a part of a worldwide network that lacked this intervention. As there was no information available in literature or on the cancer center's outreach program's websites that indicated the application of culturally-appropriate education for African American Black women to increase breast cancer awareness or breast cancer screenings for this population, results of this project provided valuable information to address the gap in literature.

It was evident that this QI project advanced scientific knowledge in this field of practice for the cancer center's outreach program by adding culturally-appropriate materials to clinical practice. Likewise, the intervention was projected to advance African American Black population outcomes by increasing breast cancer screening rates and lowering the rate of mortality from breast cancer in the southern portion of NJ. The information contained within this QI can be duplicated in other African American Black communities to increase early breast cancer screenings and encourage healthy decisions

in this population.

Lewin's theory of change and Leininger's theory of culture care offered a supportive context for the project's objective of increasing early breast cancer screenings and give practical context to results of this project. Lewin (1947) proposed that an intervention directed by evidence-based practice necessitates change within the population of interest. Therefore, Lewin's theory for change was applied to the change needed by African American Black women regarding seeking early breast cancer screenings. Additionally, applying Lewin's theory of change using the concepts of unfreezing, changing, and refreezing, which are central to the theory, enabled a firm basis for change (Lewin, 1947) (see Appendix O).

Lewin's theory for change describes a procedure that when followed, promotes change within a population. Lewin's procedure for change includes three stages or steps (Lewin, 1947) (see Appendix O). The first stage of the theory is known as unfreezing or changing old thought patterns about breast cancer health. Unfreezing was applied when cultural educational tools were used to dispel myths and educate. African American Black women about scientific facts regarding breast cancer awareness. The goal was to change old ways of thinking about breast cancer, which is correlated with poor rates of screenings, by using scientifically based knowledge. Step two is known as changing or education about breast care awareness. Changing was accomplished in this project as participants were encouraged to change by learning the correct guideline to support standardized care. Step two also occurred with the introduction of handouts and guidelines, that provided information on choosing healthy lifestyles related to breast cancer awareness. The final step was to freeze, or solidify, the new information by executing new guidelines and reinforcing continuance. The final stage of this theory was

applied when African American Black women were encouraged to schedule annual breast cancer screenings, get a screening in the mammogram van at the church the following Sunday, sign up with the cancer center's outreach program or with the Susan G. Komen Foundation for annual screening reminders.

Leininger's theory of culture was also applied as part of the theoretical framework of this project. Leininger's theory of culture was included to promote the awareness of the culture of others to contribute to their well-being (Leininger, 2006). According to Leininger (2006) nursing practices are actualized in the context of culture through the relationship of caring. Outreach regarding the need to increase breast cancer screening rates through culturally appropriate materials/education, fulfilled the focus of providing culturally harmonious nursing practice to the population of African American Black women in a community in the southern portion of NJ (Leininger, 2006).

Leininger's theory of culture care was applied, as the cancer center's outreach program nurses incorporated culturally appropriate materials for education in their practice setting to establish healthcare relationships with the African American Black community. This advancement in the cancer center's outreach program demonstrated that nurses intrinsically care about the plight of African American Black women, who may be in danger of high mortality rates of breast cancer because of low breast cancer screening rates (Copeland, Kim, & Eack, 2018).

The nurses of the cancer center reached out to this community to improve cultural care outcomes of African American Black women in the southern portion of NJ (Leininger, 2006). Leininger (2006) defined cultural care as the ability to address healthcare needs or concerns, using culturally informed measures. Within the context of this QI project the cancer center's outreach program nurse's objective was to fulfill

African American Black women's healthcare need for increased breast cancer screenings through application of culturally appropriate materials/education. The application of these theories advanced knowledge in the care of African American Black women who needed to understand the importance of breast cancer screenings from their own cultural perspective.

Significance of the Project

Breast cancer is the second major cause of death of African American Black women (Copeland et al., 2018). Research reveals that African American Black women have health disparities related to low breast cancer screening rates when compared to other ethnicities, especially Caucasian women (Davis et al., 2017). A large body of evidence indicated that breast cancer screening is undeniably related to patient centered outcomes of mortality in African American Black women (Copeland et al., 2018). Thus, this population has higher mortality due to lack of breast cancer screenings. Copeland et al. (2018) examined health disparities in African American Black women and concluded that increased breast cancer screenings prevented breast cancer related mortality within this population.

Similarly, research completed by Robles-Rodriguez (2018) also indicated that African American Black women in the southern portion of NJ are less likely to get breast cancer screenings or seek future screenings when compared to other locales within the United States. This is especially problematic, as lower breast cancer screening rates may contribute to this population's higher mortality. The results are lower survival rates compared to other minorities in the same city (Robles-Rodriguez, 2018). There was a pressing need to complete a project focused on increasing breast cancer screenings within the African American Black community in the southern portion of NJ. Results were

projected to be significant for a few reasons.

First, results of this project to add to the body of empirical knowledge related to how African American Black women perceive breast cancer and the need for breast cancer screenings. Secondly, the culturally-appropriate applications of this QI project helped develop results that better inform community outreach programs used to teach African American Black women about the importance of participation in breast cancer screenings, especially within a community in the southern portion of NJ. In addition to the empirical significance of the results, this QI project had practical outcomes by improving current communication and education between the cancer center's outreach program and the African American Black community. The improvement in communication reduced the likelihood that African American Black women will postpone or withhold participation in breast cancer screenings.

Rationale for Methodology

A quantitative methodology was the best methodology to address the clinical question: Did the addition of culturally appropriate education increase breast cancer screening rates? A quantitative methodology was selected to demonstrate the relationship between the independent and dependent variables that were measured and quantified (Creswell, 2015). Quantitative methodology allowed the relationships between variables to be identified (Nardi, 2018). Identifiable variables and collection of numeric data in this project were characteristic of quantitative studies (Polit & Beck, 2017). For example, culturally appropriate education was the independent variable that remained consistent and was not influenced by the dependent variable (Creswell, 2015). Breast cancer screenings was the dependent variable expressed in numeric values of rates that produced an outcome (Sylvia & Terhaar, 2014). A qualitative approach was not appropriate

because the project did not study a phenomenon through interviews or observations, nor can collected numeric data be in the form of qualitative narrative information (Creswell, 2015). Mixed methods were also eliminated from consideration, as this type of methodological approach relies on qualitative approaches to gather data.

Nature of the Project Design

Quantitative methodology with a quasi-experimental approach was selected as the most appropriate methodological design for this project. The quasi-experimental approach was identified as the best approach for this project to study relationships between variables because the quasi-experimental strategy of inquiry was associated with quantitative approaches and used for nonrandom grouping of variables (Creswell, 2013). Additionally, quasi-experimental design allowed the comparison of pre-interventional data with the post-interventional data to more comprehensively address the clinical question and variables of interest (McCusker & Gunaydin, 2015). The independent variable in this project is culturally appropriate education, which was presented to African American Black women. The dependent variable, breast cancer screening rates of African American Black women in the southern portion of NJ, was numerically measurable by the number of women who responded to the independent variable by getting breast cancer screenings.

Utilizing a quantitative, quasi-experimental design, this QI project determined cause and effect and change of the variables of interest. (Kleinpell, 2013; Polit & Beck, 2017). For the context of this project, the independent variable was culturally appropriate education, that was presented to African American Black women as part of a cancer center's outreach program. The dependent variable, breast cancer screening rates of African American Black women in the southern portion of NJ, was numerically

measurable by the number of women who responded to the independent variable by getting breast cancer screenings.

The use of quasi-experimental design was also appropriate in this QI project to evaluate differences in breast cancer screenings as a result of the intervention (McCusker & Gunaydin, 2015). Data collected from the results of the March 2018 project and inputted into the cancer center's outreach program's database provided a pre-interventional baseline measure of cancer screening rates for this QI project (Polit & Beck, 2017). Information from this QI project (with the intervention) provided post-interventional data used to evaluate differences in breast cancer screening rates which answered the clinical question (see Appendix P for written evaluation survey).

Definition of Terms

The following terms were used operationally in this project:

Breast cancer screenings. Mammogram and clinical breast exam (Patel et al., 2014).

CaST form. New Jersey Cancer Education and Early Detection Data Collection Form.

Clinical breast exam (CBE). Physical examination of breasts and under-arm area by a health care provider (Susan G. Komen Foundation, 2019).

Culturally appropriate. "Providing care which takes account of the preferences and aspirations of individuals and the cultures of their communities, is an important component of quality of care" (Jones, Lattof, & Coast, 2017, p. 2).

Disparities. "Cultural, behavioral, and health system factors converge and contribute to unequal access and differential care." (Wasserman, Palmer, Gomez, Berzon, Ibrahim, & Ayanian, 2019, p 564).

Latinas. Hispanic women

Mammogram. X-ray exam of breast to detect abnormalities and cancerous tumors; identification of early signs of breast cancer like microcalcifications, masses and bilateral asymmetry (Meharunnisa, Ravishanakr, & Suresh, 2018).

Quality improvement. A continuous process involving all levels of health care services working together to improve quality of health care to patients.

Quasi-experimental. Strategy of inquiry associated with quantitative approaches, used for nonrandom grouping of variables (Creswell, 2013).

Assumptions, Limitations, Delimitations

Assumptions are self-evident truths that need to be made for research to have meaning or relevance (Simon & Goes, 2013). The first assumption was that there existed a correlation between breast cancer screenings and reduction in the incidence of breast cancer in African American Black women. This assumption was made to provide meaning to this QI project. It was also assumed that the participants in this project were not deceptive with their answers on the CaST form and written evaluation survey and that the participants answered questions accurately and to the best of their ability (see Appendix P for written evaluation survey and Appendix Q for CaST form). This assumption was made to allow data collected to have meaning, especially regarding analysis and results. Finally, it is assumed that the sample represented the population of African American Black women in a community in the southern portion of NJ. This assumption existed to allow some generalizability of QI results.

Research showed low breast cancer screening rates (73.5%) for African American Black women, 50 years and older, in the southern portion of NJ and New Jersey (79.4%) (Robles-Rodriguez, 2018). Therefore, it is also assumed that this QI project was an

accurate representation of the current situation related to low breast cancer screening rates in an African American Black community in the southern portion of NJ. Mott-Coles (2013) reported that when providers are familiar with the patient's culture, care is impacted and improved. Therefore, it is assumed that culturally appropriate materials/education improved the cancer center's outreach program's care and impacted cultural change related to breast cancer screening rates for African American Black women in the southern portion of NJ.

The limitations within this QI project involved the use of a sample of participants that live exclusively in the southern portion of NJ. As such, results of this project may not be generalizable outside of this area. Another limitation was collecting data partially through secondary sources, which can be problematic if there are errors or bias in the data used. Thus, issues with original data sources can influence results of this QI.

Delimitations present in this QI project included the lack of time restricted to six weeks. Scheduling a mammogram van, coordinating with the cancer center's outreach program employees, timely mailings of information and invitations to participants, and the constraints of the church schedule limited the scope of this project. Invitations should have been mailed at least 30 days before the intervention to insure adequate sampling. No activities were done until approval from Grand Canyon University's (GCU) institutional review board (IRB), which limited time for the mailings (see Appendix K). In addition, the fact that people responded to solicitation instead of being patients in a hospital setting (for example) made it difficult to reach the sample size. The mammogram van had a tight schedule and was not able to coordinate availability within the church's timeframe and the time allotted for this project. This relegated the investigator to schedule tentative times and limited availability for future scheduling.

Summary and Organization of the Remainder of the Project

In summary, this QI Project implemented culturally appropriate breast cancer education for the population of African American Black women in a community in the southern portion of NJ. All materials/educational sessions were made available in the community of the southern portion of NJ. The problem answered by the practice improvement project was did evidence-based culturally appropriate materials/education increase rates of breast cancer screenings for African American Black women in the southern portion of NJ? The goal of the project was to increase breast cancer screening rates among African-America Black women and decrease mortality associated with low early breast cancer screenings in this population. Chapter 2 gives a review of current research on the significance of the practice improvement project. Chapter 3 defines the design of the research, methodology, and processes for this investigation. Subsequently, Chapter 4 details how the data was analyzed and includes a summary of the results. Chapter 5 includes an interpretation and discussion of the results as they related to the existing body of research and to the practice improvement project topic.

Chapter 2: Literature Review

African American Black women have the lowest rates for obtaining breast cancer screenings among all American minorities (Davis et al., 2017). Despite medical advancements in treatment and detection of breast cancer, African American Black women continue to experience higher breast cancer mortality rates than all other ethnic groups (Davis et al., 2017; Mayfield-Johnson et al., 2016). Researchers attribute these higher death rates to lower rates in obtaining early breast cancer screenings, which has been shown to reduce negative patient outcomes (Davis et al., 2017; Mayfield-Johnson et al., 2015). Mammograms have been identified to be the best method in detecting early stages of breast cancer (Mayfield-Johnson et al., 2016).

Historically, African American Black women have lower rates in obtaining mammograms, which are routinely used to detect breast cancer in early stages, before cancer becomes more difficult to treat, which drastically decreases their chances of survival (Davis et al., 2017). A study was done in the Mississippi Delta after identifying barriers to breast cancer screening among low-income African American women. The objective of the Mississippi Delta study was to increase breast cancer screening rates in this population (Mayfield-Johnson et al., 2016). One barrier identified by Mississippi Delta study was the lack of the application of culturally appropriate education. Results of another breast cancer study conducted in Chicago produced decreased mortality rates and the reduction of breast cancer disparities in African American Black women through the increase of breast cancer screenings (Sighoko, Murphy, Irizarry, Rauscher, Ferrans, & Ansell, 2017). Therefore. this QI project evaluated if culturally appropriate materials education increased breast cancer screening rates of African American Black women in a community in the southern portion of NJ.

The literature review addressed a historical and present review of the problem pertaining to low breast cancer screenings of African American Black women. The review also cited factors contributing to lower breast cancer screening rates, and how early screenings are essential to improving outcomes in this population. In addition, exploration of the topic from a culturally sensitive approach helped to define the nursing challenge and accountability of applying culturally appropriate materials/education to African American Black women to improve their health.

Literature was surveyed using data analysis and synthesis. Articles were included from primary sources dated from 2013 to 2019 as well as classic articles related to theory by M. Leininger and K. Lewin. Articles were obtained from online sources using the Grand Canyon University database collection, EBSCO LopeSearch, CINAHL complete database, Google Scholar and Cochrane databases. Literature was also surveyed to look for key terms and common themes: breast cancer screenings in African American Black women, breast cancer, nursing practice in breast cancer screenings, health disparities in breast cancer, culturally appropriate education, culture theory, and change theory. Articles with quantitative and qualitative research with graphs and charts were then reviewed for content related to the topic. Data pertaining to cultural educational interventions, which could address the problem and the clinical question, were also extracted and analyzed.

The background of the problem showed that low breast cancer screening rates in African American Black women continued to be a health challenge in the early detection of breast cancer. Low breast cancer screening rates in African American women leads to greater mortality rates related to breast cancer more than with any other ethnic group (American Cancer Society, 2016). Historically racial differences in breast cancer

outcomes were studied and data proved that African American women have lower incidences but higher mortality rates than White woman in America (Clayton & Tariman, 2018). The local cancer center's outreach program had challenges with African American women, in the community of the southern portion of NJ, responding to traditional methods of outreach to increase breast cancer screenings as evident in the 2018 pre-intervention project. The cancer center's outreach program's practice included mailings and invitations to the community in hope that women in the southern portion of NJ and surrounding communities would respond by scheduling breast cancer screenings.

During March 2018, invitations were sent to African American Black women and Latinas in the southern portion of NJ. African American Black women's responses were the lowest (Robles-Rodriguez, 2018). Two African American Black responded by getting a breast cancer screening (Robles-Rodriguez, 2018). Current research suggests that cultural influences reduces rates of breast cancer screening in African American Black women and Latinas (Mott-Coles, 2013). This post-intervention QI project applied culturally appropriate material/education for African American Black women in the attempt to meet their needs for awareness and understanding of the importance of breast cancer screenings. The application of culturally appropriate education caused change in the way African American women think about the importance of breast cancer screenings.

Theoretical Foundations

Lewin's theory of change and Leininger's theory of culture care were theoretical foundations which guided the clinical question: For African American Black women in the southern portion of NJ did culturally appropriate education increase breast cancer screening rates? Lewin (1947) stated that any intervention conducted by evidence-based

practice necessitates change. Similarly, in a practice improvement project by McFarlan, O'Brien, & Simmons, (2019) nurses and health care leaders, through collaboration, successfully applied Lewin's theory of change to change, guide and improve patient care during care of emergency room patients. Therefore, Lewin's theory for change was used to guide nursing practice and to assist African American Black women in changing to a healthier lifestyle by choosing early breast cancer screenings. Applying Lewin's concepts of unfreezing, changing, and refreezing helped to enable a firm basis for change for all stakeholders (Lewin, 1947).

Lewin's procedure for change included three stages or steps (Lewin, 1947) (see Appendix O). Step one is to change the mind (unfreezing) and release old ways of thinking and practice. Step two encourages change by using optimistic identification of change, learning through trial and error to determine the correct guideline to support the standardized care. The third and final step is to refreeze or solidify the new information by executing new guidelines and reinforcing their continuance (Lewin, 1947). This QI project conducted in the cancer center's outreach program setting encouraged refreezing through the application of annual and ongoing culturally appropriate materials/education in the community. Lewin's change theory was applied to nursing practice to encourage change to healthy lifestyles choices of African American Black women related to breast cancer. The consistent practice of using cultural appropriate education was projected to increase early and annual breast cancer screenings guaranteeing the sustainability of outcomes.

Leininger's theory of culture care was relevant by using its principles to encourage the awareness of the culture of others in order to advance their well-being during clinical care (Leininger, 2006). According to Leininger, nursing practice is to be

actualized in the context of culture through the relationship of caring (Leininger, 2006). The practice of reaching the vulnerable population of African American Black women to increase breast cancer screenings through culturally appropriate materials/education exemplified the accountability of caring characterized by nursing, which fulfilled the focus of providing culturally harmonious nursing practice (Leininger, 2006).

Previous research by Nashwan & Mansour (2013) documented the application of Leininger's theory of culture care by oncology nurses caring for a female Bedouin patient. The nurses concluded that valuing cultural differences were essential when giving nursing care in order to guarantee the provision of culturally compatible nursing care and to avoid conflicts (Nashwan & Mansour, 2013). Similarly, the application of the culture care theory affirmed that culturally appropriate education supported culturally caring nursing practice in the cancer center's outreach program (Mott-Coles, 2013). Application of this theory answered the clinical question: Did African American Black women in the southern portion of NJ exposed to the intervention of culturally appropriate education increase breast cancer screening rates?

Review of the Literature

There is a vast amount of literature, research and studies related to the topic of low breast cancer screenings in African American Black women. Low early breast cancer screening rates were cited as the cause of higher mortality rates in this population (Wheeler, Reeder-Hayes, & Carey, 2013). Various and numerous studies researched mortality rates and disparities related to this same topic. The importance of early breast cancer screenings was a common theme throughout most studies that involved researching the causes for low breast cancer screening in this group and were addressed in this chapter.

Several studies also cited the causes for low breast cancer screenings in African American Black women as lack of community support, lack of insurance, lack of access to affordable health care, lack of awareness of breasts cancer guidelines, perceived benefits of early screening, and doctors who do not encourage patients to get screenings (Allen et al., 2013; Bazargan et al., 2015). In addition, there was the need to understand the influences of culture, healthcare system constraints and behavioral factors which contributed to this disparity (Wasserman et al., 2019; Wheeler et al., 2013). The concept of applying culturally appropriate education and encouraging culturally responsive communication in African American Black communities are central constructs. These cultural concepts are necessary to understand issues affecting the ability to understand and use information and education (Susan G. Komen Foundation, 2016). This project used these cultural concepts to inform the organization of this quality improvement project, which answered the clinical question, for African American Black women in a community in the southern portion of NJ: Did culturally appropriate education increase breast cancer screening rates?

The following studies emphasizes the importance of breast screenings for the detection of breast cancer. According to the Susan G. Komen Foundation (2019), the chances of survival are highest when cancer is found early. The present problem cited in the following studies was that too many African American Black women fail to get early breast cancer screenings. Understanding the issues and causes of this construct for this poet-intervention QI project, helped give evidence-based clinical care to a group in need of interventions to improve outcomes.

Breast cancer screenings. Bazargan et al. (2015) gathered data to determine why African American women in South Los Angeles have lower cancer survival rates than

White women in the same city. The researchers evaluated African American Black women behaviors associated with prevention and screening and their understanding of the benefits of early screenings, and level of cancer awareness (Bazargan et al., 2015). The scope of the study correlated perceived benefits of early cancer screenings for breast, cervical, and colon cancer to determine attitudes about early cancer screenings. The study cited differences in the awareness and understanding of the benefits of early screenings which that affect cancer screening behaviors in African American women.

Researchers noted that the construct of whether a person believes that early cancer screenings are beneficial is included in health theories (Bazargan et al., 2015). The study also noted that grasping of the understanding of the importance of early cancer screenings may be related to the level of education, income, health care access, and observation of cancer results in the community. The hypothesis was that behaviors and attitudes about early cancer screenings in African American women can be modified through intervention (Bazargan et al., 2015). Data suggest that a large part of the African American women in South Los Angeles are unaware of the advantages of cancer early screenings and early cancer detection. So might be the case for African American Black women in the southern portion of NJ. Culturally appropriate education planned in this post-intervention QI project brought awareness of the advantages of early and annual breast screenings to participants and help to increase breast cancer awareness.

The Mayfield-Johnson et al. (2016) research objective was to increase the low breast cancer screening rates of African American Black women in Mississippi by increasing awareness, education, and community commitment. To do this Mayfield-Johnson et al. (2016) utilized a variety of methods (mailers, media, and word of mouth) to saturate the Mississippi Delta area with messages on the importance of breast cancer

screenings and the dangers of undetected breast cancer. The study was limited to the Delta area of the state and 500 low-income African American Black women in that location. The rationale was to reduce disparities through a collaborative effort in cancer treatment. It is noted in the literature that cancer programs have increased understanding about how early breast cancer screenings can prevent high mortality rates yet screening rates for low-income African American Black women in this area of the country remained low (Mayfield-Johnson et al., 2016).

The study partnered with community groups to educate more than 500 women on early breast cancer detection screenings and mammogram screenings. The researchers reported that community-based breast cancer screening programs with multiple culturally appropriate strategies are the most successful programs (Mayfield-Johnson et al., 2016). Not having these components in programs would be deterrents that would continue to add to the disparity gap. In addition, these same successful programs have outreach components in partnership with community health workers, educators from the community, and health care providers, and mass media publicity (Mayfield-Johnson et al., 2016). It is noted that the 2019 post-intervention QI project also had the same outreach components of culturally strategy using culturally appropriate materials/education, as well as partnership with other community programs.

A report by the American Cancer Society (2016) included updated data and statistics on the incidence of cancer, survival rate, incidences of death, and risk factors for African Americans. The ACS researched how can the information contained in this study be used to prevent and/or treat cancer in African Americans. Review of the literature is provided from over 187 studies. African Americans are the population being studied as

the second largest minority group in America. The data are collected from the US Census Bureau and research articles.

The findings reported that African American Blacks have the shortest survival rate of cancer and the top death rate of any other minority group in America for most cancers (ACS, 2016). Death rates for breast cancer is on the increase (ACS, 2016). Data are supported by figures, tables, charts, and graphs. Analysis of the data gives statistics supporting breast cancer as the foremost cancer among African American Black women. The findings in this study also noted that incidences of cancer in African American Black women are lower in most states compared to White women, but breast cancer remains a leading cause of cancer deaths in African American Black women (ACS, 2016). ACS (2016) encourages early cancer screenings for early detection, promotes health lifestyles, supports community health initiatives, and provides grants and funding to promote education. The society also has online training to promote and apply culturally relevant cancer education and outreach (ACS, 2016).

According to Patel et al. (2014), African American Black women continued to have a higher mortality rate more often than others from breast cancer due to low rates of noncompliance for early breast cancer screenings. This empirical study used surveys to examine socio-demographic factors that influences African American Black women's decisions about mammogram and other breast cancer screenings for early prevention of cancer. Patel et al. (2014) examined lifestyles of African American low-income women in three cities in Tennessee and other obstacles in the decision to being screened. The researchers noted that by having early mammograms and other screenings for breast cancer, women can decrease breast cancer mortality (Patel et al., 2014).

The American Cancer Society (2016) recommends that women 40 and older get annual screenings for breast cancer (Patel et al., 2014). Therefore, African American Black women forty and older were selected from a local hospital community database and given a 123-question survey. Women were also recruited for the survey from community centers and events as well as businesses and barbershops. This study concluded that breast cancer deaths in African American Black women are partly influenced by lack of access to mammogram screenings for low income African American Black women in poor areas of Tennessee. This study also showed that 58% of the participants listed not having enough information as an obstacle for obtaining breast cancer screenings (Patel et al., 2014). Eliminating these barriers and other factors is essential to increasing early breast cancer screenings and lowering mortality rates in African American Black women (Patel et al., 2014). This 2019 QI project eliminated the barrier of not having enough information by offering culturally appropriate evidence-based education to increase breast cancer awareness and screening rates for African American Black women in a community in the southern portion of NJ.

Robles-Rodriguez (2018) conducted a study and successful quality improvement project for Latinas and African American Black women in the southern portion of NJ. The study's goal was to improve breast cancer screening and education through an advanced practice nurse-led evening clinic using mailings. The target population was minorities in the southern portion of NJ. The project by Robles-Rodriguez (2018) found several barriers to breast cancer screening in this population including decreased access to screening sites, lack of transportation to breast cancer screening centers, cultural and economic factors and mistrust of the healthcare system. The project improved access to breast cancer screenings by holding evening breast cancer clinics, offering free

transportation and free breast cancer screening to the uninsured. Latinas responded well, but the African American Black women's turnout was comparatively low (Robles-Rodriguez, 2018). The results showed that having an evening clinic that provided free transportation helped to address the previously mentioned barriers.

Despite addressing the barriers, 45% of the women in the project with abnormal breast findings delayed care, canceled or rescheduled appointments, which may contribute to higher late cancer stage diagnosis and higher mortality rates for minorities in the southern portion of NJ (Robles-Rodriguez, 2018). This pre-intervention study also found that African American Black women were less likely to get breast cancer screenings or schedule future screenings. Providing culturally appropriate education as a post-intervention might increase breast cancer screening for a community in the southern portion of NJ.

Manning et al. (2015) conducted a study of treatment characteristics of breast cancer patients to look for variations over time. A retrospective chart review was performed on breast cancer patients from 2000 to 2008. Data extracted from an earlier study (1995-2000) were extracted for comparison. Results showed that despite improved breast cancer screening access African American Black women continued to have poor outcomes and compliance with breast health care follow-ups (Manning et al., 2015).

Manning et al. (2015) also cited data that revealed that occurrences of breast cancer are higher among White women in America, but African American Black women's mortality rates are higher. Access to breast cancer screenings produces barriers in this group, which may explain higher mortality rates. According to the researchers the most effective interventions to increase breast cancer screenings in this population should be based on access to breast cancer screenings. The breast cancer screening program from

this study did not provide treatments for breast cancer care of these patients, although participants were screened, they were not treated at this location. The breast cancer screening rates improved but not enough to improve breast cancer mortality in this group. In this QI project the investigator collaborated with the local cancer center outreach program for treatment of abnormal findings during breast cancer screenings in African American Black women in the southern portion of NJ, and nurse navigators were available to follow-up on patient care.

The objective of the study by Latosinsky et al. (2014) was to determine if breast cancer screening mammography reduced late stage breast cancer detection. The researchers used a before and after population cohort study of women 40 years or older. Data came from the US census, national health interview survey, SEER (surveillance, epidemiology and end results) and Latosinsky et al. (2014). This study concluded that mammography had slightly reduced the rate that women present with late stage breast cancers. The conclusion of the study did not settle the debate on the benefits of mammography, and further research was needed. Until evidence proves that mammography alone does not benefit breast cancer screenings, women should follow guidelines based on evidence that mammography is the recommended test for detection of breast cancer in all women.

In another study conducted by Bush (2017), African American Black women in the northwest part of Ohio had higher mortality rates from breast cancer more often than White women. Consequently, the local newspaper published in the health section that an official with Susan G. Komen Foundation stated that it doesn't have to be that way. A project was done by a breast health coordinator from Susan G. Komen Foundation to educate African American Black women on the advantage of early detection to reduce

the rates of mortality (Bush, 2017). The health coordinator gave ways to reduce their risk for breast cancer by acting and getting screenings (Bush, 2017). This QI project is a way to educate the African American Black women in the southern portion of NJ on the importance of getting breast cancer screenings and to empower them to take responsibility for their health.

Wells, Shon, McGowan, James, & Wells (2017) performed a qualitative study to understand mammogram breast screening among low-income African American Black women. Telephone interviews were conducted with 28 uninsured, low-income African American Black women between the ages of 40 -70 (Wells et al., 2017). These women were solicited from laundromats, nail and hair beauty shops in the five St. Louis zip codes on the north side of the city. Researchers noted that although progress has been made in the rates of breast cancer screenings, low-income African American Black women continue to show lower use of mammogram screenings. The researchers attribute most of these differences to cultural and socioeconomic barriers (Wells et al., 2017).

Results of this study showed that education about breast cancer is essential for motivation to seek breast cancers screenings. Another barrier that was identified was the misunderstanding of these women. These barriers show that education is a key factor in African American Black women's understanding of breast cancer health. The QI project removed these barriers, as culturally appropriate education was offered about breast cancer awareness and the importance of getting breast cancer screenings.

According to Virk-Baker et al. (2013), older African American Black women have decreased usage of breast cancer screenings especially in counties where mortality rates are higher than White women. The goal of this study was to research the extent of the causes of low breast cancer screenings in the US population. The data were extracted

from Medicare claims in 203 US counties (with high death rates due to breast cancer) for women 65 to 74 years old (Virk-Baker et al., 2013). Conclusions showed that breast cancer screenings were low from these counties. Results identified 406,602 women. African American Black women represented 17% who were less likely to seek early breast cancer screenings (Virk-Baker et al., 2013). The researchers also found that programs that reduce barriers to breast cancer screenings for older African American Black women successfully improved the rates of screening. This study shows a historical pattern of disparities and noncompliance based on cultural economic factors that contribute to low breast cancer screenings in African American Black women.

Wang et al. (2018) noted that some women age 50 -74 do not get mammograms. It is the opinion of this study that accountable care organizations (ACO) can coordinate care for these individuals and raise breast cancer screening rates. This study extracted data from medical records of 8,347 women from clinics in Nebraska to determine barriers as well as facilitators for breast cancer screenings (Wang et al., 2018). A generalized equations model was used to find correlation among patients from the same provider and county of residence. Results of multi-level logistic regression indicated that uninsured African American Black patients were less likely to get biennial mammograms. Additionally, findings showed that African American Black patients were less likely to adhere to breast screening guidelines. The study also showed relationships between compliance to guideline and the type of provider. Although patients with co-morbidities were more likely to be screened, African American Black women were less likely to be screened than White women. The above literature indicated the importance of breast cancer screenings for all women to detect breast cancer in the early stages, yet African American Black women did not utilize breast cancer screenings as recommended by the

guidelines. This health care system's failure contributed to higher mortality rates for African American Black women, which can easily be prevented.

The above articles indicated that one of the common themes to increase the rates of breast cancer screening for African American Black women was related to educational promotion of breast cancer awareness. Applying culturally sensitive or appropriate materials was one of the main practices used to help African American Black women absorb the importance of early and annual breast cancer screenings. This QI post-intervention project also supports the above cited constructs and applied culturally appropriate education to improve outreach practices of the cancer center to African American Black women to increase the rates of breast cancer screenings for a community in the southern portion of NJ.

In summary of the theme of breast cancer screenings, many studies showed that having mammograms plays a crucial role in early breast cancer detection (Allen et al., 2013). Despite this knowledge, findings in literature have identified suspicion and absence of support by health care authorities as barriers to early breast cancer screening of African American Black women (Allen et al., 2013). Researchers note that awareness of changes to breast cancer guidelines are low. They also noted that just education about the changes in guidelines is not enough, but that other contextual norms such as cultural, community norms, fear, and mistrust need to be included when educating the women on changes to breast care guidelines. The conclusion calls for further studies inclusive of cultural influences on knowledge, attitudes, and beliefs. The following studies cite many educational, social and health system barriers that are deterrents and barriers for African American Black women in seeking breast cancer screenings.

Barriers for African American Black women. Copeland et al. (2018) conducted a meta-analysis about the effects of clinical trials on African American Black women pertaining to breast cancer screenings published in articles from 1997 to 2017. When studying health disparities related to breast cancer screenings, the objective was to prevent death by increasing early screening rates in African American Black women (Copeland et al., 2018). Findings indicated that screening interventions for women were significantly more apt to receive mammography than control (OR 1.56 [95 percent CI 1.27 1.93], $p < .0001$). Copeland et al. (2018) suggested that "while health disparities are prevention focused, breast cancer screenings is the end point" (p.3172), which was the focus and challenge of this QI project. The deterrence of death was also the end point for patient-centered outcomes in the goal to increase early breast cancer screening rates in African American Black women (Copeland et al., 2018).

Breast cancer screening rates were the center of this meta-analysis research because evidence shows that early breast cancer screenings are profoundly connected to the patient-centered outcomes of mortality and death (Copeland et al., 2018). The results of the 14 randomized studies in this meta-analysis showed that 76% of the studies used culturally tailored educational interventions for African American Black women (Copeland et al., 2018). To address barriers to early breast cancer screenings, this study found that combining African American Black cultural norms such as religion, mind, body, spirit, and racial pride, with education about mammograms may increase breast cancer screenings in this population (Copeland et al., 2018). Therefore, this QI project, using culturally appropriate education in local churches, was projected to prove advantageous in increasing breast cancer screenings for African American Black women in the southern portion of NJ.

Conway-Phillips & Janusek (2014) reported that understanding why some African American Black women follow the guidelines to get early breast cancer screenings can help others overcome barriers. Application of the salutogenic model of health empowered the researchers to focus on the individual variances and factors which promoted health as opposed to the factors that hindered making healthy lifestyle decisions, like obtaining early breast cancer screenings (Conway-Phillips & Janusek, 2014). The researchers used this model to understand the characteristics of African American Black women who pushed through the barriers mentioned by other researchers.

Two groups of African American Black women were used for this study, those enrolled in the Illinois breast and cervical cancer program and those who were not. Total participants were 134 (Conway-Phillips & Janusek, 2014). In conclusion, this study reported that spirituality had a great influence on African American Black women flowing health guidelines (Conway-Phillips & Janusek, 2014). Therefore, since spirituality is cultural, this QI post-intervention project applied culturally-appropriate education in African American Black churches, which was projected to prove advantageous in answering the clinical question and increasing the dependent variable.

Davis, Cadet, Moore, & Darby (2017) explored the differences of African American Black women who were noncompliant and those who were compliant with healthcare recommendations of screenings for breast cancer. The researcher recruited African American Black women over age 40 without any history of cancer for a community health fair in a southern US city. The women were low income, and the focus of the community event was breast cancer prevention (Davis et al., 2017). Findings agreed with previous studies that African American Black women who lacked health insurance were more likely to be noncompliant. Additionally, radiation concerns,

transportation hindrances, and deferring health care were barriers to breast cancer screenings (Davis et al., 2017). The study presented a continual need to create awareness about the benefits of early screening for breast cancer. This study found no differences in compliance between educated and uneducated African American Black women. The study concluded that screenings for breast cancer in African American Black women continues to be a challenge and critical part of saving lives of African American Black women (Davis et al., 2017).

Tangka et al. (2017) reported that mammography, as a part of breast cancer screening, reduces mortality and morbidity. Early breast cancer screening with mammography reduced disease and death (Tangka et al., 2017). One identified barrier for low income women in receiving early breast cancer screening was not having affordable health insurance (Tangka et al., 2017). In this study, African American Black women were less likely to use mammography than other racial groups in a majority of the 44 states examined although they were receiving Medicaid insurance.

The study examined Medicaid records across these states and found racial disparities at the state level in breast cancer screening. Tangka et al. (2017) also found that variations in education and income among minorities on Medicaid could impact breast cancer screening, causing disparities. The results of this study showed that interventions were needed to empower women to make healthy decision related to early breast screening due to disparities at the state level. This QI project was projected to help raise breast cancer awareness for African American Black women and increase breast cancer screening rates.

According to Jacobs et al. (2014), breast cancer screening rates were also impacted by the barrier of discrimination among minority ethnic groups including

African Americans Black women, Latinas, and Asian women in the United States. Racial inequalities related to breast cancer screenings are well documented among these groups (Jacobs et al., 2014). Researchers studied data from 3,258 multi-ethnic women from seven US testing sites. African American Black women reported 35% as the highest percent of racial discrimination (Jacobs et al., 2014). Conclusions stated that perceived discrimination is an issue that is important and connected to breast cancer screening, although not generally associated with reduced rates of breast cancer screening.

This study, in addition to multiple studies, confirmed that discrimination in receiving accurate and adequate breast cancer screenings needs further research and exploration (Jacobs et al., 2014). Providing the best care to all women regardless of socioeconomic status or ethnicity in health and health care should be the focus of saving more lives due to breast cancer. The challenges of breast cancer screening should be in a loving, professional, and caring environment to encourage future care and follow-up. The QI project was conducted in a culturally appropriate and sensitive setting without discrimination which supported professional care for women undergoing breast cancer screenings.

Kidd, Colbert, & Jatoi (2015) noted that breast cancer health disparities, as barriers, are influenced by several factors such as discrimination, socioeconomic, cultural differences, and healthcare system barriers. Breast cancer disparity was created by the gap in the differences of mortality between American White women and African American Black women. White women have more incidences of breast cancer then African American Black women, but African American Black women have a greater mortality rate from breast cancer (Kidd et al., 2015). The authors of this study described health disparities and complicated issues surrounding breast cancer screenings for young

African American Black women. A literature review provided complete data on recent controversies about mammogram screenings and the impact on mammography practices. The main reason, cited by the researchers, for the controversy of obtaining mammogram screenings for young African American Black women was lack of research and evidence supporting the need for mammogram screening for women in their 40s (Kidd et al., 2015). The findings suggested that nurses should be aware of factors and barriers that affect these young women's participation in breast cancer screenings.

Young African American Black women are at higher risk for certain aggressive breast cancers and should be educated on the disparities surrounding breast cancer screenings with informed consent (Kidd et al., 2015). Nurses should educate patients and empower them to make informed decisions about their healthcare based on guidelines for mammograms. The QI project offered culturally appropriate education and materials to empower African American Black women to take responsibility for their healthcare by choosing breast cancer screening including mammograms.

Palmer et al. (2015) studies disparities in barriers by describing variations in follow-up care between African American Black women and White women. According to the study African American Black women are less likely to receive proper follow-up up care for breast cancer. Follow-up care is given to women who have a diagnosis and need to seek treatment for breast cancer. This care included regular early screenings for possible re-occurrences through physical exams, mammography, monitoring of the effects of breast cancer treatment, and patient education (Palmer et al., 2015).

A mailed survey of 203 breast cancer survivors asked about 14 possible obstacles to follow-up healthcare. Logistic repression was used to discover associations between ethnic group and barriers (Palmer et al., 2015). Some 62% of women reported at least

one barrier to follow-up care. African American Black women reported three times more barriers to follow-up care than White women. African American Black women reported barriers related to cost, anxiety and transportation (Palmer et al., 2015). Findings reported that barriers to follow-up breast cancer healthcare for African American Black women can be addressed through cultural resources, navigation, economic support, education and psycho-social interventions (Palmer et al., 2015). This QI post-intervention project removed some of these barriers for participants by offering navigation after breast cancer screenings by the cancer center, financial support through NJCEED program (funding for breast cancer screenings), and culturally appropriate education.

The study by Molina, Kim, Berrios, & Calhoun (2014) examined medical mistrust experienced by African American Black women and if it impacted satisfaction with mammography health care services. Medical mistrust is identified by several studies as a barrier to breast cancer screening for African American Black women. A total of 671 African American Black women without breast cancer history completed questionnaires (Molina et al., 2014). The study was controlled and randomized. Bivariate analyses of data collected from the study sample showed that age was negatively correlated satisfaction with both mammography, Pearson's r 0.13, p 0.001 and overall mistrust of the medical community Pearson's r 0.09, P 0.02. African American Black women who were identified as underserved were given a referral from their provider to receive mammography.

Navigation is a plan that was instituted to help underserved low-income ethnic groups. This study examines satisfaction of navigation services among African American Black women receiving mammograms (Molina et al., 2014). This study suggests that African American Black women with medical mistrust reported dissatisfaction with

navigational services related to receiving mammograms (Molina et al., 2014). In conclusion, promoting self-efficacy and building trust may result in greater satisfaction with health care related to mammograms, resolving this barrier to care.

The Susan G. Komen Foundation (2016) reports that African American Black women's deaths related to breast cancer are 40% higher than White women. Researchers in this study explore the reasons for this disparity and offer possible solutions. The reasons mentioned in this study for higher breast cancer mortality rates for African American Black women are more aggressive forms of breast cancer, inherited predisposition and patterns of care. Studies now suggest that African American Black women's rates for getting mammograms for breast screening on the rise, but many experience differences in quality of the mammogram and follow-up care. Barriers of insurance, lack of patient education, poor provider communication, and the health care system are still important issues in inequality of breast cancer care for African American Black women (Susan G. Komen Foundation, 2016). The Susan G. Komen Foundation's objective is to create programs that closes the gaps of health care disparities in breast cancer for African American Black women and promote quality of healthcare for everyone.

In summary of the information on the theme of Barriers for African American Black women, the above studies and research notes many educational, social, and health system barriers that are deterrents for African American Black women in seeking early and continuous breast cancer screenings. The studies also indicated that African American Black women were more likely to abstain from breast cancer screening based on a variety of factors such as negative perception of medical services, historical medical mistrust, inadequate access to breast cancer screening services, and low standards of care

when services are sought. All these factors, that are shown by researchers to contribute to erecting healthcare barriers for quality breast cancer care, may explain discrepancies between African American Black women and other ethnicities. However, many interventions, including the 2019 post-intervention QI project, have attempted to resolve the disparity of low breast cancer screenings rates in African American Black women.

Resolving the disparity of low breast cancer screenings. Research studies outline many successful interventions that help to address health care inequalities pertaining to breast cancer in African American Black women by increasing breast cancer screening rates. Several interventions mentioned in the following articles share the same constructs to resolve these health care challenges. Many addresses the health care system, cultural influences, and educational factors. The most successful interventions in lowering breast cancer rates for this population are those that collaborate with healthcare systems, state and federal entities, community partners, and health care professionals.

In 2007, concerned citizens of Chicago created a task force composed of over 100 healthcare partners and community workers (Sighoko et al., 2017). The purpose and scope of this study was to evaluate the progress made in Chicago to reduce disparities in deaths from breast cancer compared to nine other US cities with large African American population (Sighoko et al., 2017). The rationale was to show that improvement in breast cancer mortality can be made using the model of comprehensive health care initiatives used in Chicago-such as a task force. The research question asked in this study was: Why has breast cancer increased in African American women since the 1990s (Sighoko et al., 2017)? Using Chicago based research, the rates of African American Black women who died from breast cancer from 1999 to 2005 & 2006 to 2013 and disparity ratios in Chicago were compared to nine cities in the US with the largest population of African

Americans (Sighoko et al., 2017). The nine cities used for comparison, had over 500,000 African Americans Black women.

Researchers found that during 2006 to 2013 (period of task force) the rates of deaths from breast cancer in Chicago decreased significantly more than in the nine largest US cities (Sighoko et al., 2017). The collected data were extracted from the US Census Bureau, National Center for Health Statistics databases. The study states that overall the nation's rate of deaths due to breast cancer during 1999-2005 has decreased for American women due to advances in breast cancer screenings and treatment. The national rates for White women have decreased significantly more than black women. This has resulted in a disparity related to greater deaths from breast cancer in African American women and less in White women during the years 2006-2013 as compared to previous period of 1999-2005. The conclusion of the hypothesis is that one cannot deny that there are large differences and disparities in deaths related to breast cancer between African American Black women and White women in America. The questions for further research apply to the duplication of the lessons learned in Chicago. These disparities can be reduced through city wide and/or statewide health care initiatives by the reproduction of the task force's health care initiative (Sighoko et al., 2017).

Wheeler et al. (2013) explored why there are disparities in breast cancer deaths between groups in America and the objectives for future research. Existing literature is explored to find the reasons for breast cancer deaths related to racial disparities. The researchers are motivated by the rationale that breast cancer mortality related to racial disparities persists despite improvement in screening methods and treatments (Wheeler et al., 2013). The hypothesis is that quality care of patients for breast cancer health should be based on multi-disciplinary team collaboration consisting of culturally and

socioeconomically coordinated efforts to encourage unbiased education of guideline recommendations and treatments.

Researchers concluded that numerous gaps are evident in the understanding of treatment disparities in breast cancer as related to African American Black women. Studies show conflicting information of such things as race and endocrine therapy. Analysis of the data through studies cited by the authors show that Black women have more comorbidities than White women, poor follow-up after diagnosis and initial mammograms, and poor access to state-of-the-art breast cancer treatments (Wheeler et al., 2013). Researchers concluded that cancer outcomes rely upon biological factors as well as changeable behavioral characteristics and the health system itself.

The conclusion stated that acting upon the many factors involved in breast cancer disparities, including variations in treatments, calls for further opportunities for research in order to identify ways to devise equal care and treatment to ensure patient outcomes for all in health care for breast cancer (Wheeler et al., 2013). The QI project presents the opportunity to devise and identify a way of equity in health care through culturally sensitive nursing care to help decrease disparities in African American Black women by potentially increasing early breast cancer screenings for prevention of breast cancer at the cancer center.

The purpose of the Gray et al. (2017) study was to evaluate evidence pertaining to disparities in cancer occurrences, frequencies, and deaths relative to oncological nursing practice and other practitioners. The research question is how can nurses as leaders educate, promote, and encourage awareness of cancer screening recommendations for minorities? The population being studied are minorities and under-represented populations in the United States. Analysis of the breast cancer data states that African

American women tend to be diagnosed at a later and harder to treat stage (63 percent) than White women (52 percent) and promotes the importance of including cancer screening as a part of oncological nursing practice.

In conclusion the researchers note that studies show that the fear of cancer and its many consequences are deterrents to screening among certain cultures and some are unlikely to discuss the possibilities (Gray et al., 2017). In answer to the hypothesis the authors state that nurses are educated to be aware and observe sensitivities and outlooks of patients about cancer screening behaviors (Gray et al., 2017). Therefore, future nursing studies should explore barriers, that may cause poor access to care and target cultural interventions to meet a specific patient's need to reduce disparities in cancer screenings (Gray et al., 2017). This conclusion supported the QI post-intervention project which applied culturally appropriate education as a way to close gaps in the early screening rates of African American woman at the cancer center outreach's program. It also helped to answer the research question and demonstrated how a DNP prepared nurse, as a leader, educated, promoted, and encouraged awareness of cancer screening recommendations to minorities.

In this study, Santos et al. (2017) created a randomized study groups for a project called HEAL (Health through Early Awareness and Learning). This initiative was based in African American Black communities in 14 churches. The project trained community lay leaders with web based educational models. The results of this project concluded that training approach using web-based education was just as effective as classroom education (Santos et al., 2017). African American Black participants learned about cancer health care in this workshop series just as much as in a traditional didactic setting (Santos et al.,

2017). Application of project HEAL to educate African American Black women may help increase breast cancer screenings with the addition of culturally appropriate tools.

According to Cullerton et al. (2016), breast cancer screenings can decrease illness and death in women. This study was conducted in Australia and is significant when observing factors that hinder breast screening rates in various minority cultures (Cullerton et al., 2016). The researchers had 146 participants in three culturally tailored education sessions. Results were derived from pre and post education test. The changes in understanding and attitudes were assessed from the results of the test. The results of the study are significant in demonstrating the importance of developing culturally tailored educational programs to increase cancer screening rates in these communities (Cullerton et al., 2016). The concepts of applying culturally appropriate education to increase the understanding of the need to obtain cancer screenings allowed the researchers to answer the same clinical question proposed in this QI project.

New Jersey Department of Health (2018) task force on breast cancer sets the objectives for those at high risk for developing breast cancer. The objectives focus on awareness and education. The goals of the appointed work group are to concentrate on improving public understanding of breast cancer, breast health and screening to encourage understanding of the value of early detection. Information about cancer is obtained from New Jersey cancer statistics and registry, data research and resources that are then made available to the public. The aims of task force are to prolong life by disseminating data, promote access to quality cancer screenings, and state of the art treatment to reduce the cancer burden in New Jersey.

The task force's goal is also to reduce cancer-related health disparities in racial and ethnic minorities. The disparity noted in this report is that in New Jersey African

American Black women die from breast cancer more than other races (New Jersey Department of Health, 2018). This task force recommends that early detection education be taught to high risk populations first, to address disparities. Statistics show that, in New Jersey, less educated and lower income women age 40 and over are less likely to have mammograms (New Jersey Department of Health, 2018). An important strategy of this New Jersey initiative is to disseminate evidence-based, culturally appropriate educational materials through community-based organizations, healthcare providers, and leaders. Based on the research and need for New Jersey African American Black women the report identified them as a group at risk for breast cancer and in need of an intervention to address this disparity. This QI project's goal of dissemination of culturally appropriate education to increase breast cancer screening rates in the southern portion of NJ upholds the goals of the New Jersey Breast Cancer Taskforce's recommendations for African American Black women.

According to Newman (2015), there is available information from recent studies related to breast disparities based on hereditary susceptibility. This study reviews the current information of breast cancer disparities based on African ancestry. According to rates of population-based incidences, breast cancer is lower in African American Black women in comparison to White American women (Newman, 2015). In addition, the rate of breast cancer in African American Black women is low compared to White American women (Newman, 2015). This article quotes statistics from well-known studies but fails to make the case for breast cancer disparities based on African genealogy. The author mentions the BRCA1 gene and triple negative breast cancer as hereditary markers but fails to mention what makes these factors of breast cancer disparities.

Plescia and White (2013) examined research on breast cancer screening to examine recent approaches to improve breast cancer screening and continuous disparities in the use of mammograms. A few of the objectives of this study were to highlight the importance of outreach, the need of more patient centered models of care, and increased approaches to identify women for breast cancer screening and participation (Plescia & White, 2013). The results of this study noted that mammogram by itself did not benefit follow-up care after an abnormal mammogram result. Women from ethnic groups and low-income groups are less likely to have follow-ups in a timely manner, which leads to late-stage breast cancer disease.

Case management can improve the follow-up health care and time span for underserved minorities and help to resolve disparities in health care related to breast cancer and screening (Plescia & White, 2013). Other barriers cited by this study are myths about breast cancer screening, pain associated with the procedure, and lack of knowledge regarding the breast cancer screening procedure (Plescia & White, 2013). In conclusion this study proposes that new methods are needed for improvement of breast cancer screening rates. Case management, patient navigation and outreach by those trusted in the community are promising strategies in reaching communities to improve breast cancer screening and resolve disparities in ethnic and minority communities (Plescia & White, 2013). The QI project has all the factors proposed by this study to resolve breast cancer disparities for the African American Black community in the southern portion of NJ.

The objectives of the article by Smith, Conway-Phillips, & Francois-Blue (2016) was to describe and classify breast cancer disparities in the metropolitan setting and define the Sisters Saving Lives (SSL) program as an evidence-based intervention on

evidence to address breast cancer disparities. In addition, this study uses the self-efficacy theory to direct and appraise the project. The study reports that African American Black women have the lowest rates of survival of any ethnic or racial population (Smith et al., 2016). Disparity factors related to breast cancer in African American Black women are access, discrimination and usage of healthcare, socioeconomic position, education/ knowledge, and cultural views (Smith et al., 2016). In order to address these breast cancer disparities among African American Black women in Chicago, the Metropolitan Chicago Breast Cancer Task Force "MCBCTF" developed the SSL program to train the trainer (Smith et al., 2016). African American Black cancer survivors were trained to promote breast cancer awareness through education within the African America Black community on the South side of Chicago (Smith et al., 2016). The SSL program established an encouraging effect on the awareness of breast cancer screening in Chicago.

The program has proved sustainable through continual training programs in Chicago. Programs about breast cancer awareness and education for African American Black women should be culturally based, improved through community collaboration, and evidenced based (Smith et al., 2016). The QI project is culturally based through evidence-based materials with community collaboration with a cancer survival group, local churches, and the local cancer center employees. According to the SSL project, these factors are essential in addressing disparities related to breast cancer in African American Black women.

Best, Spencer, Hall, Friedman, & Billings (2015) reports that spirituality in the African American Black culture has been recognized as a possible barrier to breast cancer screening. Culturally framed communication based on African American Black spiritually was used in this study to develop breast cancer screening health educational

materials (Best et al., 2015). The study was developed in response to the failed attempts to eliminate breast cancer disparities in the African American Black women. This study used framing theory to inform the process of incorporating spiritual messages into breast cancer screening communication for African American Black women. To frame this cultural reality for African American Black women related to breast cancer, beliefs and values must be considered (Best et al., 2015). This study used qualitative study design to develop culturally based spiritual breast cancer screening messages for African American Black women (Best et al., 2015). The results of this study are presently being evaluated, according to the authors. The researchers encourage exploring this method of including the cultural spiritual approach to healthcare to increase breast cancer screening for African American Black women (Best et al., 2015).

Marshall et al. (2016) reports that studies show that patient navigators improve breast cancer screenings. This study explores the use of patient navigation on African American Black women by evaluating the results of mammography rates of 1,905 women receiving Medicare in Baltimore, Maryland (Marshall et al., 2016). The researchers conducted a screening trial on African American Black women 65 years and older using, mailings and phone calls. Research included giving printed educational materials to the control group and the same materials with navigation (Marshall et al., 2016). Results showed that participants in the interventional group increased use of mammography breast cancer screening. This study adds to the evidence that patient navigation is related to improved rates of breast cancer screening by African American Black women and may be effective in reducing breast cancer disparities among minorities (Marshall et al., 2016).

According to Conway-Phillips and Janusek (2014), reducing breast cancer mortality rates among African American Black women depends upon understanding the individual characteristics and behaviors of this population. This study used a salutogenic health model to assess the outcome of coherence, social supports, understanding about health and spirituality on behaviors and attitudes related to breast cancer screenings (Conway-Phillips & Janusek, 2014). The chosen model for health care focused on factors that encourage health. Researchers found that spirituality has a positive effect for breast cancer screening in African American Black women characteristic of the model (Conway-Phillips & Janusek, 2014). Based on this outcome, breast cancer programs to increase breast cancer screenings within faith-based groups may improve disparities in breast cancer care and screenings for African American Black women (Conway-Phillips & Janusek, 2014).

The purpose for this breast cancer screening intervention by Perez et al. (2014) was to address disparities related to high breast cancer mortality rates in African American Black women. The project had cultural, educational, and technological components. Using videos of breast cancer survivors' stories, a team from the local college and medical school piloted a random control test (Perez et al., 2014). After an intense production process, the videos were shown to participants. The results of using these narratives of breast cancer survivors to increase knowledge and participation in breast cancer screenings were positive. These narratives have been associated with increased breast cancer health participation in African American Black women and can therefore be used to help resolve disparities (Perez et al., 2014).

Rapkin et al. (2017) conducted a research project named Healthlink, that was community-based to reduce disparities related to cancer. The objective was to link

communities targeted as medically underserved to address risk behaviors and to increase cancer screenings. The public library system was used for collaboration among stakeholders over 48 months in 20 large metropolitan areas (Rapkin et al., 2017). This study was initiated in the libraries of Queens, in New York City. Data from surveys helped to track the rates of cancer screenings. Cancer screenings were phased into the metropolitan areas in random, stepped-wedge sequence. Event-history regressions (*n* 9374) indicated that adherence outcomes were positively correlated with program implementation.

The authors used the National Cancer Institute's Cancer Control Planet Research-Tested Intervention Programs (RTIPs) website to help guide the project (Rapkin et al., 2017). The RTIPs list evidenced-base methods to encourage cancer screening and a program to encourage mammography through flu treatment centers (Rapkin et al., 2017). The libraries in urban locations were used to form councils from local stakeholders and helped them to organize programs. The Healthlink initiative is sustainable and has helped decrease disparities in cancer screenings for the underserved in rural areas (Rapkin et al., 2017).

Belgrave & Abrams (2016) provided a literature review and summary of factors that contributed to the health of African American Black women. The objective is to encourage future action and research to resolve persistent health disparities for the African American Black women. The emphasis is on protective and perilous cultural factors that govern African American Black women's health choices and behaviors. Data on disparities are consistent with previous studies pertaining to culture, psychological, and socioeconomic factors. The authors' summarized stress reduction, social support,

cultural tailoring, and empowerment programs to help improve health outcomes in this population and decrease health disparities for African American Black women.

The study by the University of Maryland School of Public Health (2015) created a research focus group for African American Black women over the age of 40. This group included 26 women and was designed to explore the breast cancer screening beliefs and their ways of obtaining breast cancer screenings. The study consisted of navigator groups and six participants. The results of the study provided insight into the motivations for getting screened. The women said they wanted to live, and they knew someone who had breast cancer. The women also identified obstacles and barriers to screening as lack of knowledge, social norms and beliefs, and structural limitations (University of Maryland School of Public Health, 2015). The study demonstrated positive attitudes as the African American Black woman obtained breast cancer screenings despite the barriers.

Highfield, Hartman, Bartholomew, Balihe, & Ausborn (2015), a research team from the School of Public Health in Houston, Texas, conducted a quasi-experimental study that evaluated an evidence-based intervention which sought to improve African American Black women's breast cancer screening appointments. The concept is that other evidence-based interventions used in community settings are ineffective because of lack of evaluation and adjustments for the setting (Highfield et al., 2015). The literature review in this study yielded over 500 studies that showed that how the program is implemented affects the outcomes of the prevention program (Highfield et al., 2015). The second goal of the researchers was to define implementation practices of the evidence-based intervention in the practice setting. The evidence-based intervention, "Breast Cancer Screening among Nonadherent Women," was adapted for use (Highfield et al., 2015, p.2). This study used survey questions and telephone counseling, which helped to

determine African American Black women's readiness for breast cancer screening appointments (Highfield et al., 2015). Researchers concluded that this study demonstrated the best practice for adaptation of an evidence-based intervention to show effectiveness in a new setting.

In this study Karcher, Fitzpatrick, Leonard, & Weber (2014) addresses the disparities in breast cancer care of African American Black women in Maryland. Breast is the fifth cause of death in Maryland. The death rate for African American Black women in the US is 41% higher than White women (Karcher et al., 2014). African American Black women in Baltimore, Maryland, have the second highest yearly rate of breast cancer mortality (Karcher et al., 2014). Many factors were evident for this disparity: cultural, limited access to health care, no health insurance, poverty, and social inequities (Karcher et al., 2014). Based on these disparities for African American Black women related to breast cancer, a community outreach and educational collaboration was founded to improve breast screening knowledge and understanding. Educational videos and materials were given out to community businesses, churches, schools, and hospitals in Baltimore neighborhoods. The result of this collaborative project was a positive increase in breast cancer screenings.

According to the literature review by Wasserman et al. (2019), there are consistent gaps which still exist pertaining to health care disparities. The need for healthcare professionals to improve understanding of behavioral, cultural and factors in the health care system remains a complex challenge in the elimination of disparities (Wasserman et al., 2019). The American health care system is fragmented, which perpetuates health care disparities (Wasserman et al., 2019). Patient factors may also contribute to disparities as poor minority patients decline, delay and/or defer important

health care due to lack of insurance or being underinsured. The authors propose that quality improvement projects are promising methods in helping to identify and address quality of care within the health system that may help to reduce disparities.

Northington et al. (2011) reported that race and ethnicity are significant factors in breast cancer deaths especially in African American Black women. Mentioned in this study are the same barriers and disparities in previous studies such as lacking understanding and knowledge, cultural factors related to past happenings with the health-care organization, and viewpoints pertaining to the breast cancer screening process (Northington et al., 2011). The project in this study used an educational model of collaboration of community, faith-based and state organization to address breast cancer disparities in the African American Black community.

The study was applied in a low-income, underserved region with high breast cancer death rates. The goal was to increase breast cancer screenings services, improve access to yearly mammograms, provide breast cancer education, and give women resources for follow-up and health care sources for future breast care concerns. The study was designed by a group from a school of nursing from an American Southern state. The objectives and goals of the project were meant to be duplicated in other communities to increase participation. This QI project duplicated this integrative educational model to help resolve barriers and disparities related to breast cancer screening in African American Black women.

Summarization of these studies demonstrated similar disparities throughout in resolving breast cancer disparities for African American Black women. The text mentions several other studies in addition to the one in the text. Cultural application was a common concern as well as socioeconomic barriers. The statistics cited in each article coincided

and demonstrated the profound need to resolve disparities leading to low breast cancer screening rates and use of mammography for this population. One article mentioned that the main concern in resolving disparities in African American Black women is saving lives (Patel et al., 2014).

In summary of the theme, resolving the disparity of low breast cancer screenings, all the studies thoroughly covered factors related to disparities, and suggested, and implemented successful interventions. Information about the accountability of the health care system to establish generalized evidence- based practice guidelines to abolish breast cancer disparities related to African American Black women is lacking and needs more research. Studies have recorded the success of many projects that helped to close the gap in healthcare caused by disparities. Many have resulted in increased breast cancer screenings for African American Black women. One of the major themes that helped to bring about this increase, throughout these studies and research, was culturally sensitive and appropriate educational tools that were used in clinical practices.

Culturally-appropriate applications and cultural competence. Scherr, Bomboka, Nelson, Pal, & Vadaparampil (2017) endeavored to reach a target population of African American Black women who have a higher risk of breast mutated cancer genes. The purpose of this study was to identify why African American Black women are less likely to get genetic counseling for breast cancer. The survey in this study found that once African American women found out about the genetic testing, positive attitudes developed in seeking testing and screenings. The brochure was disseminated into the communities through churches and community events (Scherr et al., 2017). The goal of the culturally targeted brochure was largely successful in reaching the targeted population. Once again culturally appropriate education proved significant in increasing

breast cancer screening rates and awareness of breast cancer and the need to seek testing for the vulnerable populations of African American women.

Davis, Darby, Moore, Cadet, & Brown (2017) reports that approximately half of the cases of breast cancer among African American Black women are diagnosed in early stage compared to 63% of Caucasian/White American women. These findings indicate the ongoing need of education and health promotion interventions for early breast cancer screenings of African American Black women (Davis et al., 2017). This study states that traditional healthcare promotional models lack inclusiveness of shared cultural backgrounds of African American Black women when conducting community base cancer screening programs. The objective of this culturally based project was to encourage underserved women to become active in breast cancer screening programs. The project developed culturally based program to increase breast cancer awareness in the African American through culturally appropriate information and social support. The findings indicated that the educational intervention dispelled myths and answered concerns about breast cancer. As a result of the project the women increased their knowledge base and were more amenable to getting mammogram screening.

Reiter & Linnan (2011) reports that the American Cancer Society (2016) recommends that women get annual mammograms starting at 40 years old. The authors also reported that African American Black women die from breast cancer more frequently than other women, because many do not get the recommended screenings for early breast cancer detection (Reiter & Linnan, 2011). This study examined cervical and breast cancer screening behaviors of 1,123 African American Black women through a survey given in beauty salons in North Carolina. The results of this survey suggested that beauty salons might be a good community setting for recruiting African American Black

women to participate in education and cancer screening programs (Reiter & Linnan, 2011).

Reiter & Linnan (2011) also reported that the African American Black women in North Carolina have a low participation rate for breast cancer screenings. Many women reported several barriers to obtaining screenings. Based on the results of this study African American beauty salons are an appropriate setting for using interventions for increasing cancer screening rates among African American Black women. Reiter & Linnan (2011) used African American beauty salons as an appropriate cultural setting to disseminate education and encourage breast cancer screening for African American Black women with good results. The post-intervention 2019 QI project also used the cultural setting of the church as well as culturally appropriate materials/education to increase rates of breast cancer screenings.

Hall et al. (2005) presented an experimental design using control group and a posttest. The goal was to evaluate the effect of a culturally sensitive education program about breast cancer for African American Black women in African American churches in the Arkansas/Mississippi River Delta (Hall et al., 2005). The population sample was 55 women, 30 in the interventional group and 23 in the control group. The mean age was 51-56 years old (Hall et al., 2005). Culturally appropriate education surveys were given to both groups to measure dependent variables. *T*-test were used for analysis of the data. The objective was to evaluate awareness and views about breast cancer. The results showed differences in the scores between the control group and the interventional group. Although this article is a little dated, the project, methodology, and results are timeless, as reflected in more up to date studies. This is an example of the long-standing and consistent challenges related to breast cancer in the African American Black community.

The study confirmed that culturally sensitive or appropriate educational tools are important factors in health care for African American Black women when dealing with issues in breast cancer and breast cancer screenings.

Garneau & Pepin (2015) used the constructivist theory to develop cultural competence for health care professionals, in their study. In this theory culture is fluid, vibrant, continuously altering, and relational. This study gathered data from semi-structured interviews of nurses by documenting the process of cultural competence development in health care professionals. Garneau & Pepin (2015) proposed that cultural competence is developed through reflection, action, and learning to understand various realities in the cultural context of diversity (Garneau & Pepin, 2015). The cancer center is culturally diverse and brings these concepts in the health care setting by being sensitive to the needs of African American Black women. Similarly, the setting for the post-intervention QI project included clinical outreach to African American Black women in a culturally appropriate church, and with culturally appropriate materials/education. This QI project was in a cultural setting, which helped the cancer center employees continue to develop, reflect and act while learning to understand the cultural realities of African American Black women's struggle with disparities in relation to breast cancer health.

Mosavel, Genderson, Ports, Carlyle, & Wilson (2015) conducted a study on African American Black mothers and daughter to evaluate knowledge of breast and cervical cancer. The study's goal was to assess the close relationships between a mother and daughter to promote breast cancer screenings among African American Black women. The survey assessed 32 African American Black mothers and adolescent daughters from low income neighborhoods in America to explore the communication, knowledge, and views about breast and cervical cancer. Both were compensated for their

participation. Non-identifying demographics were reported in collective form. The results showed that mothers and daughters in the African American community have ways of positive communication, that may contribute to the dissemination of screening information.

Hall & Johnson-Turbes (2015) used the persuasive health message framework to develop materials used in a focus group projected to inspire African American Black women to seek breast cancer screenings. This was a community-based program that was funded by the Center for Disease Control (CDC) for low income minorities to receive breast cancer screening. Seventy-eight African American Black women were recruited in Macon, GA. Each focus group had 6 -10 participants as a result of flyers in beauty salons, community centers, grocery stores, and laundromats (Hall & Johnson-Turbes, 2015). Each participant completed surveys before and after the intervention. The data were analyzed using the Statistical Package for Social Sciences (SPSS), version 25.0 (Hall & Johnson-Turbes, 2015). The conclusion states that using the framework assisted in creating good communication and messages using cultural constructs, which clearly made this study a success in increasing breast cancer health awareness and mammogram screening for low-income African American Black women in Macon (Hall & Johnson-Turbes, 2015).

Best, Spencer, Friedman, Hall, & Billings (2016) findings of disparities are consistent with the present need for African American Black women need to increase awareness of breast cancer health. The challenge for obtaining breast cancer screening to prevent unnecessary mortality in African American Black women remains a concern across all these studies. The authors cite the same barriers as other studies: social concerns, income, limited health care access, and culturally based opinions (Best et al.,

2016). In this study 200 African American Black women were randomly chosen and placed into two groups. Recruitment took place throughout the South and Midwest. Participants were offer $5 to complete the survey, which evaluated demographics and factors pertaining to breast cancer behaviors. Spiritual framing was used to incorporate health messages pertaining to breast cancer. Statistical analysis was used for a power analysis using SPSS. Chi-square test was performed on the data. The findings revealed that spiritual framing was associated with increased intentions to obtain breast cancer screenings. Once again culturally appropriate educational materials proved to be a major factor in breast cancer health and increasing outcomes for African American Black women.

Mott-Coles (2013) did a literature review to support the concept that culture is a critical factor which may help to increase breast cancer screening rates in African American Black women and Latinas. Literature shows some similarities between the cultures in relationship to health care (Mott-Coles, 2013). Both groups are known to delay treatment after an abnormal mammography. Complex factors contribute to this disparity. The author states that cultural influences the health care provider's decisions as well. One study found that some providers do not understand the impact of their patients' culture on their health care decisions (Mott-Coles, 2013).

The author conducted a quality improvement effort through interviews with health care professionals in Tennessee. Fourteen participants were interviewed by the principle investigator in settings that were private (Mott-Coles, 2013). This study revealed several implications for health care practice. Providers had a standard format when speaking to patients no matter what the cultural or educational background of the patient (Mott-Coles, 2013). Recommendations for practice was that providers should be familiar with the

culture (cultural competence) of his/her patient to provide best care and have an improved impact in the care of African American Black women and Latinas breast cancer health (Mott-Coles, 2013).

In summarization of the theme, culturally-appropriate applications and cultural competence, the above articles and research shows that knowing cultural norms is an important part of communication, that encourages educators and healthcare personnel to reach, communicate with and educate cultural groups. The above studies and research demonstrated the importance of understanding cultural beliefs and how they impact health behaviors, especially in African American Black women. All studies promoted the application of culturally appropriate or culturally sensitive education to improve quality of healthcare and well-being when applied in the healthcare setting (Susan G. Komen Foundation, 2015). Understanding the influence of culture for the African American Black women in a community located in the southern portion of NJ helped in the educational and clinical applications of this post-intervention QI project.

Summary

This chapter reviewed important literature, research, and studies that highlighted information related to low breast cancer screenings. Low breast cancer screening rates in African American women continues to be a health challenge in the early detection of breast cancer in this population. Low breast cancer screening rates in African American women lead to greater mortality rates related to breast cancer than any other ethnic group (American Cancer Society, 2016). Historically racial differences in breast cancer outcomes have been studied and data proved that African American women have lower incidences but higher mortality rates than White woman in America (Clayton & Tariman, 2018).

The literature revealed a gap in practice improvement at the local cancer center that can be improved in support of the clinical question and independent variable through the application of evidence-based culturally educational tools to increase breast cancer screenings. The results of the Sighoko et al. (2017) research concluded with improvement in mortality and the reduction of disparities in African American women and shows possibilities as an example for other cities to follow. Mayfield-Johnson et al. (2016) identifies one barrier to early cancer screenings in African American Black women as the lack of the application of culturally appropriate approaches.

The cancer center outreach program's practice setting has had challenges with African American women in the local community responding to traditional methods of outreach for early breast cancer screenings (Robles-Rodriguez, 2018). This post-intervention QI project used culturally appropriate education to increase breast cancer screening rates of African American women in a community of the southern portion of NJ. The objective was to promote awareness and understanding of the importance of early breast cancer screenings for prevention of late stage breast cancer leading to higher mortality rates. The addition of culturally appropriate materials/education was a quality improvement method that the cancer center utilized to promote quality of care and increase low rates of breast cancer screenings for African American Black women in the outreach program (Wasserman et al., 2019). This was accomplished by comparing the breast cancer screening rates of the pre-interventional group to breast cancer screenings rates to the post-intervention participants who received the addition of culturally appropriate education and responded by getting breast cancer screenings and/or mammograms. The first theme expounded on the importance of African American Black women grasping the essentials of early breast cancer screening and the need in

understanding benefits breast cancer awareness (Bazargan et al., 2015).

The QI project was expected to help the African American Black women participants to grasp the importance of early breast cancer screenings through culturally educational tools. The hypothesis of this study was that behaviors and attitudes about early cancer screenings in African American women can be modified through culturally appropriate intervention. The QI project was projected to change behaviors in African American Black women through educational awareness and empower them to make healthy choices related to early and annual breast cancer screenings.

Chapter 3: Methodology

This QI project focused on increasing historically low breast cancer screening rates of African American Black women in the southern portion of NJ. While previous literature indicated that African American Black women have lower participation in breast cancer screenings, it was not known if culturally-appropriate education increased breast cancer screening rates for African American Black women in a community of the southern portion of NJ (CDC, 2016; Davis et al., 2017; Patel et al. 2014). Increasing breast cancer screenings within this population was vital as, according to the American Cancer Society (2016), low breast cancer screening rates in African American Black women lead to greater breast cancer mortality more than any other ethnic group.

The National Cancer Institute (2019) encouraged early breast cancer screenings for detection and cancer prevention. Screening methods for breast cancer include manual exams and mammograms (Clayton & Tariman, 2018). Research showed that mammograms are the most effective method to detect cancer before cancer progresses into more advanced stages and becomes more difficult to treat (Clayton & Tariman, 2018). African American Black women have the lowest rates for obtaining breast cancer screenings when compared to other ethnicities, especially before advancement of the breast cancer into more advanced stages (CDC, 2016; Davis et al., 2017). Low rates of participation in breast cancer screenings can be attributed to multiple factors. One is African American culturally normative beliefs regarding the healthcare system within the United States (Mayfield-Johnson et al., 2016). To alleviate issues regarding the historical cultural beliefs of African American Black women in a community of the southern portion of NJ, this QI project focused on addressing the lack of the application of culturally appropriate education in the cancer center's outreach program (Mayfield-

Johnson et al., 2016).

Results of this QI project addressed the clinical question: For African American Black women in the southern portion of NJ, did the addition of culturally appropriate education increase breast cancer screening rates? Previous literature has indicated that historically African American Black women have lower participation in breast cancer screenings (Davis et al., 2017; Gray et al., 2017; Patel et al., 2014). However, it was not known if the addition of culturally appropriate education increased breast cancer screening rates for African American Black women in a community in the southern portion of NJ.

According to Davis et al. (2017) numerous complicated and correlated factors contribute to low rates of breast cancer screenings in the population of African American Black women (Davis et al., 2017). The purpose of this quantitative quasi-experimental project was to evaluate if culturally appropriate education increased breast cancer screening rates of African American Black women in the southern portion of NJ. This chapter provided information including explaining the problem within the population. Reliability of the project assured that the project can be repeated in another setting in the future (Heale & Twycross, 2015). Similarly, validity of this QI project was reviewed in this chapter and established through explanations of the procedures used to measure the results and that those results can be duplicated in other similar population samples. Finally, this chapter explained data collection, data analysis procedures, ethical considerations, and limitations.

Statement of the Problem

Previous literature has indicated that historically African American Black women have lower participation in breast cancer screenings (Davis et al., 2017; Gray et al., 2017;

Patel et al., 2014). However, it was not known if the addition of culturally appropriate education increased breast cancer screening rates for African American Black women in a community in the southern portion of NJ. Interrelated factors that contribute to low rates of breast cancer screenings in the population of African American Black women, include lack of understanding of the importance of breast cancer screenings, lack of education of the mammogram procedure, lack of awareness of breast cancer health guidelines, and cultural beliefs (Davis et al., 2017). The Susan G. Komen Foundation (2015a) reported that it is important to consider how cultural beliefs, as an important part of communication, impact understanding of health and wellness when educating African American Black women about breast cancer. The recommendation of the Susan G. Komen Foundation (2015a) reflected research completed by Davis et al (2017), which also noted that understanding the cultural norms of the African American Black community is an important part of communication.

Clinical Question

The following clinical question guided this quantitative quasi-experimental project: For African American Black women in the southern portion of NJ did the addition of culturally appropriate education increase breast cancer screening rates? Previous literature has indicated that historically African American Black women have lower participation in breast cancer screenings (Davis et al., 2017; Gray et al., 2017; Patel et al., 2014). Aforementioned literature also reported that culturally relevant education, as part of community outreach programs, can increase breast cancer screenings in African American women (Mott-Coles, 2013). However, it was not known, if the addition of culturally appropriate education increased breast cancer screening rates for African American Black women in the southern portion of NJ. In March 2018, the cancer center's

outreach program conducted a project targeting African American Black women in the southern portion of NJ, but without culturally appropriate education.

The results of the March 2018 project recorded on the CaST form and inputted into the cancer center's outreach program's database provided pre-intervention breast cancer screening rates for this post-intervention QI project (see Appendix Q). Data from this QI project, a community outreach program with the inclusion of culturally relevant education, were collected on the same form as the 2018 cancer center outreach program. Information recorded by employees and inputted into the cancer center's outreach program's database was extracted to provide post-intervention information on breast cancer screening rates (see Appendix R for data use agreement).

Project Methodology

Quantitative methodology was selected for use within this project as the quantitative approach allows for establishment of relationships between the independent and dependent variables (Nardi, 2018). Additionally, quantitative approach allows the researcher to better understand to which degree the relationship between the variables exists (Nardi, 2018). This allows the researcher to more fully understand the issue they are trying to address. Qualitative methodology was eliminated from consideration for this project. A qualitative approach would not be appropriate because the methodology only studies phenomenon through lived experience (Smith, 2015). Qualitative method data are most often gathered through interviews or observations and do not quantify variable information (Creswell, 2015). The investigator was not involved in examining the lived experience of participants; therefore, mixed methods were also excluded from consideration. Mixed methods are methodological approaches that combines aspects of quantitative and qualitative study (Creswell, 2015). The use of mixed methods was not

appropriate, as this methodology would use qualitative approaches to collect data, which is not within the scope of this project.

Project Design

Quantitative methodology was employed in this post-intervention project, a quasi-experimental approach was selected as the methodological design. Quantitative, quasi-experimental methodology was the best approach for this project to study relationships between variables because the relationship between the independent and dependent variables can be numerically measured and quantified (Creswell, 2015). The quasi-experimental strategy of inquiry was associated with quantitative approaches and used for nonrandom grouping of variables (Creswell, 2013). Additionally, quasi-experimental design allowed comparison of pre-intervention and post-intervention data to comprehensively address the clinical question and variables of interest (McCusker & Gunaydin, 2015). The independent variable in this project was culturally appropriate education, which was presented to African American Black women participants. The dependent variable, breast cancer screening rates of African American Black women in the southern portion of NJ, was numerically measurable by the number of women who responded to the independent variable by getting breast cancer screenings.

Utilizing a quantitative, quasi-experimental design, this QI project used a pre-intervention and post-intervention approach to determine cause and effect and change of the variables of interest (Kleinpell, 2013; Polit & Beck, 2017). For the context of this project, the independent variable was culturally appropriate education, which was presented to African American Black women in a community in the southern portion of NJ. The dependent variable, breast cancer screening rates of African American Black

women in the southern portion of NJ, was numerically measurable by the number of women who responded to the independent variable by getting breast cancer screenings.

The use of quasi-experimental design was also appropriate as this QI project applied a pre-intervention/post-intervention approach to evaluate differences in breast cancer screenings, as a result of the intervention (McCusker & Gunaydin, 2015). The results of the March 2018 project recorded on the CaST form and inputted into the cancer center's outreach program's database provided a pre-intervention baseline measure of cancer screening rates for this QI project (Polit & Beck, 2017) (see Appendix Q for CaST form). Information from this QI project (with the intervention) provided post-intervention information and evaluated differences in breast cancer screening rates between the two community outreach projects (Table 2).

Population and Sample Selection

The total population of this project was African American Black women living in a community in the southern portion of NJ. According to Robles-Rodriguez (2018), African American Black women who reside in a community in the southern portion of NJ, characteristically have low breast cancer screening rates, which leads to mortality rates that are higher than those of all other minorities in surrounding counties and the state of NJ. The post-intervention QI project sample was drawn from the same pre-intervention project (March 2018) population of African American women living in a community in the southern portion of NJ. Thus, the post-intervention sample was African American Black women living in the same community in the southern portion of NJ and registered in the cancer center's outreach program's database. Demographics of age, ethnic group, and zip code was collected by the project investigator. The project was deemed a quality improvement project (see Appendix K).

For recruitment, culturally appropriate mailings was used to inform potential project participants about the project (see Appendix I). The mailings included information on the project, expectations for participants, researcher contact information, inclusion, and exclusion criteria for participants. To be included in this project, all participants had to meet established inclusion and exclusion criteria established by the project investigator prior to recruitment.

First, all participants in the QI project were African American women more than 18 years old and living in the community in the southern portion of NJ. Additionally, all participants were fluent in the English language, in order to completely understand project investigator's expectations and consent. Exclusion criteria included any person that is not an African American woman, less than18 years of age, or non-fluent in English. Also, any person that did not grant written consent was also excluded from participation. Non-qualifying women were welcome to participate in the culturally appropriate education, breast cancer screenings, and all other components of the project but their data was not included in the project results.

Consent forms included detailed information on this QI project, including all the processes involved with the breast cancer screening, importance of breast cancer screenings, and researcher contact information. Participants were informed, on the consent forms, that they had the right to withdraw from participation for any reason without fear of retribution from the project investigator. Additionally, all participants were informed that confidentiality was ensured in perpetuity. The breast cancer screening rates for the post-intervention data was drawn from the sample participants who completed breast cancer screenings after the culturally appropriate education intervention. Below is output from a power analysis completed through the statistical

package “R”:

> p1 .001

March 2018 project 2/1,246 .001 (.1%).

> p2 .013663

h 0.07923865 (Effect Size)

This was the proportion that was needed to show a significant increase in screening for breast cancer: 0.014 (or 1.4%) or 18 women. The proposed sample size was 18 based upon 1,246 population and rates from the pre-intervention March 2018 project. This assumed a margin of error or the percentage at which the sample group differs from the population that it represents was equal to 10%. The probability that the sample’s response in getting breast cancer screenings represented the population was the confidence level of 80%.

Sources of Data

According to Melnyk and Fineout-Overholt (2015), clinical support data combined into the patients’ electronic health records was an ideal basis for sources of data. The collected data for this project were obtained from the cancer center’s outreach program’s electronic health records (EHR). Pre-intervention data for this project came from the percentage of project participants who received a mammogram after participation in the project in March of 2018, without the culturally-based educational intervention. Specifically, data was collected off the CaST form by cancer center’s outreach program employees and integrated into the cancer center’s outreach program evidence-based EHR database (see Appendix Q).

Post-interventional data was collected from the written evaluation survey (see Appendix P). The QI investigator accessed the cancer center’s outreach program’s EHR

and retrieved demographics of age, race/ethnicity, zip code and participation in breast cancer screenings. Mammogram participation rates from participants from the community outreach pre-intervention group of March 2018 were measured to compare with post-intervention rates of mammogram participation. The extracted information determined current breast cancer screening rates of the post-intervention QI project and if culturally-appropriate materials/education increased breast cancer screening rates for African American Black women living in a community of the southern portion of NJ.

Validity

Validity is the degree to which the dependent variable is actually and intentionally measured by the data collection tool (Sylvia & Terhaar, 2014). The independent variable (culturally appropriate education) was not measured in this project. Susan G. Komen Foundation's culturally appropriate education is evidence-based by reflecting the current body of scientific knowledge (see Appendices A, B, C, D, E, F, G, H, I, J). The Susan G. Komen Foundation's clinical and research experts developed these educational materials using a disciplined and well-established process taking into consideration needs, purpose, message, audiences, methods of distribution, and resources (see Appendix N). The content about breast cancer was co-developed with Harvard Medical School faculty and the Dana-Farber/Brigham and Women's Cancer Center staff (see Appendix N). Evidence-based implies education or nursing practice that emphasizes the practical application of the best available current research to nursing practice (Melnyk & Fineout-Overholt, 2015). The validity of the cultural appropriate education by the Susan G. Komen Foundation was secured by the evidence-based process of using research from large studies (with people), literature reviews and peer-reviewed articles. The Know Your Girls curriculum was intended to benefit African American Black women using cultural

norms to educate them in knowing their bodies, getting screenings and talking with their doctors (see Appendix G). The culturally appropriate breast cancer education is available to registrants online.

The validity for this project was reinforced using Electronic Health Records (EHRs), which are listed as secondary sources for data collection (Sylvia & Terhaar, 2014). EHRs contains data about patient demographics, past medical history, vital signs, and many more patient care factors (Sylvia & Terhaar, 2014). According to Sylvia & Terhaar (2014), the best way to evaluate the validity of secondary resources, used for data collection, is through published scientific peer-reviewed literature.

The *Journal of Healthcare Communications* is a peer-reviewed journal that has published on the validity and reliability of the EPIC® EHR system. The cancer center's outreach program EHR is the EPIC® system. Johnson (2016) writes in the *Journal of Healthcare Communications* that the EPIC® EHR system excels in providing accurate/connected information in real time. The researcher also concluded that "EPIC® provides a high-quality, tech-savvy front-end-to-back-end EHR system for collecting and managing medical record data" (Johnson, 2016, p. 1). Thus, the validity of the cancer center's outreach program's EHR database was established.

The established validity of the cancer center's outreach program's EPIC® EHR as the data collection tool for project participants' breast cancer screenings rates, ensured the internal validity. Collecting the rates of the dependent variable demonstrated whether the intervention (independent variable) caused a change in the breast cancer screening rates (dependent variable) of the project participants. The patient information that was collected from this validated EHR as a result of the pre-intervention project, provided the demographics needed to evaluate and compare the dependent variable (rates of breast

cancer screenings of African American women in a community in the southern portion of NJ) for the post-intervention project results. The QI project investigator extracted demographics (age, race/ethnicity, zip code and confirmation of breast cancer screenings) data from the cancer center's outreach program's EHR for comparison. The data was transferred into a Microsoft Excel® (2016) spreadsheet for analysis to determine changes in the dependent variable.

Reliability

Sylvia and Terhaar (2014) reports that reliability is the degree to which a data collection tool can give the same results in another project or study. Milinovich and Kattan (2018) shares their process of extracting data from EPIC® for research. The authors reported that the EPIC® EHR system allowed substantial research support resulting in numerous publications (Milinovich & Kattan, 2018). Similarly, this post-intervention QI project duplicated numerous community-based projects to increase breast cancer screenings (dependent variable) for African American Black women in a community of the southern portion of NJ.

This QI project can be duplicated as well. Davis et al. (2017) conducted a study which provided culturally appropriate education (independent variable in this QI project) and social support that resulted in increased breast cancer awareness and increased breast cancer screening rates (dependent variable in this QI project) in underserved African American Black women. The concepts of community outreach, collaboration with community groups and African American Black churches were documented in several studies of the literature review and was characteristic of this project, which ensured its reliability.

Susan G. Komen Foundation educational materials are used by multiple health

departments, which play key roles in breast cancer screening and prevention (McHugh, Martinez, Kliman & Roschwalb, 2001). Mathematica Policy Research is a peer-reviewed journal that published a brief stating Susan G. Komen Breast Cancer Foundation relies on health departments to deliver health services and implement education and outreach programs (McHugh et al., 2001). Many of these health canters successfully used educational materials to educate underserved minority women on the importance of obtaining regular breast cancer screenings (McHugh et al., 2001).

Data Collection Procedures

Data collection was initiated after IRB granted approval to the project investigator, and all other appropriate permissions were granted from both Grand Canyon University and the cancer outreach center (see Appendix K). Data collected for this project was obtained from the pre-intervention breast cancer screening rates of a project in March 2018 and this post-intervention QI project. Recruitment for the project sample was 10 days before the culturally appropriate educational intervention. The project investigator used culturally appropriate mailings for the African American Black women listed in the cancer center's outreach program's electronic health records database who received generic invitations (mailings) for breast screenings in the March 2018 project (see Appendix I and Appendix L). The Sister Will You Help Me cancer support community group assisted with the culturally appropriate education panel discussion.

Project participants attended culturally appropriate education in an African American Black Church in the same community of the southern portion of NJ. The education lasted one hour. The project investigator provided a sign-in sheet for program participants. The nurse from the cancer center's outreach program was available to collect participant information on the CaST form (see Appendix Q). Following the

cultural appropriate education participants was asked to complete a written evaluation survey (see Appendix P). The written evaluation survey data was used by project participants to evaluate the presentation of the culturally appropriate educational session. It also established content validity by measuring participants understanding of breast cancer awareness and the importance of getting screenings. This written evaluation survey collected demographics of the participants (see Appendix P).

The objective of the post-intervention project was to present culturally appropriate education guided by evidence-based education from the Susan G. Komen Foundation to help participants understand the importance of breast cancer screenings (Susan G. Komen Foundation, 2015). Culturally appropriate education curriculum and "Breast Self-Awareness for Black and African American Communities" designed by the Susan G. Komen Foundation was taught by the QI investigator and the leader and founder of the Sister Will You Help Me breast cancer community support group (see Appendices A, B, C, D, E, F, G, H, I, J). Project instructors was guided by "Outreach and Education to Faith-Based Organizations: Tips for Planning" and "Education Tips" for the culturally appropriate education format (see Appendix H and Appendix I). Susan G. Komen Foundation curriculum is evidence-based by reflecting the current body of scientific knowledge (see Appendix N). The Know Your Girls culturally appropriate education was designed to help African American Black women take charge of their breast health by knowing their risk, knowing their bodies, getting screened, and talking with their doctors.

The procedure for obtaining informed consent for mammograms and breast cancer screenings was the responsibility of the cancer center's outreach nurses and the project investigator as this is the usual practice prior to procedures (see Appendix S). The nurse from the cancer center's outreach program was ready to collect participant

information on the CaST form following the intervention, during the breast cancer screenings in the mammogram van (see Appendix Q). The nurse was also available to secure and transport all data directly to the center upon completion of project.

The specific and multiple changes made to the previous (pre-intervention) QI project in the cancer center's outreach program practice, was the introduction of culturally-appropriate materials, mailings, education, and curriculum specifically designed for African American women, to raise awareness and understanding of breast cancer care and prevention, from a cultural perspective (see Appendices A, B, C, D, E, F, G, H, I, J). In addition, a culturally appropriate setting (a local church in the targeted community) was used to present the culturally appropriate education. Collaboration with the African American Black group: Sister Will You Help Me Cancer Support group, further added culturally appropriate constructs to support the objective of the post-intervention project. Upon completion of the project, zip code, age, ethnic group, and participation in breast cancer screenings was extracted from the written evaluation survey (see Appendix P). Data was transferred to a Microsoft Excel® (2016) spreadsheet for analysis.

Data Analysis Procedures

The evaluated data demonstrated the relationship between the independent variable of culturally appropriate education and the dependent variable of breast cancer screenings to answer the clinical question: For African American Black women in the southern portion of NJ, did culturally appropriate education increase breast cancer screening rates? The independent variable of culturally appropriate education was not measured or categorized in this project. A pre-intervention/post-intervention approach used in this project determined cause and effect, and change of breast cancer screening

rates (Kleinpell, 2013; Polit & Beck, 2017). The cause and effect or change detected in this project was the increase that culturally appropriate education had on breast cancer screenings of Africa American Black women who received the intervention. The dependent variable of breast cancer screening rates of African American Black women reflected information about the project participants' response to culturally appropriate education (Simpson, 2015). This data were collected from the project's sign in sheet and the written evaluation survey (see Appendix P). The data use agreement allowed the project investigator to extract demographics of age, ethnicity, zip code, and participation in and breast cancer screenings from pre-intervention data in the EPIC® EHR (see Appendix R). The pre-intervention sample and the post-intervention project sample were independent and unpaired. The dependent variable of breast cancer screening rates of the pre-intervention sample and the post-intervention QI project sample were categorized and analyzed using chi-square test in SPSS, version 25.0. The demographics of age, ethnic group and zip code was analyzed using chi-square tests in SPSS, version 25.0 to determine similarities and characteristics of the sample population by creating charts of frequencies. Chi-square is a nonparametric test and was used because variables were categorical in nature, as this test allows for comparison of categorical independent and dependent variables (Sylvia & Terhaar, 2014). The mean is not applicable to this QI project; therefore, *t*-tests were not used to describe data (Sylvia & Terhaar, 2014). The level established level of significance was 0.05. The chi-square test was used in SPSS, version 25.0 to understand whether culturally approved education made a difference on breast cancer screening rates which answered the clinical question: For African American Black women in a community in the southern portion of NJ, did culturally appropriate materials increase breast cancer screening rates?

Ethical Considerations

Protection of the privacy and demographical information of the participants was a very important ethical consideration in this QI project. All data was handled in a professional manner, according to the recommendations of the IRB process. Information is secured in the EPIC® EHR database of the cancer center's outreach program, which only staff with passwords and in direct care of patients had access. No identifying demographics were a part of the QI project or documentation: all identifying information was removed from collected data. The written evaluation survey collected by the project investigator had no identifying demographics but was destroyed after transferring data onto the Excel® spreadsheet (see Appendix P). Participants of the project were volunteers, whose privacy and freedom of choice was respected by adhering to the standards and privacy practices of *The Belmont Report*, IRB and cancer center. Ethical principles of the Belmont Report respect for persons and beneficence - were demonstrated through application of an informed consent (see Appendix S). The project investigator respected the participants right to refuse participation in any part of the project and their right to leave at any time before, during or after the intervention without repercussion. In addition, there were no risks or potentials harms at any time to projects participants.

Limitations

The short time frame allotted for the project proved to be a limitation that affected the timely recruitment mailings and solicitation of participants. Another limitation was that there was no budget for the project, and the project investigator met the cost of reproduction of the culturally appropriate education. This project was limited to the response of the church and consent to use church for outreach cultural

event. The time constraints of this project and the availability of the mobile mammogram van limited the timeframe, therefore the mammogram van had to be scheduled in anticipation of the IRB approval. The van and the education were rescheduled once IRB approval was obtained (see Appendix K). Use of the mammogram van was contingent upon having at least 30 participants sign-up after the educational session or the van would be canceled.

Summary

This chapter focused on using culturally appropriate education designed by Susan G. Komen Foundation to increase low breast cancer screening rates of African American Black women in the southern portion of NJ (see Appendices A, B, C, D, E, F, G, H, I, J). The statement of the problem was reviewed, and the clinical question was addressed using quantitative quasi-experimental methodology. Quantitative, quasi-experimental methodology was explained in relationship to the independent and dependent variables. This chapter reviewed the project approach of the pre-intervention/post-intervention method used to determine cause and effect and change in the dependent variable (Kleinpell, 2013; Polit & Beck, 2017). The population was explained, and the sample selection was described. A power analysis was given based on the population and sample size.

Sources and tools for the EPIC® EHR data collection were reviewed, and validity and reliability were discussed. The dependent variable (intervention) culturally appropriate education by the Susan G. Komen was discussed, and the validity of the education was explained (see Appendices A, B, C, D, E, F, G, H, I, J). Reliability of the data collection tool and the culturally appropriate education were also reviewed. Data collection procedures were discussed as well as recruitment of project participants. A step

by step explanation of data collection procedures and how the QI project ensued, was given. Explanation of data analysis procedures was given to expound upon the chi-square test used to categorize demographic data and understand how culturally approved education made a difference on breast cancer screening rates. Finally, this chapter gave ethical considerations and limitations that affected the conduction of this QI project. The next chapter will provide information on the results of the data analysis as well as a brief description for context.

Chapter 4: Data Analysis and Results

This QI quality improvement project focused on increasing breast cancer screening rates in a local cancer center outreach program through the application of culturally-appropriate materials/education to increase breast cancer awareness for the target population (see Appendices A, B, C, D, E, F, G, H, I, J). The target population was African American Black women living in the southern portion of NJ. This chapter expounded upon the phenomena of interest, re-introduced the purpose of this QI project, briefly covered the problem statement and clinical question, described the methodology, and examined the data analysis procedures, and results.

Copeland et al. (2018) concluded that increased breast cancer screenings will aid in preventing health disparities and breast cancer related mortality in African American Black women (Copeland et al., 2018). Research prior to implementing this project showed that African America Black women in the southern portion of NJ demonstrated especially low participation in breast cancer screenings when compared to other areas (Robles-Rodriguez, 2018). According to Robles-Rodriguez (2018), breast cancer death rates in the southern portion of NJ from 2009 to 2013 were above the Health People 2020 guidelines as compared to the surrounding NJ counties, as illustrated in Table 1.

Table 1

*Disparities in Breast Cancer Outcomes (*per 100,000) in the Southern Portion of NJ*

	Mammogram in Past 2 years	Breast Cancer Incidence Rate*	Breast Cancer Death Rate*
Camden Co.	73.5%	192.6	27.6
Gloucester Co.	76.9%	179.5	26.7
Burlington Co.	84.4%	174.0	25.4
New Jersey	79.4%	172.8	23.5
United States	77.0%	123.3	21.6

One serious issue related to low participation in breast cancer screening is the increased likelihood of breast cancer related mortality. Thus, African American Black women who are reluctant to participate in breast cancer screenings often experience as a group, high mortality rates when compared to other ethnicities (Davis et al., 2017). It was essential to saving lives in this population to find interventions to increase breast cancer screening rates (Patel et al., 2014).

A research study by Cullerton et al. (2016) indicated that creating a culturally based educational intervention improved knowledge and attitudes about the importance of breast cancer screenings. Within increased scientifically based knowledge amongst women in this specific cultural group, women often felt more empowered regarding their respective health behaviors, which led to an increase in the rates of breast cancer screenings (Cullerton et al., 2016). Similarly, the Susan G. Komen Foundation (2015b) reported that it was important for nurses to consider how cultural beliefs impacted understanding of health and wellness when educating African American Black women about breast cancer in order to better serve this at-risk population.

The methodology and design allowed the variables to be measured and evaluated to answer the clinical question derived from the problem statement. The quantitative methodological framework was used in this QI project. In addition, using a quasi-experimental design, aligned well with the problem statement. The problem statement was: While literature indicated that African American Black women had lower participation in breast cancer screenings, it was not known, if culturally appropriate materials/education would increase breast cancer screening rates for African American Black women living in a community in the southern portion of NJ.

Q1: For African American Black women in the southern portion of NJ, did the

addition of culturally appropriate education increase breast cancer screening rates?

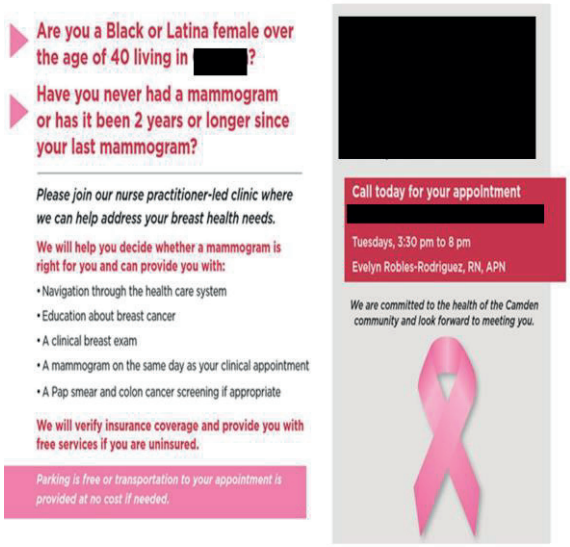
A project conducted by the director of the cancer center's outreach program in March 2018 provided the pre-intervention data for breast cancer screenings rates of African American women in a community of the southern portion of NJ. The dependent variable (breast cancer screening rates) was obtained from the pre-intervention project and expressed in numeric values, which provided a baseline to better reveal the influence of the culturally appropriate materials used for breast cancer education (independent variable) (Sylvia & Terhaar, 2014). This chapter provides a review and discusses the processes and procedures used to summarize and examine the descriptive data and answer the clinical question. A step by step process of the project reviews the challenges and summarizes the chapter.

Descriptive Data

This QI 2019 project utilized pre-interventional and post-interventional data. The pre-intervention sample information was collected from a March 2018 project as displayed in Table 3. African American Black women in the cancer center's outreach program's database were 1,246 from the targeted community of the southern portion of NJ, as shown in Table 3. The cancer center's outreach program coordinator invited African American Black women to participate in an evening breast cancer screening clinic. The 1,246 invitations were generic, not projecting cultural influences (Figure 1) (see Appendix T). The women who responded were a sample of 2 African American Black women from the targeted community in the southern portion of NJ, as shown in Table 3.

Figure 1

Pre-Intervention Mailing/Invitation



This post-intervention, QI 2019 project only measured the population of African American Black women from a community located in the southern portion of NJ to evaluate post-interventional breast cancer screening rates. The 2019 QI project investigator obtained names and addresses of African American Black women then living in the southern portion of NJ from the cancer center's outreach program's database. Subsequently, culturally appropriate invitations were mailed to 1,800 African American Black women residing in the same community of the pre-intervention project, located in the southern portion of NJ, inviting them to a breast cancer educational session in a local African American Black church (see Appendix J). Breast cancer screenings were to follow the educational session, at the same church, the following week. Funding was available through the NJ CEED program for those without insurance, so that there was no cost to participants (see Appendix P). In addition, participants were provided free transportation. Childcare and food also were offered. Post-interventional demographics were obtained from the written evaluation survey (see Appendix P).

Data Analysis Procedures

The QI project investigator collected the pre-intervention data from the March 2018 project in the cancer center outreach program's EMR database and the post-intervention data from the 2019 QI project participant results. Pre-intervention data included the total sample of African American Black women from a community in the southern portion of NJ who responded to the generic mailings by attending the evening clinic at the cancer center and receiving breast cancer screenings (Table 3) (see Appendix T). The post-interventional results consisted of the sample of African American Black women who responded to the culturally-appropriate mailings from the same community in the southern portion of NJ, who also attended the culturally-appropriate breast cancer education at a local church in the southern portion of NJ (see Appendix I). Collected data were sorted and cleaned. Once data were cleaned and organized, results were recorded in a Microsoft Excel® (2016) spreadsheet and transferred to create tables for comparison of results between pre-intervention data and post-intervention data of the same group (Table 4). A chi-square test was run from the data using SPSS (Version 25.0). All information in table format allowed comparison of pre-intervention and post-intervention data to address the clinical question.

Results

The results of data analysis demonstrated the relationship between the independent variable, culturally appropriate education, and the dependent variable, which was participation in breast cancer screenings. Both pre and post-intervention results rendered very low to no breast cancer screenings in the African American Black women from a community located in the southern portion of NJ. The breast cancer screening results of the pre-intervention project in March 2018 showed that out of the population of

1,246 African American Black women living in a community in the southern portion of NJ and listed in the cancer center's outreach program's database, a sample of two participants or 0.16% responded and 100% received breast cancer screenings (Table 4).

The post-intervention data showed that out of the population of 1,800 African American Black women now living in the same community in the southern portion of NJ, 4 participants or 0.22% responded and 0% obtained breast cancer screenings, although breast screenings and mammograms were available in the Mammogram Van, the following Sunday at the church. According to the results of the written evaluation survey, all 4 participants plan to have a mammogram in the future (see Appendix P). In addition, the post-intervention African American Black women reported having breast cancer screenings/ mammograms within the year and came for the culturally appropriate education. This lack of need for breast cancer screenings resulted in cancellation of all mammograms and breast cancer screenings for the post-intervention group. Findings were used to answer the clinical question: for African American Black women in the southern portion of NJ, did culturally appropriate materials/education increase breast cancer screening rates? The results were not statistically significant (p-value was 0.067), and the sample size was too small (0.00%) to demonstrate an effective relation between the independent variable and the dependent variable. Therefore, the results of the project demonstrated that there was no increase in breast cancer screening rates for African American Black women in a community located in the southern portion of NJ who were exposed to the intervention of culturally appropriate materials/education (see Table 4).

Table 2

African American Black Women from Southern Portion of NJ

African American Black Women	Generic Mailings (Pre-intervention)	Culturally-appropriate Mailings (Post-intervention)
Population	1,246	1,800
Sample	2	4
Attendance	2	4
Breast Cancer Screenings	2	0

Table 3

Pre-Intervention Data

	Mailings/ Invitations (without Intervention) to AA Black women (Population)	Pre Intervention Breast Cancer Screenings of AA Black women (Sample)
Southern portion of NJ	1,246	2

Table 4

Pre-Intervention and Post-Intervention Cancer Screening Rates

		Pre-Intervention		Post-Intervention			
Variable	*N*	*n*	Percent	N	n	Percent	*p*-Value
Mailings	1,246	2	0.16%	1800	4	0.22%	0.706
Mammograms	2	2	100.00%	4	0	0.00%	0.067

Summary

The purpose of this QI project was to determine if culturally appropriate materials/education increased breast cancer screening rates for African American Black women living in a community in the southern portion of NJ. The pre-intervention data showed that out of 1,246 African American women (listed in the cancer center's database) in a community in the southern portion of NJ who were sent a generic mailing (See Figure 1), resulted in two African American Black women responding by attending the evening clinic and receiving breast cancer screenings /mammograms. The post-intervention data collected for this 2019 QI project showed that out of 1,800 African American women (listed in the cancer center's database) living in the same community (as the pre-intervention project) in the southern portion of NJ who were sent a culturally-appropriate mailing resulted in four women responding to the culturally-appropriate mailings/education and 0% received breast cancer screenings. The four participants reported that they had received mammograms and breast cancers screenings in 2019 and therefore had no need for breast cancer screenings. As a result, the mammogram bus was cancelled. The QI project data and results answered the clinical question: For African American Black women in the southern portion of NJ, did culturally appropriate education increase breast cancer screening rates? The results of the data analysis cannot confirm that culturally appropriate materials/education increased breast cancer screening rates in the project population, as results are not statistically significant. The results and possible causes are discussed in the following chapter. Additionally, the implication for project results in both theory and practice are also discussed in the subsequent chapter.

Chapter 5: Summary, Conclusions, and Recommendations

African American Black women continue to have the lowest rates among ethnic groups for obtaining breast cancer screenings (Robles-Rodriguez, 2018). This lack of attention to breast care contributes to-the highest mortality rates amongst American women diagnosed with breast cancer when compared to all other ethnicities (Mayfield-Johnson et al., 2016). As, breast cancer screenings, inclusive of mammograms, remains the most effective method towards early detection of breast cancer before it is in the difficult stages to treat, better understanding how to increase participation of African American Black women is vital to reduce negative health outcomes and mortality within this population (American Cancer Society, 2016; Clayton & Tariman, 2018).

African American Black women have the lowest rates for obtaining breast cancer screenings when compared to other ethnicities, especially before advancement of the breast cancer into more advanced stages (CDC, 2016; Davis et al., 2017). Low rates of participation in breast cancer screenings can be attributed to multiple factors adopted by the African American community, especially culturally normative beliefs regarding the healthcare system within the United States (Mayfield-Johnson et al., 2016). To mitigate issues regarding the historical cultural beliefs of the African American community, this QI project focused on addressing the lack of the application of culturally appropriate education (Mayfield-Johnson et al., 2016). This project intended to address this issue to add to the body of knowledge by evaluating the influence of culturally appropriate materials/education in the cancer's outreach program with the goal of increasing breast cancer screenings/mammograms of African American Black women in a community in the southern portion of NJ.

Summary of the Project

This project investigator used evidence-based culturally materials and educational tools designed by the Susan G. Komen Foundation (2016) to educate African American women on the importance of breast care and breast cancer screenings (see Appendices A, B, C, D, E, F, G, H, I, J). The challenges associated with this project were the lack of response to the cultural mailings and the time constraints in which to conduct the project. This project was conducted in collaboration with the director of the local cancer center's outreach program, the leader of the breast cancer support group, and the mammogram van coordinators.

A church allowed use of the educational building to present the education (see Appendix J). The education was presented by the project investigator, the leader of the breast cancer support group, and the director of the cancer center's outreach program using the PowerPoint presentation format from Susan G. Komen Foundation (see Appendix F). The church also designated rooms for proposed childcare, breast cancer screenings, and a parking lot for the Mammogram Van, scheduled the following week.

The cancer center generated 2,000 labels from its EHR database for the mailings. The labels contained names and addresses for African American Black women in the southern portion of NJ. Mailings went out as soon as the IRB consents were obtained which was three weeks before the educational session at the church (see Appendix K for IRB Outcome Letters). A mammogram van was secured to conduct mammograms seven days following the educational session. The cancer center's outreach program's APN (Advanced Practice Nurse) was schedule to perform manual breast cancers. The stipulation for use of the van was that 30 women had to be committed and pre-registered for breast cancer screening and mammograms or the van was to be canceled. Advanced

practice nurses from the cancer center's outreach program would conduct manual breast exams on the participants and supervise the paperwork for vouchers (NJ CEED program) (see Appendix P). The project investigator's husband provided transportation. The breast cancer support group and church members were on standby for possible childcare. Food was prepared by the cancer center's outreach program director.

Eighteen hundred culturally appropriate mailings reached the women in a community in the southern portion of NJ, with eight responding by attending the culturally-appropriate education session in an African American Black church in the southern portion of NJ. The project demonstrated the continuous need for healthcare professionals to find a solution to the many challenges facing this population and to close the gap in breast cancer care. Conclusions, implications, and recommendations are presented in this chapter to inspire future research.

Summary of Findings

The specific findings of this project answered the clinical question: Did culturally appropriate materials/education increase breast cancer screening rates in a community in the southern portion of NJ? With a sample sizes being only two and four individuals respectively, the results of the data analysis could not show/illustrate that the culturally appropriate materials/education in this project increased breast cancer screening rates. The presentation of cultural materials/education did make a small change in attendance but not in breast cancer screenings, in this sample, when pre-intervention and post-intervention data were compared. Thus, although sample sizes were too small to be significant, the post-intervention data showed 100% increase in attendance due to the use of culturally appropriate mailings as compared to using generic materials (see Appendix T). This QI project also arranged breast cancer screening opportunity by scheduling a

Mammogram Van the following Sunday for project participants. However, the Mammogram Van was canceled because no one registered following the educational session, all the participants reported that they had mammograms within the past year and plan on continuing annual breast cancer screening on a regular basis (see Appendix P).

Findings of this QI reflected findings of previous research on the low participation rate of African American Black women in breast cancer screenings. The low rate of breast cancer screenings by African American Black women in a community in the southern portion of NJ supports the literature findings by showing the ongoing problem in this population and the need for further research and interventions. According to literature, complex factors contributed to low rates of breast cancer screenings in the population of African American Black women (Davis et al., 2017). Several of these factors included cultural beliefs, lack of understanding, lack of awareness of breast cancer health guidelines, and lack of education of the mammogram procedure (Davis et al., 2017). In addition, literature by Mayfield-Johnson et al. (2016) reported that health care projects in African American communities should include education and promotion of community awareness. This project included education about breast cancer and promoted awareness in the African American Black community of the southern portion of NJ. The poor response to both pre-intervention and post-intervention mailings demonstrated that there is a continual need for change within this ethnic group related to personal accountability for breast care in the prevention of breast cancer mortality.

Implications

According to Wasserman et al. (2019) and Wheeler et al. (2013), there is the need to understand the influences of culture, healthcare system constraints and behavioral factors which contribute to this disparity. Based on the data analysis and results of this QI

project, it was clearly demonstrated that there is a continual need to understand these complex influences to increase breast cancer screening rates and save lives in this ethnic group. A result of this QI project, the cancer center's outreach program plans to continue the application of culturally appropriate materials to reach African American Black women in the community of the southern portion of NJ.

The application of Lewin's and Leininger's theories demonstrated that using theoretical constructs can guide nurses in bringing about change and promoting accountability in quality healthcare practice in the cancer center's outreach program. Decreasing mortality related to low breast cancer screening rates in African American Black women should be the goal of evidence-based health care. This implies that further research and attention is needed to resolve this long standing and historical challenge. Efforts to decrease mortality rates should be expanded to every cancer care research center in America. The strengths of this project were found in the collaboration between project investor, the cancer center's outreach program director, the breast cancer support group and its leader, the church personnel, and the breast cancer mobile van personnel. This type of collaboration was demonstrated in the successful projects cited in the literature. The weakness of this project was in the limitations and time and budget constraints.

Theoretical implications. Although the need persists to understand how to better encourage African American Black women to participate in breast cancer screenings, the significance of this project related to the cultural appropriate education session was supported by both Lewin's theory of change and Leininger's theory of cultural care. Lewin's theory of change and Leininger's theory of culture care provided a framework in support of the project's objective of increasing early breast cancer screenings. Lewin

(1947) proposed three stages/steps: Step one: (unfreeze) or releasing old ways of thinking and practice. For this project, the first stage of the theorem, (unfreeze) or releasing old ways of thinking and practice, was encouraged when cultural educational tools were used to dispel myths and educate African America Black women about true factors of breast cancer awareness. The goal was to change old ways of thinking about breast cancer which would result in the increase of breast cancer screenings/mammograms. This theory remains significant in helping to change to healthy styles of living in preventing breast cancer. Step two encouraged change by using optimistic identification of change, learning through trial and error to determine the correct guideline to support the standardized care. Step two occurred, in this project, with the introduction of handouts and guidelines that gave information on choosing healthy lifestyles related to breast cancer awareness. The third and final step is to freeze or solidify the new information by executing new guidelines and reinforcing continuance. The final stage was applied in the project when African American Black women are encouraged to schedule breast cancer screenings the next day at the church and sign up with the cancer center's outreach program or Susan G. Komen foundation for annual screening reminders. Another suggestion for change is to continue to disseminate culturally appropriate educational materials using social media, regular distribution within the neighborhoods, community centers, and churches.

Leininger's theory of culture was also used as part of the theoretical framework of this project because this theory promotes that awareness of the culture of others in order to assist their well-being (Leininger, 2006). According to Leininger (2006), nursing practices are actualized in the context of culture through the relationship of caring. Leininger's theory of culture care was applied, when the cancer center's outreach

program nurses incorporated culturally appropriate materials for education in their practice setting to establish healthcare relationships with the African American Black community. This advancement in the cancer center's outreach program demonstrated that nurses intrinsically care about the plight of African American Black women, who may be in danger of contracting breast cancer because of low breast cancer screening rates (Copeland, Kim, & Eack, 2018).

The nurses of the cancer center additionally reached out to this community to improve outcomes of African American Black women in the southern portion of NJ using cultural care (Leininger, 2006). Within the context of this QI nurses attempted to fulfill African American Black women's healthcare need for increased breast cancer screenings through application of culturally appropriate education. The application of these theories advanced knowledge in the care of African American Black women who needed to understand the importance of breast cancer screenings from their own cultural perspective.

Practical implications. This project was significant for a variety of reasons. First, results of this QI project contributed to the present field of knowledge needed for the cancer center's outreach program's clinical practice to focus on increasing breast cancer screenings in the African American Black community in the southern portion of NJ. Next, the addition of culturally appropriate materials/education in the cancer center's outreach program for African American Black women in the southern portion of NJ was a practice improvement that can be duplicated in other cancer center outreach programs. With replication in other cancer centers, other populations of African American Black women could be made aware of the importance of breast cancer screenings, which may improve outcomes for women with breast cancer. Finally, this project was an additional

contribution to the cancer center's outreach program's practice field which, promises improved practice quality and sustainability in educational endeavors within the community.

Future implications. Although findings of this QI project were not statistically significant, as the sample sizes were so low in both the pre-intervention and post-intervention data sets, there remains many areas for future research. One factor to be adjusted for future research in this area of increasing breast cancer rates in this population included allowing more time for participants to attend educational sessions, as the project education was conducted on a Thursday evening due to restrictions by the church calendar. Future researchers should consider providing culturally-based educational sessions on weekends, or at multiple times, which may allow for increased response from participants. Additionally, in future research, signing women up for mammograms and breast cancer screenings can be done after church services at least one to two weeks before the mammogram van is scheduled.

Recommendations

A recommendation, as a result of this project, is that funding is solicited to provide a breast cancer nurse navigator assigned to the surrounding minority community. The objective is to raise the awareness of breast cancer health using culturally appropriate education and materials. A second recommendation is continuous culturally appropriate mailings to African American women in the community, churches and community centers with follow-up calls to establish relationships with the community to raise awareness for families and loved ones who may encourage family members to seek breast cancer screenings.

Recommendations for future projects. Future project investigator should stress

to the participants that it is a commitment. The results of the project did find that the use of cultural materials made a difference in the number of African American Black women attending the educational session. The results of this QI project inspired several recommendations for future studies. At least thirty days are needed to mail invitations to answer phone response and conduct preregistration. This project had no preregistration process which could increase attendance. Another recommendation is to conduct the educational session on a weekend day which may prove more convenient to working mothers.

Also, the addition of the use of social media apps for advertisement is highly recommended to increase attendance in the young adult age group. Posters should be distributed to the churches and inserts for church bulletins should be given out every Sunday four weeks before the event to increase attendance. Having cultural education events at health fairs may increase attendance through one-to-one interactions. A quantitative approach to measure variables would support comparison of outcomes and evaluate the effect of cultural applications for evidence-based care and quality improvement for the cancer center's outreach program. The other projects cited in the literature were successful by saturating the neighborhoods with information and door to door solicitations. Future researchers may also want to explore a mixed methods approach that would gather qualitative data, on the reasons for hesitation to participate within breast cancer screenings and perceptions on the culturally relevant educational tools. Future researchers should also consider age of African American Black women within similar studies. The age of the woman could also willingness to participate within breast cancer screenings, and the effectiveness of culturally based interventions.

Recommendations for practice. Recommendations for practice include the need

to initiate implementation of culturally based education materials to the African American Black women in the surrounding community. African American Black women should be contacted through a comprehensive approach that utilizes mailers, social media, and community events to ensure saturation of information within the community. Additionally, once or twice a year outreach conferences can be held annually at the cancer center or in the community center for personnel to speak to women in the community about breast cancer health. Churches and community centers may also be utilized to host culturally appropriate educational breast cancer awareness seminars. It is also recommended that the breast cancer support group be utilized by the cancer center's outreach program to connect to the cultural establishments as ambassadors in the community.

Conclusion

The pre-intervention QI project as well as the post-intervention QI project did not produce significant results in increasing breast cancer screening rates for African American Black women in the southern portion of NJ. Although results of the project are not statistically significant, there persists a definite need for similar projects within the future to help decrease the high rate of death from breast cancer among African American Black women in the southern portion of NJ, especially as project success could save lives within the area by reducing breast cancer related fatalities. Findings of this project revealed the need for consistent and continual culturally appropriate practice improvement in the local cancer center in reaching out to this group of vulnerable women in the surrounding community.

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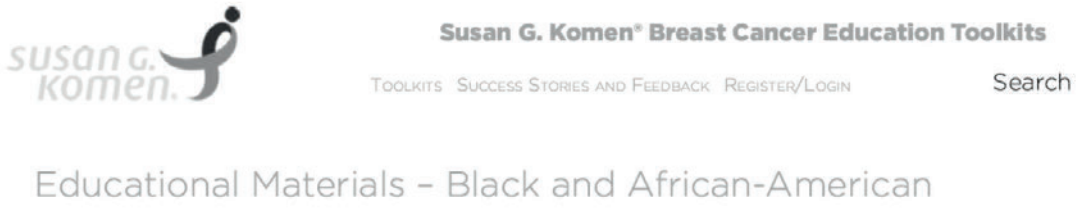
Appendix A

Project Culturally-Appropriate Education PowerPoint

Appendix B

Evidence-base Culturally-Appropriate Education



Educational Materials – Black and African-American

Black and African-American Communities

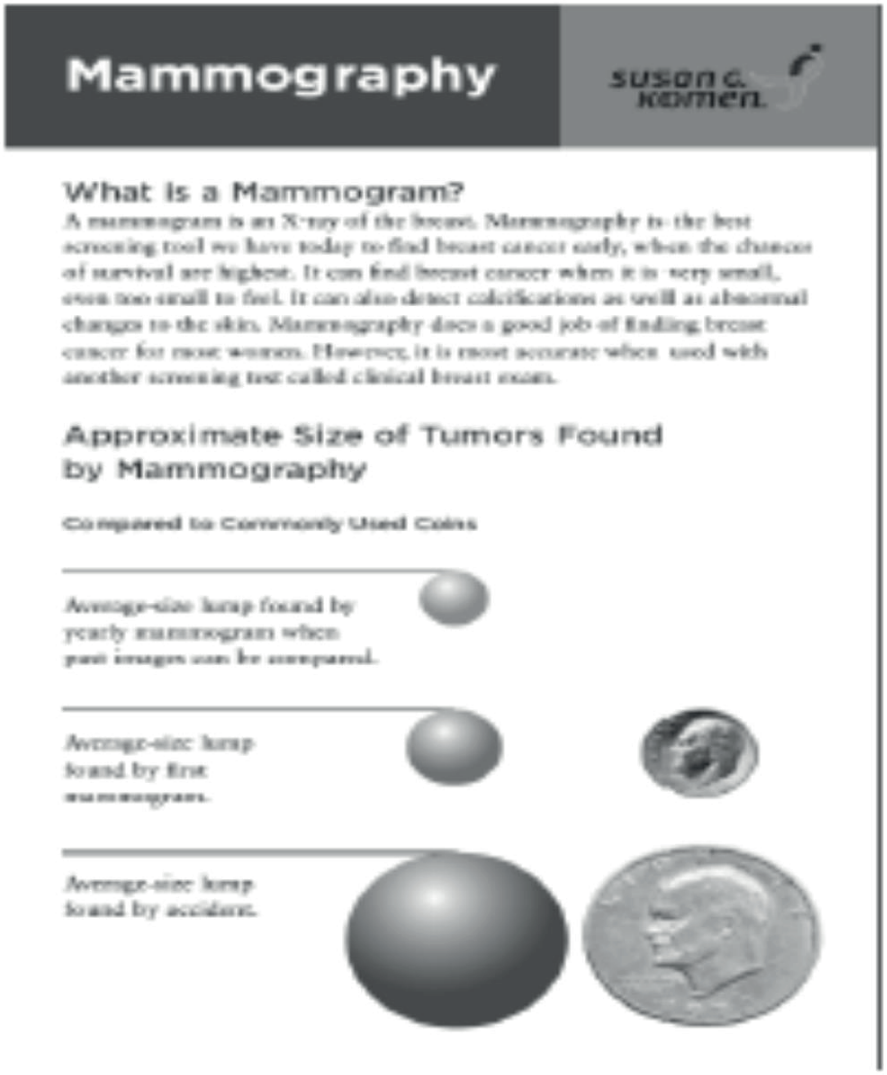
Toolkit Sections - The Breast Cancer Education Toolkit for Black and African-American Communities can be downloaded as a complete Toolkit or by individual sections. Click on the link(s) below to access the Section tools and resources.

Complete Toolkit Download - The complete Toolkit download option allows the educator to gain access to all of the sections, resources and materials in one document. Clickable links are provided within this download option to help quickly navigate to sections, resources and materials.

Education Materials - This page gives you access to the educational materials that are referenced in the Breast Cancer Education Toolkit for Black and African-American Communities.

Appendix C

Evidence-base Culturally-Appropriate Education: Mammography Card



Mammography card

Appendix D

Breast Cancer Awareness Messages for African Americans

Appendix E

Facts for Life: Racial & Ethnic Differences

Why are there racial and ethnic differences in rates of breast cancer?

Some populations have risk factors which may explain some of the differences in rates. Known risk factors include:

- Age at first period
- Age at menopause
- Age at first childbirth
- Body weight
- Number of childbirths
- Menopausal hormone therapy (postmenopausal hormone use)

There are other factors that may also play a role including:

- The biology of some breast cancers. For example, African-American women are more likely to have triple negative breast cancer — an aggressive subtype of breast cancer.
- Access to health care. Women of some races/ethnicities are more likely than others to have low income, delay in diagnosis, delay in treatment and lack of follow-up.

Studies are looking at other reasons for these differences.

Resources

Susan G. Komen®
1-877 GO KOMEN (1-877-465-6636)
www.komen.org

American Cancer Society
1-800-ACS-2345
www.cancer.org

Intercultural Cancer Council
www.iccnetwork.org

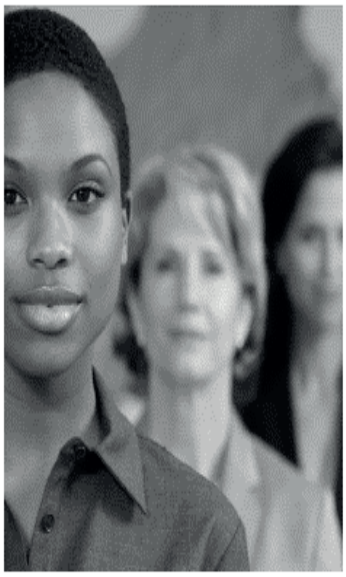
National Cancer Institute
1-800-4-CANCER
www.cancer.gov

Related fact sheets in this series:

- Breast Cancer & Risk
- Breast Cancer Screening and Follow-up Tests

FACTS FOR LIFE

Racial & Ethnic Differences

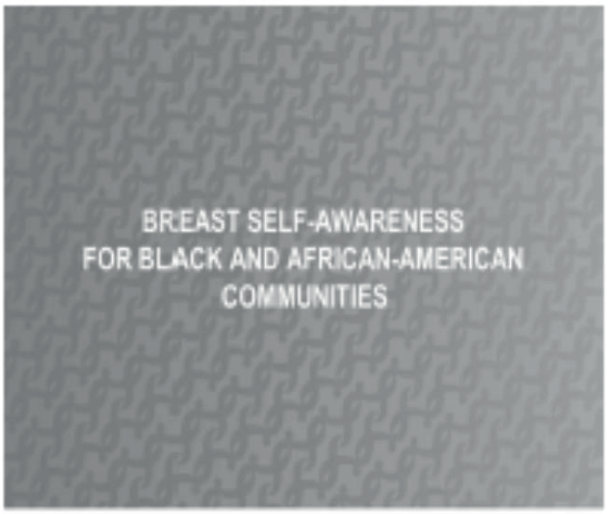


susan g. komen.

For more information,
visit komen.org or call
Susan G. Komen's breast care helpline
at 1-877 GO KOMEN (1-877-465-6636)
Monday through Friday, 9 AM to 10 PM ET.

Appendix F

Culturally-Appropriate Education PowerPoint



Breast Self-Awareness for Black and African-American Communities (short version)

Appendix G
Know Your Girls Curriculum

5 things to know about breast cancer screening

Here's one thing we know about breast cancer: The earlier you find it and get effective treatment, the more likely you are to survive. Screening tests are the only way to find breast cancer even before it causes early signs or symptoms. Here are five things everyone should know about these important tests.

1. Breast cancer screening (plus effective treatment) saves lives.

Screening tests can find breast cancer early, when the chances of survival are highest. Getting screened regularly means your doctor is likely to know sooner if there's a problem, so you can get effective treatment as early as possible. There are more than 3.5 million breast cancer survivors in the U.S. today—more than any other group of cancer survivors—largely thanks to advances in screening and treatment.

2. There are three screening methods.

There are three types of tests that may be used to screen for breast cancer.

Clinical Breast Exam (CBE)

A CBE is a physical exam of your breast and underarm area by a health care provider. It's often done during your regular medical check-up. A CBE should be performed by someone who's trained in the technique—not all health care providers have this training. If your doctor doesn't offer you a CBE at your check-up and you would like one, ask if he or she can perform one or refer you to someone who can.

Mammogram

Mammography uses X-rays to make images of the breast (called mammograms). While some tumors in the breast are aggressive and grow quickly, most grow slowly. In some cases a tumor may have been growing for as long as 10 years before it creates a lump large enough to feel. Mammography can find cancers early, before you would have noticed any signs or symptoms. That's why it's often used as a screening test. It can also be used as a follow-up test (called a diagnostic mammogram). If you've noticed a change in your breast and are getting a mammogram, tell the technologist what you noticed before your exam. If you ever notice a change in your breast—even if you've had a mammogram recently and had normal results—get checked out by a doctor asap. And if you've never had a mammogram before, here's everything you wanted to know (but were afraid to ask).

Appendix G (cont.)
Know Your Girls Curriculum

Breast MRI

A breast MRI uses magnetic fields to create images of the breast. It's more invasive than mammography because a contrast agent is given through an IV before the test. Breast MRI is not a standard breast cancer screening method but is used to screen some women at higher risk. It may also be used as a follow-up test after an abnormal finding or for staging breast cancer.

3. Screening isn't one-size-fits all.

If you have breasts, getting screened for breast cancer is a good idea–but what that looks like depends on your unique situation. How often you get screened and what screening methods your doctor recommends depend on your age and other personal risk factors.
Here are some things that could affect your screening plan:

If you have a higher risk of breast cancer

Routine breast cancer screening is important for anyone with breasts, but even more so for those at higher risk. Work with your doctor to look at your individual risk factors and discuss what screening tests are right for you. (Get a head start by using this Know Your Risk tool.) If you and your doctor find that you have a higher risk of breast cancer, you may need to be screened earlier and more often than average. You might also benefit from breast MRI screening along with regular mammograms.

If you're pregnant

If you're pregnant, your doctor may recommend a CBE as part of prenatal care. Mammograms aren't recommended to screen for breast cancer during pregnancy because the radiation may harm the fetus. If you have any concerns about your breasts while you are pregnant (such as finding a lump or noticing a change), talk to your doctor about what test is best for you. Learn more about breast cancer during pregnancy.

If you have breast implants

Mammograms are safe and effective for women with implants, but it may be harder to read the results. If you can, find a mammography center where the technologists and radiologists have experience doing mammograms for women with breast implants. Let your technologist know you have implants before your exam. They can position the machine and your breast to get the best image of your natural tissue. Four views of each breast will be taken (instead of two).

If you're breastfeeding

While you are breastfeeding, the tissue in your breasts may look denser on a mammogram, making it hard to read. If you're due for a mammogram while you're breastfeeding, talk with your doctor about whether and for how long to delay screening. You should also check in with your doctor if you notice any unexpected changes to your breasts while you're breastfeeding.

The best way to find out what screening plan is right for you is to talk to a doctor. To prepare for your appointment, take some time to gather your family health history and any other information you think could be relevant.

Appendix G (cont.)
Know Your Girls Curriculum

Here are some questions you may want to ask at your appointment, or you can print a similar list of questions from Bright Pink:

1. Would I benefit from getting a mammogram or clinical breast exam? Why do you recommend that test for me? How accurate is it?
2. When and how often do you suggest I start getting mammograms and/or clinical breast exams?
3. Where can I get a mammogram?
4. When and how can I expect my results?
5. What happens if a problem is found?
6. What if I cannot afford a mammogram?
7. Am I at higher risk of breast cancer? If so, do I need special screening tests or more frequent screening?

4. Your insurance should cover breast cancer screening.

Thanks to the Affordable Care Act, all health insurance plans should cover yearly mammograms with no out-of-pocket costs (like co-pays) for women 40 and older. If your doctor says you're at a higher risk of breast cancer because of family history, an inherited gene mutation or other risk factors, your screening should be covered even if you're under 40. CBEs and screening breast MRIs should also be covered if your doctor recommends them. Medicare and Medicaid also cover breast cancer screening. Check with your insurance provider to find out where you should go for screenings and make sure they'll cover whatever services you need.

5. There are ways to find low-cost or free screening if you don't have insurance.

If you don't have health insurance, don't assume that means you can't get screened. There may be more ways to get good, affordable health care than you think. Each October, during Breast Cancer Awareness Month, many mammography centers offer mammograms at reduced rates. (To find a certified center in your area, search the FDA's database.) Year round, there are organizations working to help women get screened whatever their financial and insurance status.

Getting screened for breast cancer is a crucial part of breast health–but it's not enough on its own. Here's everything you should know to take charge of your breast health.

Appendix G (cont.)
Know Your Girls Curriculum

Know Your Risk Factors

Everyone is at risk of breast cancer–but some of us are at a higher risk than others. Our risk depends on our unique combination of risk factors. A risk factor is anything that affects risk, for better or worse. Understanding our risk factors means we can get on a screening schedule with our doctors and take other actions to stay on top of our breast health.

AGE

The older you are, the higher your risk of breast cancer. Age is one big factor in what screening tests you get, and how often. That said, it's never too early to get on top of your breast health and learn about all your risk factors. Even women in their 20s can get breast cancer and black women are more likely to get it at a younger age.

GENES

Certain changes in our genes that can pass from parent to child, a.k.a. inherited gene mutations, can increase our cancer risk. The best-known genes linked to breast cancer are BRCA1 and BRCA2. About 1 in 400 people in the U.S. have a mutation in one or both. If you know you have a mutation, you can take action to reduce your risk and take extra care of your breast health.

EXERCISE

Exercising regularly lowers your risk of breast and other types of cancer. What you do doesn't need to be intense or time-consuming. Even physical activity like taking the stairs instead of the elevator, biking short distances instead of driving or parking farther away when you drive to the store can make a difference.

ALCOHOL

The more you drink, the higher your risk of breast cancer. Even 2-3 alcoholic drinks per day can increase your risk 20 percent. Drinking in moderation may have health benefits in terms of heart disease and high blood pressure. A good guideline is not to have more than 1 drink per day (or 2 for males) to protect your breast health.

HEALTH HISTORY

Health issues you or your relatives have had in the past may mean you have a higher risk of breast cancer. If you've ever had cancer, or if you've had breast conditions including hyperplasia and lobular carcinoma in situ (LCIS), your doctor may recommend earlier and more frequent screening. Same if one or more members of your mother's or father's families have had breast, ovarian or prostate cancer.

BREAST DENSITY

If you're one of the roughly half of women with dense breasts, your risk of breast cancer is 4-5 times higher. This isn't about how dense your breasts feel–it's about how they look on a mammogram. Your doctor can help you figure out your breast density and what screening methods and schedule are best for you.

FIRST PERIOD

The younger you were when you had your first period, the higher your risk of breast cancer. If you were younger than 12 when your period started, your risk of breast cancer is about 20 percent higher compared to people whose periods started after age 14.

BREAST CHANGES

Texture. Color. Sudden discharge. Itching or pain. If you or your partner have noticed a change in your breasts, nipples or underarms, get it checked out by a doctor asap. In most cases, changes are harmless, but it's always worth finding out for sure. In cases when a change in your breast is a sign of cancer, the sooner the cancer is diagnosed and treated, the better your chance of survival.

Appendix H

Outreach and Education to Faith-Based Organizations: Tips for Planning

Tips For Planning and Providing Educational Events in Faith-Based Organizations

☐ **Identify church leaders and ask for their support.**

Set up a meeting with the church leaders and/or health ministry to introduce your program and get their support. Consider approaching influential females within the church, such as the first lady or the church secretary.

- Ask if the church hosts an ongoing breast health group, workshop or discussion — or if it has ever hosted a breast cancer education workshop. If not, ask if the church would be interested in allowing you or your organization to provide outreach and education to the congregation.
- Provide information about the importance of breast cancer education and mammography screening in the Black and African-American community. This might include information about incidence and survivorship rates among Black and African-American women, and the importance of early detection.
- Ask leaders if they can introduce you to people or groups that can assist you in recruiting participants for your program.
- If the church holds its own health fairs, ask for permission to participate by setting up a table to engage in conversations with members about breast cancer in their community. Empower them to take action and get screened.

For more information about breast cancer incidence and mortality rates, see *Breast Cancer Among Black and African-American Women*.

☐ **Plan your event.**

Based on your conversation with the faith-based organization leadership, determine how much time and resources you will need to conduct your program.

- Decide if you will conduct a one-time event or several events that will require more planning.
- Identify volunteers who can help you set up and promote your event(s) and recruit participants.
- Invite a guest speaker, such as a breast cancer survivor or representative of a breast cancer organization, to speak to your audience.
- Consider partnering with someone within the congregation or part of the clergy to assist with conducting the event. A person who is well-known by the congregation may be seen as more influential than someone outside of the church.

Appendix H (cont.) pg. 2
Outreach and Education to Faith-Based Organizations: Tips for Planning

☐ **Promote your event.**

Use printed material such as flyers and handouts and/or posts on websites or public media to promote your event(s) and provide participants with facts about breast cancer.

- Download and print materials from *KomenToolkits.org*.
- Use flyers, printed bulletins and bulletin boards to announce your upcoming event.
- Use social media to promote the event. Ask the church leaders the best way to reach their congregation. For instance, if they have a large following to their Facebook or Twitter page, ask if they will announce your event. See *Tips for Using Text Messaging and Social Media for Outreach and Education* for more ideas.
- Ask faith leaders if you can include information about your event in their newsletter, or if they can announce it during services.
- Ask faith leaders if they would be willing to share information with the congregation during their service, time of worship, mass or assembly.
- Participate in the organization's regular services and distribute event flyers after services.

☐ **Other ideas**

- Contact your local Susan G. Komen® *Affiliate* to see if they have a faith-based program with which you can partner or a Toolkit from which you can gather ideas. The names of these programs vary, but include *Worship in Pink*, *Pink Sunday* and *Pink in the Pew*.
- Invite a health care professional to your event to speak about the importance of screening.
- Invite a speaker to Bible study to share their story and lead a prayer for those affected by breast cancer.
- Request that church leaders ask the congregation to wear pink or pass out pink ribbons or flowers to honor survivors and those who have passed.
- Ask the church leaders to have a moment of prayer for those affected by breast cancer during their services.
- Ask church leaders to praise the improvements that have been made to screening and treatment for breast cancer over the years. Provide a script, if needed.
- Develop a recipe book with healthy recipes submitted by the congregation. Cook with these recipes at an event focused on breast health.
- Set up an education booth to hand out materials and answer questions after weekly services.
- Serve pink lemonade and pink cake before or after services to start a conversation about breast health.
- Ask church leaders if you can create a "pink-space" on a bulletin board to post facts and information on breast health.
- Ask if you can create a Wall of Hope with names, pictures and stories of congregation members who have been affected by breast cancer.
- Host a women's only prayer group or educational event for women who may not feel comfortable accessing breast health information in front of the congregation.
- Ask if you can form or help set up a team to participate in a local Susan G. Komen Race for the Cure®. The Komen Race for the Cure is a series of fundraising and education events, which include 5K runs and fitness walks. To locate a Race for the Cure event near you, visit: *apps.komen.org/raceforthecure*.

For more information about conducting your event, see *Leading a Breast Health Session*.

Appendix I

Culturally-Appropriate Education Mailings/ Invitations

Are you interested in learning more about breast health and breast cancer?

WE INVITE YOU

to join us to talk about breast cancer in our community.

Let's talk about facts and myths about breast cancer in Black women! Sister Will You Help Me Breast Cancer Support will be on hand to answer any questions.

PRESENTATION PROVIDED BY:

DATE: September 19, 2019

LOCATION:

TIME: 5 pm to 6:30 pm

FOR QUESTIONS ABOUT THE EVENT, CALL:

TO REGISTER:

Register on site. Call the number above for child care and transportation needs. REFRESHMENTS and GIVEAWAYS!

SUSAN G. KOMEN.

Appendix J

Breast Cancer Culturally Appropriate Education Programme'

As principle investigator for this DNP project I would like to thank my mentor and content editor – Dr. Evelyn Robles-Rodriquez for all her help and expertise. She is such an inspiration.

I would also like to thank Diane Hymen, the Sister Will You Help Me Breast Cancer Support Group, Pastor and First Lady Freeman and the ladies [redacted] Church for their help and use of the church facilities to help bring breast cancer awareness to their community.

Finally, I thank my family (especially my husband) – Rev. Errol M Warner, Marvella Griggs (my sister), Clara Russell (My Mom) and Hilda Griggs (my Auntie) for the help, love and support in doing mailings and in completing my education.

I give Praise to God my Father and Jesus my Savior for all the special people who have helped along the way.

This project is supported by:

[redacted]

Susan G. Komen Race for the Cure

Grand Canyon University

BREAST CANCER EDUCATION FOR BLACK AND AFRICAN-AMERICAN COMMUNITIES

"Increasing Breast Cancer Screenings of African American Black Women"

A Quality Improvement Project Presented By

Marlene A Griggs-Warner RN, MSN, DNP Candidate (Grand Canyon University)

in Collaboration with

Dr. Evelyn Robles-Rodriquez RN, MSN, DNP, Director,

[redacted]

&

Dianne Hyman RN, MSN, Founder

Sister Will You Help Me Breast Cancer Support Group

DATE: September 19, 2019

[redacted]

TIME: 5pm to 6:30 pm

Appendix J (cont.)
Breast Cancer Post Intervention Culturally Appropriate Education

PROJECT PROGRAMME'

Opening Prayer: Minister

Introduction: Dianne Hyman

- Breast Cancer in Our Community: Marlene A Griggs-Warner
  - Breast Cancer Awareness, Mammography Myths & Facts
  - Know Your Risks
- African American Black Women and Breast Cancer: Dianne Hyman
  - Know What is Normal for You
- Make Healthy Lifestyle Choices: Evelyn Robles-Rodriguez
  - Resources and Funding
  - Follow-up
- Closing Remarks and Questions to Sister Will You Help Me Panel, Evaluation
- Sign-Up for Mammogram Van (Sunday, after church: Sept. 29th, 1pm - 5 pm).
- Benediction: Minister

Refreshments served

Appendix K
GCU's IRB Outcome Letter

GRAND CANYON UNIVERSITY

3300 West Camelback Road | Phoenix, Arizona 85017 | 602.639.7500 | Toll Free 800.800.9776 | www.gcu.edu

DATE: August 23, 2019

TO: Marlene Griggs-Warner

FROM: COLLEGE OF NURSING AND HEALTH CARE PROFESSIONALS

STUDY TITLE: Increasing Breast Cancer Screenings of African-American Black Women

ACTION: DETERMINATION OF QUALITY IMPROVEMENT/PROGRAM EVALUATION STATUS

DATE: August 23, 2019

REVIEW CATEGORY: QUALITY IMPROVEMENT/PROGRAM EVALUATION

In collaboration with the Institutional Review Board, The College of Nursing and Health Care Professions at Grand Canyon University has determined that this submission does not meet the definition of human subject research. The submission qualifies as Quality Improvement and/or Program Evaluation; therefore, further IRB review is not required. In future publications and/or presentations, please refer to this submission as Quality Improvement and/or Program Evaluation, not research. If the results of the project will not be published, presented, or disseminated outside of the institution, ensure that all those associated with the project are aware that the project is ongoing.

We will put a copy of this correspondence in your student file in our office. If you have any questions, please contact The DNP Program Lead Faculty, Dr. Amanda Ziemendorf in the College of Nursing and Health Care Professions, Amanda.ziemendorf@gcu.edu.

Please include your study title and reference number in all correspondence with this office, IRB@gcu.edu.

Appendix K (cont.)
IRB Determination Letter

Date: June 18, 2019
To: Marlene Griggs-Warner, MSN, RN
Project Title: Culturally Appropriate Education to Increase Breast Screenings in African-American Black Women
From: [redacted]
Re: "Not Research" Determination

The materials you submitted have been examined and it has been determined that this is a Quality Improvement Program Evaluation project. As this study does not meet the regulatory definition of research [a systematic investigation, including research development, testing and evaluation, designed to develop or contribute to generalizable knowledge], it does **not** require review by the IRB.

Please note: If you submit your results as a QI project you may use this letter as documentation that an independent party determined that you did not need IRB review or approval.

As a reminder, **QI projects may not be published or presented as research.** If you would like to conduct a research study related to the QI work you have done, you must formulate your research project and submit to the IRB for review and approval BEFORE you start collecting any data for research purposes.

Feel free to let me know if you have any further questions.

Thank You,

[redacted]
Director, Human Research Protections Program

Appendix L
Pre-Intervention Mailing/Invitation

Are you a Black or Latina female over the age of 40 living in [redacted]?

Have you never had a mammogram or has it been 2 years or longer since your last mammogram?

Please join our nurse practitioner-led clinic where we can help address your breast health needs.

We will help you decide whether a mammogram is right for you and can provide you with:

- Navigation through the health care system
- Education about breast cancer
- A clinical breast exam
- A mammogram on the same day as your clinical appointment
- A Pap smear and colon cancer screening if appropriate

We will verify insurance coverage and provide you with free services if you are uninsured.

Parking is free or transportation to your appointment is provided at no cost if needed.

[redacted]

Call today for your appointment

[redacted]

Tuesdays, 3:30 pm to 8 pm

Evelyn Robles-Rodriguez, RN, APN

We are committed to the health of the Camden community and look forward to meeting you.

Appendix M
Educator Tips: p.1

EDUCATOR TIPS

Leading a Breast Health Session

1. Introduce yourself and welcome participants.

- Introduce yourself. You can say: "Welcome everyone! My name is _____ and I am very glad to have you all here. Thank you for coming. I hope that we will have a great conversation about breast health."
- Invite participants to introduce themselves. Allow 5-10 minutes for them to share their reasons for taking the breast health session.
- Warm-up the participants with icebreaker activities. Talking about breast cancer may be frightening for some women. Icebreakers can make the space more intimate and less intimidating. Suggestions for warm-up activities can be found in *Activities* and *Culturally-Responsive Communication with the Black Immigrant Community*.
- Share the goals of the breast health session. For example, you might say: "The goals of our session are:
  - To discuss the four breast self-awareness messages,
  - To discuss the importance of routine mammograms and clinical breast exams, and
  - To motivate you to get screened."
- You might also say: "I am here to share with you what I have learned and direct you to local resources. If I am unsure of something, I will attempt to find the answer or direct you to resources for the answer."
- Consider creating ground rules to foster respect within the group. You may even allow audience members to include their own ground rules. Example ground rules include:
  - Share the airspace — do not interrupt or speak over others.
  - Show respect for others' questions and responses.
  - Maintain confidentiality — what is shared within the group should stay within the group.

Appendix M (cont.)
Educator Tips: p. 2

2. Explain forms and materials.

- Explain that your organization uses evaluation to determine how well you did presenting the information. Also, your organization uses data to help determine the best ways to help women get screened regularly.
  - The evaluation tools are for you, the educator, to know how well your message was received by the audience. The evaluations can also be tailored to gather any information you feel you need to decide whether your presentations are going well.
- If you are using a pre- and post-survey, explain that everyone should complete and turn in the pre-survey before you get started. Inform the audience that you will hand out the post-survey after the presentation. If you are just using a post-survey, explain that you will distribute a quiz or post-survey after the presentation. The post-survey will help you and your organization to understand whether the information you presented was clear and understandable.
- If you have provided print materials, explain what they are at the start of the presentation and why you have distributed them. You can also refer to the materials throughout the presentation.

3. Deliver content.

- Provide your presentation/lesson, information and/or facilitated discussion to the audience.
- You can answer questions your audience has while you are delivering content, or after.

4. Evaluate the session.

- Tell the audience when it is time to complete the post-survey.
- You might consider reading each question out loud and giving the audience time to respond. This will help those with limited reading ability to complete the evaluation without embarrassment.

If a listener says they do not have enough money to pay for a mammogram, there are resources for women without insurance to get mammograms. If someone needs help paying for a mammogram and/or clinical breast exam, transportation to/from, or childcare during a breast health appointment, instruct them to first contact their local *Affiliate* for information and/or call the Susan G. Komen® Breast Care Helpline at 1-877-GO KOMEN (1-877-465-6636).

Appendix N

Susan G. Komen Foundation Letter of Consent

Global Headquarters
5005 LBJ Freeway, Suite 250 Dallas, Texas 75244
1-877 GO KOMEN
www.komen.org

Marlene,

Thanks for contacting Susan G. Komen® and for your interest in using our educational materials. You have permission to use all of our educational materials located on komen.org.

In developing these materials, we use a disciplined and well-established process for the development of new materials – taking into consideration the need, purpose, message, audience, method of distribution and resources needed. Needs assessment as well as focus testing and literature reviews are often part of our process. We also utilize Komen's research/clinical experts as well as the information on komen.org in the About Breast Cancer section to inform the content in these resources.

Susan G. Komen's About Breast Cancer section on komen.org has the latest information about breast cancer risk factors, screening, diagnosis, treatment, metastatic breast cancer, survivorship and more. The content within the About Breast Cancer section is co-developed with Harvard Medical School faculty and the Dana-Farber/Brigham and Women's Cancer Center staff. The content reflects the current body of scientific knowledge. We look at the consistency within research from large studies (done with people) reporting in reputable, peer-reviewed journals.

I also wanted to tell you about the Know Your Girls campaign which was designed to help black women take charge of their breast health by knowing their risk, knowing their bodies, getting screened and talking with their doctors. Here is the website and a link to additional educational materials: https://knowyourgirls.org/resources/#breast-health-basics

I hope this is helpful!

Jennifer McClendon
Education & Support Manager
Susan G. Komen®

Appendix O

APPLICATION OF LEWIN'S THEORY OF CHANGE

LEWIN'S BASIC CHANGE THEORY FOR CHANGE IN THE APPLICATION OF CULTURALLY APPROPROPIATE **NURSING PRACTICE**		BREAST CANCER AWARENESS FOR AFRICAN AMERICAN BLACK WOMEN
CONCEPTS OF THEORY	**ACTIVITY**	**ACTIVITY**
Unfreezing	Evaluation of present nursing care delivery model and the need to change. Share findings with nursing staff and stakeholders. Compare findings to organizational needs & improvement of quality of patient care.	cultural educational tools are used to dispel myths and educate African America Black women about true factors of breast cancer awareness. The goal is to change old ways of thinking about breast cancer and the poor rates of screenings.
Change	Education of the educational tools and collaboration process	introduction of handouts and guidelines which give information on choosing healthy lifestyles related to breast cancer awareness.
Refreezing	Inservices, Annual education, evaluation/assessments of learning/behavioral changes, evaluation of patient outcomes, updating system factors to prevent human error.	African American Black women are encouraged to schedule breast cancer screening the next day at the church and sign up with the cancer center or Susan G Komen foundation for annual screening reminders, exercise accountability for personal BREAST cancer health.

Appendix P

Written Evaluation Survey

Re: Cultural Education: Does this increase mammograms for Black women?
IRB #: PI

Below please find your survey results:

Written Evaluation Survey (filled out by 4 participants)			
1) Did you learn anything about breast health today that you did not know before? Please select only one answer.			
	N	**n**	**Percent**
□ Yes	4	2	50.0%
□ No	4	1	25.0%
□ Not Sure	4	1	25.0%
2) Will you share the breast health information you received today with a family member or friend? Please select only one answer.			
	N	**n**	**Percent**
□ Yes	4	4	100.0%
□ No	4	0	0.0%
□ Not Sure	4	0	0.0%
3) What are the two most common things that increase your chances of getting breast cancer?			
	N	**n**	**Percent**
Genes	5	2	40.0%
Not Doing Self Exam	5	1	20.0%
Smoking	5	1	20.0%
Being Overweight	5	1	20.0%
4) Please name at least two differences in how breast cancer affects Black and African-American women as compared to white women?			
	N	**n**	**Percent**
Lack of Exam/Mammogram	8	2	25.0%
Lack of Treatment	8	1	12.5%
Lack of Health Insurance	8	2	25.0%
Low Income	8	1	12.5%
Transportation Problems	8	1	12.5%
Fear of the unknown	8	1	12.5%
5) At what age should women at average risk for breast cancer begin to get clinical breast exams? Please select only one answer.			
	N	**n**	**Percent**
□ 20 years old	4	1	25.0%
□ 30 years old	4	1	25.0%
□ 40 years old	4	2	50.0%
□ 65 years old	4	0	0.0%

Appendix P (cont.)
Written Evaluation Survey

6) At what age should women at average risk for breast cancer begin to get annual mammograms? Please select only one answer.			
	N	**n**	**Percent**
☐ 20 years old	4	0	0.0%
☐ 30 years old	4	0	0.0%
☐ 40 years old	4	4	100.0%
☐ 65 years old	4	0	0.0%

7) If you are a woman, will you talk to your doctor about what breast cancer screening tests are right for you? Please select only one answer.			
	N	**n**	**Percent**
☐ Yes	4	3	75.0%
☐ No	4	1	25.0%
☐ Not Sure	4	0	0.0%

7a) If you are a woman, do you plan to schedule a breast cancer screening tests in the future? Please select only one answer.			
	N	**n**	**Percent**
☐ Yes, a clinical breast exam	4	0	0.0%
☐ Yes, a mammogram	4	2	50.0%
☐ Yes, both a clinical breast exam and a mammogram	4	2	50.0%
☐ Yes, but not sure which type	4	0	0.0%
☐ No, I do not plan to schedule a screening	4	0	0.0%
☐ Not a woman	4	0	0.0%

8) Will you visit a health care provider if you notice any of the following changes in your breasts?			
• Lump, hard knot, or thickening inside the breast or underarm area			
• Swelling, warmth, redness or darkening of the breast			
• Change in size or shape of the breast			
• Dimpling or puckering of the skin			
• Itchy, scaly sore or rash on the nipple			
• Pulling in of your nipple or other parts of the breast			
• Nipple discharge that starts suddenly			
• New pain in one spot that doesn't go away			
Please select only one answer.	**N**	**n**	**Percent**
☐ Yes	4	4	100.0%
☐ No	4	0	0.0%
☐ Not Sure	4	0	0.0%

9) What steps do you plan to take in the future that may reduce your risk of breast cancer? Please check all that apply.				
	N	**n**	**Percent**	
☐ Maintain or add exercise into my routine	4	4	100.0%	
☐ Achieve or maintain a healthy weight	3	3	100.0%	
☐ Avoid or limit alcohol	2	2	100.0%	
☐ Breastfeed future babies	0	0	#DIV/0!	*No one responded this*
☐ Avoid or limit menopausal hormonal medications	2	2	100.0%	

10) How do you describe your race/ethnicity?			
	N	**n**	**Percent**
☐ Black or African-American	4	4	100.0%
☐ Caribbean	4	0	0.0%
☐ African	4	0	0.0%
☐ Black Hispanic	4	0	0.0%
☐ Other:	2	0	0.0%

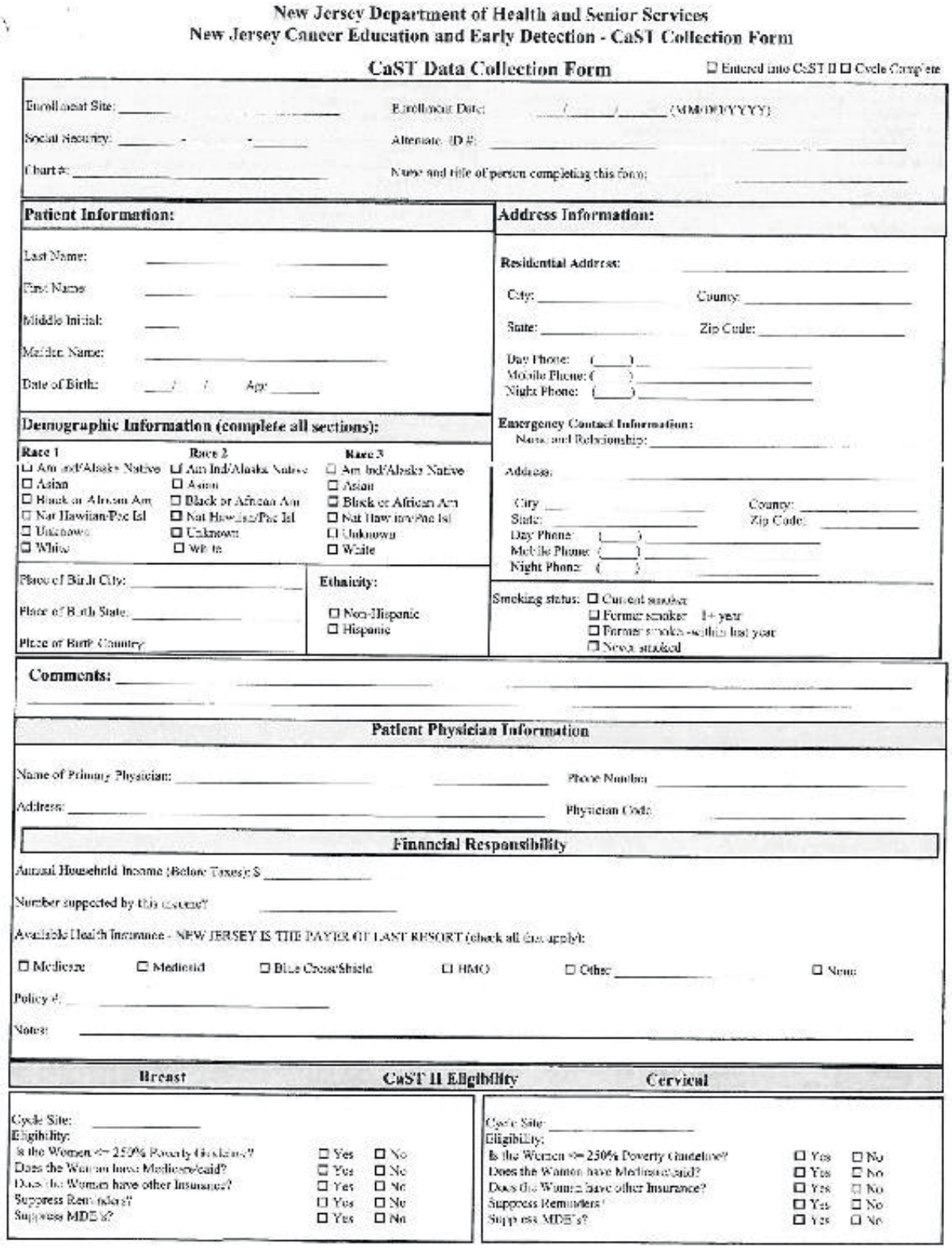
11) What is your gender? Please select only one answer.			
	N	**n**	**Percent**
☐ Female	4	4	100.0%
☐ Male	4	0	0.0%

12) What is your age? Please select only one answer.			
	N	**n**	**Percent**
☐ Under 20 years old	4	0	0.0%
☐ 20-39 years old	4	0	0.0%
☐ 40-49 years old	4	0	0.0%
☐ 50-64 years old	4	1	25.0%
☐ 65 years or older	4	4	100.0%

13) Do you have health insurance? Please select only one answer.			
	N	**n**	**Percent**
☐ Yes	4	4	100.0%
☐ No	4	0	0.0%
☐ Not Sure	4	0	0.0%

Appendix Q

CaST Data Collection Form



New Jersey Department of Health and Senior Services
New Jersey Cancer Education and Early Detection - CaST Collection Form

CaST Data Collection Form ☐ Entered into CaST II ☐ Cycle Complete

Enrollment Site: _____ Enrollment Date: ___/___/___ (MM/DD/YYYY)

Social Security: ___ - ___ - ___ Alternate ID #: _____

Chart #: _____ Name and title of person completing this form: _____

Patient Information:

Last Name: _____

First Name: _____

Middle Initial: ____

Maiden Name: _____

Date of Birth: ___/___/___ Age: _____

Address Information:

Residential Address: _____

City: _____ County: _____

State: _____ Zip Code: _____

Day Phone: (___) _____

Mobile Phone: (___) _____

Night Phone: (___) _____

Emergency Contact Information:
Name and Relationship: _____

Address: _____

City: _____ County: _____

State: _____ Zip Code: _____

Day Phone: (___) _____

Mobile Phone: (___) _____

Night Phone: (___) _____

Demographic Information (complete all sections):

Race 1	Race 2	Race 3
☐ Am Ind/Alaska Native	☐ Am Ind/Alaska Native	☐ Am Ind/Alaska Native
☐ Asian	☐ Asian	☐ Asian
☐ Black or African Am	☐ Black or African Am	☐ Black or African Am
☐ Nat Hawaiian/Pac Isl	☐ Nat Hawaiian/Pac Isl	☐ Nat Hawaiian/Pac Isl
☐ Unknown	☐ Unknown	☐ Unknown
☐ White	☐ White	☐ White

Place of Birth City: _____

Place of Birth State: _____

Place of Birth Country: _____

Ethnicity:

☐ Non-Hispanic
☐ Hispanic

Smoking status: ☐ Current smoker
☐ Former smoker 1+ year
☐ Former smoker within last year
☐ Never smoked

Comments: _____

Patient Physician Information

Name of Primary Physician: _____ Phone Number: _____

Address: _____ Physician Code: _____

Financial Responsibility

Annual Household Income (Before Taxes): $ _____

Number supported by this income? _____

Available Health Insurance - NEW JERSEY IS THE PAYER OF LAST RESORT (check all that apply):

☐ Medicare ☐ Medicaid ☐ Blue Cross/Shield ☐ HMO ☐ Other: _____ ☐ None

Policy #: _____

Notes: _____

Breast	CaST II Eligibility	Cervical

Cycle Site: _____		
Eligibility:		
Is the Woman <= 250% Poverty Guideline?	☐ Yes	☐ No
Does the Woman have Medicare/caid?	☐ Yes	☐ No
Does the Woman have other Insurance?	☐ Yes	☐ No
Suppress Reminders?	☐ Yes	☐ No
Suppress MDE's?	☐ Yes	☐ No

Cycle Site: _____		
Eligibility:		
Is the Woman <= 250% Poverty Guideline?	☐ Yes	☐ No
Does the Woman have Medicare/caid?	☐ Yes	☐ No
Does the Woman have other Insurance?	☐ Yes	☐ No
Suppress Reminders?	☐ Yes	☐ No
Suppress MDE's?	☐ Yes	☐ No

NJCEED Rev 2. 07/2010

Appendix R
Data Use Agreement

DATA USE AGREEMENT

Date: 07.11.2019

Data/ Data Set Recipient (GCU Learner, staff, faculty)

Your name: Marlene A Griggs-Warner

Name of the Institution:

College: Grand Canyon University

Address:

Your GCU email: mgriggswar@my.gcu.edu

Phone number:

Data/ Data Set Provider

[redacted]

This Data Use Agreement is made this 11th of July, 2019 by Marlene A Griggs-Warner a student at Grand Canyon University [redacted] one).

-------- Limited Data/ Data Set (contains Protected Health Information)

-------- Proprietary/Private Data/ Data Set

__X__ Other research data/information (please describe below)

Non-identifying demographics from participants of QI project: "Culturally Appropriate Education for Increasing Breast Cancer Screenings of African-American Black Women"

Appendix R (cont.)
Data Use Agreement p. 2

This Agreement sets forth the terms and conditions pursuant to which the Data/ Data Set Provider will disclose the following to the Data Recipient:

- Age
- Race/Ethnic Group
- Zip code
- Whether or not participant received breast screening/mammogram

For the purpose of this Agreement and consistent with 45 CFR 164, Subpart E (titled "Standards for Privacy of Individually Identifiable Health Information" and herein referred to as the "HIPAA Privacy Rule"); and 45 CFR 46.102(f) when private information or specimens can be linked to specific individuals by the investigator(s) either directly or indirectly through coding systems; in no case will the limited data set/ proprietary data set/ other research data include any of the following identifiers:

1. Names
2. Postal address information (other than town or city, state and zip code)
3. Telephone numbers
4. Fax numbers
5. E-mail addresses
6. Social security numbers
7. Medical record numbers
8. Health plan beneficiary numbers
9. Account numbers
10. Certificate/license numbers
11. Vehicle identifiers & serial numbers, including license plate numbers
12. Device identifiers & serial numbers
13. Web Universal Resource Locators (URL's)
14. Internet Protocol (IP) address numbers
15. Biometric identifiers, including finger and voice prints
16. Full face photographic images and any comparable images

Data Recipient agrees to de-identify the Data Set (or components) for the purpose of this Quality Improvement Project and share the de-identification procedure with concerned parties.

Appendix R (cont.)
Data Use Agreement p. 3

Except as otherwise specified herein, Data Recipient may make Uses and Disclosures of the Data Set consistent with the purpose of the research as described in the application for the following research study:

"Culturally Appropriate Education for Increasing Breast Cancer Screenings of African-American Black Women"

(i) In addition to the Data Recipient, the individuals, or classes of individuals (Co-investigators, research assistants, statisticians, individuals assisting with data collection, dissertation committee members, Academic Quality Reviewers/peer reviewers) who are permitted to use/review the Data Set for purposes of this Research Study, include:

-
- [redacted]
- [redacted]
- [redacted] Professor, Grand Canyon University, Project Chair

Data Recipient agrees to not Use or Disclose the Data Set (or components) for any purpose other than as described for the Research Study or as required by Law.

Data Recipient agrees to use appropriate safeguards to prevent Use or Disclosure of the Data Set (or components) other than as provided for by this Agreement.

Data Recipient agrees to report (within ten (10) days of discovery) to the University IRB any Use or Disclosure of the Data Set (or components) not provided for by this Agreement, including without limitation, any Disclosure of the Data Set (or components) to an unauthorized individual/company.

Data Recipient agrees not to contact any individuals from or about whom the data apply, and for Limited Data Sets, agrees not to attempt to identify the information contained in the Data Set.

In the event that this Agreement is breached by Data Recipient, (Data/ Data Set Provider) at his/her/its sole discretion, may a) terminate this Agreement upon written notice to Data Recipient or b) request that Data Recipient, to the satisfaction of Data/ Data Set Provider, take appropriate steps to address such breach. If Data Recipient fails to address such breach to the satisfaction of (Data/ Data Set Provider) and Grand Canyon University or in the time prescribed by Grand Canyon University, either entity may terminate this Agreement upon written notice to Recipient.

Should this Agreement be terminated for any reason, including, but not limited to Data Recipient's decision to cease use of the limited data set/ private data set/ other research data, Data Recipient agrees to destroy or return all data provided pursuant to this Agreement (including copies or derivative versions thereof).

Appendix R (cont.)
Data Use Agreement p. 4

Data Recipient will indemnify, defend and hold harmless the University's and any University affiliates' trustees, officers, directors, employees and agents from and against any claim, cause of action, liability, damage, cost or expense (including without limitation, reasonable attorney's fees and court costs) arising out of or in connection with any unauthorized or prohibited Use or Disclosure of the Data Set or any other breach of this Agreement.

Any notice permitted or required as provided for herein shall be in writing and to the contact and address as noted below or as may be provided by either party to the other in writing from time to time.

Signatures:

Provider:

Evelyn Robles-Rodriguez, DNP, APN, AOCN

Director, Outreach, Prevention and Survivorship

[redacted]

856-968-7315

Marlene A Griggs Warner

Data Recipient:

Marlene A Griggs-Warner

Grand Canyon University

College of Nursing

3300 West Camelback Road - Phoenix, AZ 85017

mgriggswar@my.gcu.edu

Appendix S
Participants' Informed Consent Form

INFORMED CONSENT FORM

INTRODUCTION

Greetings, my name is Marlene A. Griggs Warner. I am a doctoral student. I am in the Grand Canyon College of Nursing program. I am doing a Direct Practice Improvement (QI) project. I am the principle investigator in this project. [redacted] directs me in this project. This project will increase breast cancer screening rates.

KEY INFORMATION

This consent form explains the terms of your part in this project.

How do I know if I can be in this study? You can be in this project if you are:

- ✓ African American Black woman
- ✓ Greater than 18 years old
- ✓ Live in the southern portion of NJ

What am I being asked to do? You are being asked to take part in cultural education about breast cancer, for 1 hour and 30 minutes. The education is at in the southern portion of NJ. You will be asked to do a short survey at the end of the education. You may also get a breast cancer screening the following Sunday.

Audiotaping: does not apply
Videotaping: does not apply

Who will have access to my data? Myself, Dr. Hale, outreach program nurses.

Involvement is voluntary. You can stop at any time. Just leave the church. You will not be charged for leaving.

Any possible risks or discomforts? There are no risks or dangers. There are no physical, mental or emotional dangers.

Direct benefits: You benefit by becoming aware of how to care for yourself, related to breast cancer.

Any paid reward for my time? You will not get paid for your time.

How will my information and/or identity be protected? Personal health information in this project, is protected by the Health Insurance Portability and Accountability Act (HIPPA). HIPPA rules are used to keep health records private and safe.

PRESENTATION OF INFORMATION COLLECTED

Data from this project may be in published in the Grand Canyon Library, publications or any professional publications.

NEW INFORMATION

Appendix S (cont.)
Participants' Informed Consent Form

Sometimes during a study, we learn new information which may come from our research. It may also come from other researchers. If new information relates to your willingness to participate, I will give you that information as soon as possible.

ADDITIONAL COSTS FOR ILLNESS OR INJURY

If you are hurt as a part of you being in this project, treatment will be offered to you at the medical facility of your choice. Added services are a first aid kit. You must pay for any emergency treatments.

TERMINATION OF PARTICIPATION

I may stop your involvement if there are signs of distress or discomfort.

You may quit the project at any time by walking out. I will not use the information gathered from you.

PRIVACY AND DATA SECURITY

- ***Will researchers be able to link my data or responses back to me?*** No. Your name, address and personal data are not collected for this project. Your data is not presented in publications.
- ***Will my data include information that can identify me (names or addresses)?*** Yes, as the principle investigator I will have access to cancer center's outreach program's EMR for data regarding the individuals undergoing breast screening, this is identified data.
- ***Will there be a research code used in place of my name?*** No. We do not use your name in this project.
- ***How will my data be protected? Where? How long? Who will have access? What date will my data be destroyed or de-identified?*** Identifiable data is protected by Health Insurance Portability and Accountability Act (HIPPA). Identifiable data are kept electronically by the cancer center's outreach programs and NJ state CaST database. A cancer center nurse may access any data needed for health and treatment purposes. The consent forms will be destroyed 1 year after the last day of the project.
- ***Where and how will the signed consent forms be secured?*** Signed consent forms will be placed in a secured file by project investigator.

FUTURE RESEARCH

Once identifiers *(name, address, etc.)* are removed, data collected for this project could be used for future without additional informed consent from you or your legal representative.

STUDY CONTACTS

Any questions you have concerning the Direct Practice Improvement Project or your participation in the project, before or after your consent, will be answered by Marlene A. Griggs-Warner,

Appendix S (cont.)

Participants' Informed Consent Form

If you have questions about your rights as a subject/participant in this research, or if you feel you have been placed at risk, you can contact the Chair of the Human Subjects Institutional Review Board, through the College of Doctoral Studies at IRB@gcu.edu; (602) 639-7804.

VOLUNTARY CONSENT

PARTICIPANT'S RIGHTS

- You have been given a chance to read and review the informed consent and ask questions about this QI project.
- You have been given enough time to consider whether you want to be involved.
- You have read and understood the terms and conditions and agree to take part in this QI project.
- You understand your involvement is voluntary and that you may stop at any time without penalty.

Your signature means that you understand your rights listed above and agree to be involved in this QI project

Signature of Participant or Legally Authorized Representative Date

INVESTIGATOR'S STATEMENT

"I certify that I have explained to the above individual the nature and purpose, the potential benefits and possible risks associated with participation in this QI project, have answered any questions that have been raised, and have witnessed the above signature. These elements of Informed Consent conform to the Assurance given by Grand Canyon University to the Office for Human Research Protections to protect the rights of human subjects. I have provided (offered) you a copy of this signed consent document."

Signature of Investigator Date