To the Graduate Council:

I am submitting herewith a dissertation written by Precilla Lorene Belin entitled "Evaluating the Effectiveness of the Community-Based Project Witnessing In Tennessee to Increase Breast Cancer Screening and Awareness among African American Women." I have examined the final copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Human Ecology.

Robert Kirk, Major Professor

We have read this dissertation
And recommend its acceptance:

Accepted for the Council:

Interim Vice Provost and
Dean of The Graduate School

EVALUATING THE EFFECTIVENESS OF THE COMMUNITY-BASED PROJECT WITNESSING IN TENNESSEE TO INCREASE BREAST CANCER SCREENING AND AWARENESS AMONG AFRICAN AMERICAN WOMEN

A Dissertation
Presented for the
Doctor of Philosophy
Degree
The University of Tennessee, Knoxville

Precilla Lorene Belin
May 2001

DEDICATION

This study is dedicated to my "Loving Mother", Mrs. Clorene Belin who has always been my greatest supporter. My mother has certainly stood by my side through the pursuit of each one of my goals. She taught me that I could be whatever I wanted to be and that no one can take away from me the knowledge and wisdom that come from "GOD"!

This study is also dedicated to "Spirit"! "For the True Essence of Man is Spirit"!

Lastly, this study is in memory of my "Tee Tee", Mrs. Ometha Lowe who left this earthly realm on May 15, 1999 from breast cancer, but who still lives on in "Spirit"!

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To my mother, Mrs. Clorene Belin, (the apple of my eye and my greatest fan), and to my sister, Major Deloise J. Belin (my financial mentor) for their prayers, support, and guidance that they have given to me every step of the way. You have truly been at the core of my foundational strength and have always been there for me!

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ABSTRACT

The purpose of this investigation was to determine the effectiveness of the Witnessing In Tennessee Project to increase Breast-Self Examination (BSE), Clinical Breast Examination (CBE), and mammography among African American women in the East Tennessee Region.

Breast cancer and early detection of the disease is a significant issue for all women. However, this is especially true for minority and older women living in underserved communities. According to Healthy People 2010, one of the major priorities highlights the need for strong, cohesive, and integrated educational and community-based programs for racial and ethnic minorities. There is a need to use interventions specifically designed to meet the age, developmental levels, and culturally, linguistic, and other learning needs of diverse audiences. Also, there is a need to increase partnerships between planned community health promotion programs and community organizations (Healthy People 2010).

According to Cancer Outreach Services of Thompson Cancer Survival Center, in Knoxville, Tennessee there was a definite need to reach African American women in impoverished and/or underserved areas, particularly in East Tennessee. Also, there were no known culturally-sensitive breast health programs designed for African American women in the East Tennessee Region.

Based on the literature review, the review of the instrument used with the original Witness Project®, and input from professionals in the field of health promotion and disease prevention, a instrument was selected. A baseline and follow-up instrument was

used in this study. Both instruments were exactly the same, with the exception of the follow-up instrument having four items specifically addressing the effect of the Witnessing In Tennessee Project. Both instruments included 12 items on mammography, Breast-Self Examination, and Clinical Breast Examination, designed to assess screening practices and 4 items on breast cancer and mammography to assess knowledge. Both instruments included 7 items on opinions about mammography designed to assess attitudes and 7 items on general background information designed to gather data on the participants' characteristics on age, marital status, education, employment, income, and insurance.

A multistage clustering technique was used to identify the study population. Initially, 111 African American women participated in the intervention. However, due to age, those participants between the ages of 18 and 34 were omitted because the American Cancer guidelines state that a woman must be at least 35 years of age to have a baseline mammogram. The study population consisted of 87 African American women from the East Tennessee Region.

There were eight randomly selected churches, which agreed to host the Witnessing In Tennessee Project. The study population was administered the baseline instrument, exposed to the Witnessing In Tennessee Project, and were administered the one-month follow-up instrument. Frequency counts and percentages were computed from the data and t-test analysis was used to measure change in the post-intervention (SPSS, Version 10.0).

The practice of Breast Self-Examination and the receipt of Clinical Breast Examination had an increase in the number of women following the intervention, with 97.7% answering yes to practicing Breast-Self Examination and 93% answering yes to having had a Clinical Breast Examination.

The knowledge and attitude levels of the participants changed post-intervention. Overall, knowledge of the participants improved, with >90% of the sample during the follow-up, answering 100% of the knowledge questions correctly. Overall, the attitude scores of the participants concerning mammography improved post-intervention.

Based on the study's findings, the following conclusions were made as they relate specifically to the four hypotheses.

1. Women who participated in Witnessing In Tennessee significantly increased their performance of Breast-Self Examination.
2. Women who participated in Witnessing In Tennessee significantly increased their receipt of Clinical Breast Examination.
3. Women who participated in Witnessing In Tennessee did not significantly show an increase in the receipt of mammography.
4. Women who participated in Witnessing in Tennessee improved their knowledge and attitudes related to breast cancer and screening.

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CHAPTER I

INTRODUCTION

The purpose of this chapter was to provide the framework and to define the importance of the study. According to Healthy People 2010, one of the major priorities highlights the need for strong, cohesive, and integrated educational and community-based programs for racial and ethnic minorities. Also, it emphasizes the use of interventions specifically designed to meet the age, developmental levels, and culturally, linguistic, and other learning needs of diverse target audiences. There is a need to increase partnerships between planned community health promotion programs and community organizations (Healthy People 2010). The importance of the qualitative dimension and components of health education and community-based health programs along with multiple and strong partnerships is underscored by the kinds of health promotion programs and initiatives being fostered at the national, state, and community levels (Healthy People 2010).

Although there is significant literature on breast cancer in African American women, most studies of screening behaviors describe the issues and problems without demonstrating quantifiable methods of effectively increasing breast cancer screening in this population. Reaching women who may be less likely to have the benefit of a physician referral requires an effective community outreach effort (Mickey, 1995). This is especially true for older, minority women living in rural areas (Caplan, 1992; Earp, 1995).

Therefore, the Witness Project® was designed to increase screening among African American women (Spatz, 1996). The Witness Project® is a culturally sensitive,

community-based breast and cervical cancer education program developed with and for African American women (The Witness Project® Implementation Guide, 1998). Originally, it was developed to reach and to educate rural underserved African American women. However, as the project has expanded, it is being implemented in different African American populations.

Purpose of the Study

The purpose of this study was to determine the effectiveness of the Witnessing In Tennessee Project, to increase Breast Self-Examination (BSE), Clinical Breast Examination (CBE), and mammography among African American women in the East Tennessee Region.

Hypotheses

In order to address the purpose of the study, the following hypotheses were formulated:

1. Women who participate in the Witnessing In Tennessee Project intervention will increase their performance of Breast-Self Examination.
2. Women who participate in the Witnessing In Tennessee Project intervention will increase their receipt of Clinical Breast Examination.
3. Women who participate in the Witnessing In Tennessee Project intervention will increase their receipt of mammography.
4. Women who participate in the Witnessing In Tennessee Project intervention will improve their knowledge and attitudes related to breast cancer and screening.

Need for the Study

Breast cancer is the second leading cause of cancer death in African American women (Wingo, 1996). The five year survival rate is 69% for African American women and 84% for White women (Blumenthal, 1996). The higher breast cancer mortality rate for African American women is partially related to the fact that a larger percentage of their breast cancers are diagnosed later, at a less treatable stage (Douglas, 1994; Phillips, 1995). According to Healthy People 2010, the burden and consequences of cancer have increased over the past 25 years, and if this trend continues, cancer may become the leading cause of death early in the next century. Cancer control activities are needed which include programs designed to increase the availability and use of breast and cervical cancer screening as well as follow-up care by health providers for hard-to-reach populations such as low-income, low-education, and older minority women (Healthy People 2010).

The National Cancer Institute reported in 1996 that the need for mammography outreach programs extends throughout Tennessee. According to the Community Health Division and the Breast and Cervical Cancer Coalition of the local health department in East Tennessee, there is a definite need for community programs, which target the minority and the underserved populations. Also, there is a need for cancer control programs, which emphasize education and screening practices. The screening rates among blacks are substantially lower as compared to whites, and the mortality rate is higher (Moormeier, 1996; Simon, 1996; Danigelis, 1995; Phillips, 1995). The breast cancer mortality rate is 31 out of every 100,000 African American women compared to

27 out of every 100,000 Caucasian women (Cancer Facts, 1999). According to the Tennessee State Tumor Registry (1989-1993), 647 cases of breast cancer are diagnosed in the East Tennessee region. In addition, their breast cancer rates were disproportionately low compared to other regions in Tennessee, suggesting less than optimal screening programs. Presently, in the East Tennessee Region, according to the Cancer Outreach Services of Thompson Cancer Survival Center, there are no known culturally-sensitive programs, which have been specifically designed for African American women.

According to Cancer Outreach Services (COS) of Thompson Cancer Survival Center, Knoxville, Tennessee there is a definite need to reach African American women in impoverished and/or underserved areas, particularly in the East Tennessee Region. COS reorganized in the winter of 1997 with the primary purpose of providing cancer education and cancer screening for individuals in impoverished and/or underserved areas. The mission of COS is to reach and provide educational and screening efforts in an efficient and cost-effective manner to the impoverished, elderly, minorities, and the high-risk working poor with the primary objective being to meet the needs of low-income individuals in underserved communities. Important findings from COS revealed that more than 64% of the women that were served had never performed a breast self-exam or performed it only sometimes. Of the 1,005 respondents, 437 said they would not have had a mammogram if COS had not brought the services to their communities, and 458 respondents had not had a clinical breast exam in over a year. Also, several stated that they had never had a mammogram. Although COS has been able to reach some African

American women, their outreach team has found that there are many more African American women in the East Tennessee Region who have not been reached due to various barriers. One of the barriers most emphasized dealt with community access and effective methods of reaching the target population. The staff of COS found that it was very difficult to reach the community leaders, the key informants, and the women in the target population who needed the education and services. Eventhough COS was capable of performing the needed services in the target population, they stressed that the most important factor was the need for an effective intervention and method of delivery of the intervention to the African American women in this area. The East Tennessee Region was chosen for the study because segments of its population are impoverished and underserved creating a need to effectively reach the target population.

To improve the survival rate of black women with breast cancer, breast health education that is sensitive to black women is needed in the efforts to increase African American women participation in breast cancer screening (Moormeier, 1996; Brown, 1994). The information must be presented as basic facts about normal breast changes, breast cancer, and early detection methods (Moormeir, 1996; Brown, 1994). These educational measures can also help to alleviate unhealthy and negative attitudes regarding breast cancer (Brown, 1994). Pamphlets, instructional sessions, films, health fairs, and speakers at women's gatherings can be used to increase knowledge and awareness of breast cancer screening practice. In addition, educational methods and materials should be evaluated for ethnic and cultural sensitivity (Brown, 1994).

Basic Assumptions

For this study, the following assumptions were made:

1. The African American women who attend the Witness In Tennessee programs would participate in the baseline instrument and the follow-up telephone instrument.
2. The responses of the participants on the baseline instrument and the follow-up instrument were honest and accurate.
3. The baseline and follow-up instruments that were used in conjunction with the Witness In Tennessee Project are reliable and valid for measuring knowledge, attitudes, and practices related to breast cancer and screening.
4. The Witnessing In Tennessee programs were conducted in churches.

Delimitations

For the purpose of this study, the following delimitations were made:

1. Information gathering was delimited to health belief items on Breast-Self Examination, Clinical Breast Examination, attitudes about mammography, attitudes about the health care system, and personal background information.
2. The study was delimited to African American women who were 35 years of age or older from East Tennessee.

Limitations

The study was limited in the following way:

1. The results of the instrments were based on data collected by self-reporting.

2. The results of the study were generalizable to African American women in the East, Tennessee Region.

Definition of Terms

The following key terms were operationally defined and utilized throughout the study:

Effectiveness: The increase in practice of Breast-Self Examination, in the receipt of Clinical Breast Examination, in the receipt of mammography, and an improvement in knowledge and attitudes made in participants of the Witnessing In Tennessee Project.

Attitudes: The strength and degree of feelings and responses regarding the topic at hand as measured by the baseline and follow-up instruments of the Witnessing In Tennessee Project.

Breast Self-Examination: An examination done by an individual to her breast, underarm, and collarbone area, first on one side, then on the other.

Clinical Breast Examination: A physical examination by a doctor or nurse of the breast, underarm, and the collarbone area, first on one side, then on the other.

Mammography: A special type of x-ray for examining a woman's breast. It is a test where the x-ray is taken only of the breast, which produces a picture that is used to detect cancerous tissue.

Witness Project®: A culturally sensitive, community-based breast and cervical cancer education program developed with and for African American, which is being modified and presented to the population of the study. It was designed to target breast health education and screening (The Witness Project® Implementation Guide, 1998).

Witnessing In Tennessee: A modification of the original Witness Project®, which is the intervention of this study.

Witness Role Model: This is an African American woman who is a breast cancer survivor and a volunteer in the project who shares her story of breast cancer and survivorship.

Lay Health Advisor: This is an African American woman who does not have breast cancer but serves as a volunteer with the project who helps to schedule programs, teaches the breast-self examination skills, and share resource information during the programs.

Time (1): This defines the time before the intervention (baseline).

Time (2): This defines the time after the intervention (follow-up).

Summary

Although there is very little research that demonstrate quantifiable methods of effective community-based programs used for breast cancer education and screening, there exists a definite and desperate need for an investigation in this area, according to the COS. Since there are not a lot of research publications that present quantifiable methods of effective screening programs designed for African American women, it is hoped that this information will help to increase breast health education and screening among minority and underserved women. According to Healthy People 2010, there is an urgency for health educators to take full advantage of opportunities to reach target audiences during "teachable moments" in a variety of settings and sites through all appropriate providers and intermediaries. Also, community-based programs must assure that individuals have not just the knowledge but also the attitudes and skills needed for

optimal health, and more importantly, the programs must be those that can be planned and implemented by members of the community (Healthy People 2010).

The purpose of this chapter, then, was to provide the purpose and the need for the study. Also, this chapter outlined the hypotheses, the basic assumptions, the delimitations, and the limitations of the study. Lastly, to help provide clarity, different key terms of the study were defined.

Organization of the Study

The investigation was divided into five chapters. Chapter one, included the introduction, the purpose of the study, the hypotheses, the need for the study, the basic assumptions, the delimmitations, the limitations, the definitions of terms, and the summary of chapter one. Chapter two included the review of literature and the summary of chapter two. Chapter three included the methodology and the summary of chapter three. Chapter four included the analysis and interpretation of the data and the summary of chapter four. Chapter five included the findings, conclusions, summary of the study, and recommendations.

CHAPTER II

REVIEW OF LITERATURE

Introduction

The purpose of this chapter was to (1) discuss the research related in content, which dealt specifically with breast cancer screening, barriers to breast cancer screening, and the theoretical framework of the Witness Project®, (2) discuss the research related in methodology, which dealt with breast cancer screening programs, and (3) discuss the research related in both content and methodology, which dealt with programs previously designed to educate and empower African American women in the area of breast cancer and screening.

Research Related in Content

The purpose of this section was to discuss research related in content in regards to breast cancer screening, barriers to screening, and the theoretical framework of the Witness Project®.

Breast Cancer Screening

The American Cancer Society (ACS) and several other health care organizations recommend that women 40 years of age and older have an annual mammogram (Cancer Facts, 1999). It is also recommended that these women combined this with an annual clinical breast examination (CBE) and a monthly breast self-examination (BSE) (Morrison, 1996). Yet, less than one-half of women aged 50 years and older report ever having had a mammogram, and fewer than one-half receive a CBE (Brown, 1994).

African American women are even less likely to participate in screening by CBE and mammograms. Screening by mammography and CBE every one to three years can reduce breast cancer mortality by as much as 30-40% among aged 50 and older (Earp, 1995). Although federal, state, and local programs and legislative initiatives support efforts to increase the number of women screened for breast and cervical cancer, studies show that a large proportion of individuals, particularly low-income minorities, are not screened according to recommended guidelines (Burnett, 1995). In comparison to white women, research shows that African American women are less likely to participate in screening by clinical breast exams and mammograms (Earp, 1995). The mortality rate among African American women is approximately 20% higher than white women, and the 5-year survival rate for breast cancer among African American women is 71%, compared to 87% among whites (Cancer Facts and Figures, 1999).

The National Cancer Institute reported in 1996 that the need for mammography outreach programs extends throughout Tennessee. According to the UT Medical Center, rural patients referred to them often have needlessly advanced stages of cancer. These women can be described as rural, isolated, living in poverty, unsure of the health care system, and having no history of medical care.

According to research, in the past, women giving health education talks to African American women on breast cancer were typically white middle-class professional women who continually missed the mark with their messages. The only connection the learners saw was that breast and cervical cancers where white women's diseases. These women were not appropriate messengers because they had little in common with the African

American experiences. Witness Role Models, on the other hand, have backgrounds similar to the women in the audience. The message they send is we don't know what causes cancer but we do know that African Americans are at risk and finding it early is the key to survival (Spatz, 1996).

Barriers to Breast Cancer Screening

Psychosocial and financial barriers to access and use of screening services for breast cancer lead to increased morbidity and mortality rates among medically underserved women (Burnett, 1995). Studies have concluded that there are several factors that affect the participation of African American women in breast cancer screening. These include knowledge, beliefs, costs, accessibility, and physician reluctance to provide information regarding screening (Danigelis, 1995; Mickey, 1995; Rimmer, 1989). In the United States, older, uninsured, or low-income women are at an increased risk for not receiving preventive care compared to younger, higher income, or insured women (Brown, 1994). Many African American women report doubts about the ability to cure cancer, thereby avoiding screening programs and placing faith in God as the ultimate treatment alternative (Gregg, 1994).

Theoretical Framework

Witnessing In Tennessee, the intervention of this study is a prototype of the original Witness Project®. The Witness Project® is developed from several sociocultural models of behavior including the Health Belief Model (HBM), Social Learning Theory (SLT), Locus of Control (LOC), and community action plans such as the PRECEDE-PROCEED model.

The PRECEDE model highlights health education as a process related to health decisions and practice. This model suggests health education programs most effective when they address factors, which may predispose, reinforce or enable a behavior. PRECEDE is an acronym for predisposing, reinforcing, and enabling causes in educational diagnosis and evaluation (Glanz, 1997). During the background work of the Witness Project®, considerable work was done to diagnose educational and organizational factors which may predispose, reinforce, or enable African American women to go for cancer screening and medical care (Witness Project® Implementation Guide, 1998). Also, the researchers learned that knowledge and awareness needed to be heightened and social norms don't predispose women to early detection practices. Also, it was noted that church is an appropriate setting to reinforce the desired behaviors, and mothers, daughters, and grandmothers can encourage each other to continue their new behaviors (Witness Project® Implementation Guide, 1998).

The educational programming is based upon the 4MAT Model created to address all learning styles. As the project has progressed, the investigators have examined dimensions from the PEN-3 model of Airhihenbuwa, Community Empowerment, and the Transtheoretical Model (TM) (Witness Project® Implementation Guide, 1998).

However, to provide the heart and the soul of the Witness Project®, the Health Belief Model, the Transtheoretical Model, and the theoretical educational model, the 4MAT® System are detailed to illustrate their connection in the project. The Health Belief Model (HBM) supports the concept that individuals will take action if they believe they are susceptible to a condition, which has potentially serious consequences. Also, the

model supports the concept that individuals will take action if they believe that the course of action would be beneficial and if the anticipated barriers (costs) are outweighed by the benefits (Janz, 1984). At a Witness program, a women is shown, through the stories of other women she identifies with, she is susceptible to cancer, which is a serious illness she could develop (Spatz, 1996). The benefits of early detection are to find it early, when a cure is more likely and the treatment may be less severe. Then, she will respond to suggestions and comments from other members of the audience, her family or her physician, or to brochures and other reminders that are cues to get screening. Lastly, she will be motivated to make a positive behavior change (Witness Project® Implementation Guide, 1998) (Table 2-1, Witness Project® Implementation Guide, 1998). The HBM is incorporated into the survey tool to measure any change in response from participants as a result of the educational training from the Witness Project®. The HBM fails to incorporate many of the socioenvironmental factors, which have become increasingly more important over the past decades. Therefore, to strengthen the Witness Project®, the staff incorporated the Transtheoretical Model to address those socioenvironmental factors (Witness Project® Implementation Guide, 1998).

The Transtheoretical Model moves beyond the Health Belief Model constructs to include variables of environmental influences and barriers to action. Earlier research articles illustrate how the Transtheoretical Model of change has primarily been applied to influence addictive behaviors (Prochaska, 1992).

TABLE 2-1. THE HEALTH BELIEF MODEL AND THE WITNESS PROJECT®

Questions	**Perceived Benefit**	**Witness Project® Application**
Susceptible?	Family history may make her feel at risk	Show the learner, through the stories of other women she identifies with, she is **susceptible** to cancer…
Serious?	Disease can cause death or other serious consequences and she could develop the disease	… which is a **serious** illness she could develop.
Benefits?	Threat could be reduced	The **benefits** of early detection are to find it early, when a cure is more likely and treatment less severe…
Costs?	Must be acceptable	… with a free or reduced **cost** mammogram
Cues?	Prompt her to take action	Learner will respond **cues** – suggestions from the audience, her family or physician or magnets and brochures, or other reminders to get the screening and
Motivated?	Make a positive behavior	… she will be **motivated** to make a positive behavior change.

TABLE 2-2. THE TRANSTHEORETICAL MODEL AND THE WITNESS PROJECT®
A. CONSCIOUSNESS-RAISING

Activity	Objective	Methods	Witness Project®
Consciousness-raising	Increase learners' information about the health problem.	Observation Confrontation Interpretation Literature Videotapes	• Tell cancer stories. • Discuss beliefs, such as *It couldn't happen to me!* • See cancer happens to other black women like themselves (not just celebrities). • Confront and interpret issues to raise knowledge and awareness.

The TM suggests that individuals pass through a series of levels as they change their behaviors, from precontemplative (no awareness of the problem or desire to change) to contemplative (beginning the process of making the change) to action (acting in the decision to change) (Prochaska, 1992) (Table 2-2, WP Implementation Guide, 1998). However, as research continued with the Transtheoretical Model, the model was extended to new health care settings and to screening behaviors. For example, Rakowski and others worked with extending the TM to screening mammography. They found it necessary to add a relapse risk stage for mammography (Rakowski).

TABLE 2-2. THE TRANSTHEORETICAL MODEL AND THE WITNESS PROJECT®
B. DRAMATIC RELIEF

Activity	Objective	Methods	Witness Project®
Dramatic relief	Enable learners to experience and express feelings about their problems and solutions.	Psychodrama Role play	• Present emotional and sometimes humorous experiences to dramatize importance of finding cancer early in order to survive. • Express fears, emotions, and spiritual beliefs related to cancer and the screening process. • Discuss issues one-on-one with survivors.

TABLE 2-2. THE TRANSTHEORETICAL MODEL AND THE WITNESS PROJECT®
C. ENVIRONMENTAL RE-EVALUATION

Activity	Objective	Methods	Witness Project®
Environmental re-evaluation	Permit learners to assess how their problems affect the physical environment.	Training documentaries	• Deliver information about cancer problem in black population. • Stress importance of detection. • Encourage learners to take care of themselves. • Influence and change social norms by presenting information to family members and friends together.

If you know where members of your audience are, you know where to start. Interventions, like mammography screening, aren't effective with women in the precontemplative stage. If a woman hasn't started thinking about being at risk for breast cancer, there is no point in giving her detailed information about an appointment for a mammogram. It would be better to raise her consciousness regarding cancer risk and the benefits to be achieved from the early detection (Witness Project® Implementation Guide, 1998).

The Witness Project® role model intervention was based on the theoretical education model, the 4MAT® System. The 4MAT® System is an open-ended teaching

method to demonstrate why some things work with some learners but not with others. It is an educational process in which material is presented sequentially to address four learning styles (McCarthy, 1992). Each learning style has a distinct combination of perceiving and processing the information by the individual. Type One Learners perceive by sensing/feeling and process by watching/reflecting. Type Two Learners perceive by thinking/reasoning and process by watching/reflecting. Type Three Learners perceive by thinking/reasoning and process by doing/trying. Type Four Learners perceive by sensing/feeling and process by doing/trying. This system suggests that material needs to be presented using various methods in order for the learner to receive and apply information (McCarthy, 1992). The Witness Project® intervention embraces the four different learning styles by allowing the witness role models to share their stories, showing the Witnessing to Save Lives Video, allowing the lay health advisors to teach breast-self examination skills, providing breast models for hands-on training, and allowing for a question and answer period.

Research Related in Methodology

Successful interventions to increase BSE or screening mammography have been developed for primarily white, educated women (McClatchey, 1989; Mamon, 1985). Yet, it is not always clear why intervention or theoretical application is successful. Unfortunately, many programs either do not reach or are ineffective with minority, less educated, and lower-income women (Erwin, 1996). Little research demonstrates methods and theories being applied effectively to breast cancer education and screening

interventions in special populations and subcultures (Erwin, 1996). However, there is information published that illustrates some studies, which have been conducted to increase the participation of black women in breast cancer screening.

As part of a country-wide breast-screening promotion study, surveys were conducted in a Florida community in 1990 to provide information on participation in mammography screening, clinical breast exam (CBE), and BSE among women 40 years old and over (Danigelis, 1995). Included was a household survey using simple random sampling and conducted in two census tracts of the study community containing a large proportion of low-income and African American women (Danigelis, 1995). The two tracts encompassed a set of neighborhoods extending from downtown to suburban fringes of a small coastal city surrounded by a more affluent Caucasian population. Identical surveys were conducted at about the same time with a representative sample of women in the entire county (Danigelis, 1995).

Another study dealing with breast cancer screening behaviors and attitudes in racial ethnic groups consisted of women from Texas who participated in the American Cancer Society (ACS) 1987 Texas Breast Screening Project (TBSP). A primary objective of the program was to encourage women to have screening mammography by offering the procedures at a low cost ($50). Women were screened to ascertain eligibility. Eligible women were mailed an information packet about breast cancer, mammography, breast self-examination (BSE), and a coupon for a $50 mammogram at any participating screening center (Vernon, 1992).

In the study, the researchers compared the frequency of breast cancer screening behaviors across the racial/ethnic groups, including prior mammography, CBE, and BSE. Women rated their perception of the risk of ever getting breast cancer from very small to very high and their perception of the risk of mammography from none to high. All analyses were stratified by racial/ethnic status. Comparisons were tested for statistical significance with the chi-square statistic using SPSS-X software (Vernon, 1992).

According to research, factors related to practice of breast self-examination in rural women are also important to understand. One study conducted in this area consisted of 347 women who were members of selected county-extension homemakers clubs. Champion's Health Belief Model Scale was used. The county extension economist was contacted to obtain a convenience sample of study participants. Questionnaires were mailed to all current members on the club mailing list. Respondents were instructed to return questionnaires in an enclosed stamped self-addressed envelope. A cover letter informing participants of the nature of the study and protection of the participant's rights included with the mailed questionnaire. Consent was implied by return of the completed questionnaire. Participant's responses were kept confidential by asking participants not to write their names anywhere on the questionnaire. Questionnaires were not coded before mailing. A 2-month cutoff date was established for return of questionnaires (Gray, 1990).

In the study, Listwise multiple regression analysis was used to test the combined influence of HBM concepts on the frequency of BSE practice. The results of the Pearson product-moment correlation indicated a positive significant relationship between

knowledge for BSE and practice of BSE. The lambda statistic was used to measure the association between the demographic variables in relation to frequency of practice of BSE (Gray, 1990).

Also, one study identified and compared the adherence to breast cancer screening guidelines among African American women of differing employment status. A nonprobability sample of 154 African American women was included in the study. A letter of explanation and request was sent to dietary/housekeeping supervisors, human resources directors, and administrators from various nursing homes, social service agencies, elementary, and high schools (Phillips, 1995). When consent was granted to conduct the study, all research sites identified a contact person to assist the investigator with subject recruitment. The investigator collected data via face-to-face interviews with both unemployed women and service workers. Teachers completed self-administered questionnaires. After completion of the questionnaire, all subjects received educational materials on breast cancer and breast cancer screening along with a $5.00 token of appreciation.

Perceived benefits, barriers, and susceptibility related to breast cancer screening were measured using Champion's Health Belief Model Scale (HBMS). Knowledge of breast cancer and breast cancer screening were measured using the entire Knowledge Scale of Dickson's Breast Cancer Screening Inventory. BSE self-efficacy was measured using Fiscella's Breast Self Examination Self-Efficacy Tool. Intrinsic motivation in health behavior was measured using the Health Self-determinism Index. Three additional items were used from Dickson's BCSI to assess adherence (compliance) to breast cancer

screening guidelines (outcome variables of the study). Bivariate and multivariate logistic regression procedures were used to identify variables most predictive of adherence to breast cancer screening guidelines (monthly BSE, age-related mammography, yearly PBE) (Phillips, 1995).

Lastly, there is research information published addressing the use of lay health advisors and churches among the African American Community. The use of community persons as lay health workers has gained increased recognition in the United States over the last two decades (Jackson, 1997).

One article specifically dealt with the use of lay health advisors to address health disparities among African Americans. The authors stated that the use of lay health advisors is considered a culturally appropriate method of community health promotion for populations of color (Jackson, 1997). Although African American may obtain health information from a variety of sources, many need a personal touch to begin the process of health behavior change. The lay health advisor serves well in this helping role. By having initial health concerns addressed by a trusted community member, African Americans are more likely to accept the information and enter the health care system for necessary care. Further, the lay health advisor model serves to extend the power that groups of color have to take control of their health destiny (Jackson, 1997).

Another article addressed the role of the African American church in health programs. The author stated that effective church-based community health programs must take a holistic approach when dealing with health problems among African Americans. The programs must ensure the involvement of clergy and church members

who can participate in programs by providing a certain level of skill, thereby providing a sense of partnership in the process (Sanders, 1997). Also, the programs need to emphasize healthy living instead of a fear of dying. Rather than framing health issues in mortality statistics, church-based programs need to stress ways to improve the quality of life, in keeping with the message conveyed by the church. The author stated that by taking this approach, health organizations would find the religious community more willing to accept health messages (Sanders, 1997).

Research Related in Content and Methodology

Save our Sisters

Save our Sisters (SOS) is a program which has been used to increase breast cancer screening in African American women (Earp, 1995). SOS is an ongoing lay health advisor intervention based in North Carolina. Its mission is to increase mammography screening among African American women. The program developed following a community-wide mammography screening trial completed in 1990 (Earp, 1995). Baseline comparisons between Black and White women in that study revealed a gap in annual mammography screening of 11 percentage points. Two years later, after a series of non race-specific interventions, the gap had increased to 17% (Earp, 1995). To address this widening gap, SOS was developed to: (1) encourage Black women to explain how and why they react to breast cancer screening the way they do; (2) develop an intervention strategy based on the Black community's strengths and problem solving

capacity; and (3) implement a program to promote breast cancer screening among black women (Earp, 1995).

SOS is based on a lay health advisor model that uses informal networks of helping relationships already existing within communities (Earp, 1995). Lay health advisor programs seek to "empower" these natural helpers by helping them gain professional knowledge and skills in a specific area, such as breast cancer screening. These programs attempt to strengthen a community's capacity to solve its own problems by relying on the ties that exists between individuals in that community, the social networks these individuals are part of and the organization they join (Earp, 1995). They also provide a community-based system of care and social support that complements health care services and reaches women in ways that health professionals could reach them (Earp, 1995).

Save our Sisters recruited and trained approximately 90 "naturals helpers" from the community (Earp, 1995). The SOS natural helpers were women to whom women turned to for advice, support, and assistance. These "Lay Health Advisors" were successful as both individual counselors for breast cancer screening and organizers of community education events (Earp, 1995).

From surveys given to the participants, descriptive statistics were used to analyze the program. The researchers of the program are still working on an evaluation component of the project.

Another article addressed the "OutReach" intervention of the North Carolina-Breast Cancer Screening Program, an outgrowth of the Save Our Sisters (SOS) Project,

which is described in the above section. The OutReach intervention is the creation of a network of lay health advisors, who talk to other community women about breast cancer (individually or in groups), support women through the process of getting a mammogram, and work to broaden community awareness of, and support for, breast cancer screening for older, low-income African American omen (Earp, 1997). The lay health advisor programs are especially relevant for African American women, who often seek advice from female friends or relatives (e.g., daughters, and sisters) before making health-related decisions. Moreover, regional comparisons of the informal helper networks of elderly African Americans suggest that lay health advisor interventions may be a particularly appropriate strategy in the South. Also, lay health interventions may operate on multiple levels to affect African American women's breast cancer screening practices (Earp, 1997).

Culturally differences in perceived susceptibility and other attitudinal barriers such as fear and embarrassment may contribute to the underuse of mammograms and breast-self examinations among African American women ages 50 and older. It has been reported that these older women are less likely to assimilate into mainstream European culture. Instead they tend to adhere to traditional cultural beliefs and values that may not recognize the utility of mammography or breast-self examination (Forte, 1995). Intervention programs implemented in local community centers, clinics, and churches have all been used in reaching African American women. Interventions including culturally sensitive videos that incorporate the endorsement of mammography may link some older African American women more effectively with screening programs. The use

of ethnically relevant role models on changing the awareness and behavior of members of the same ethnic group has been used in interventions (Forte, 1995).

A community-based breast cancer intervention addressing the needs of the low-income, older African American women for breast cancer screening and education was illustrated in an article. The intervention project was designed to deliver breast cancer education through print and electronic media. A pamphlet was distributed and "A Life-Saving Choice", video was shown to older African American women while they were receiving services at their local hair salon. The video provided background information about breast cancer and uses African American women patients and health provider experts as video subjects, showing breast self-examination and a mammogram. The video emphasized relevant cultural dynamics, information comprehensible to people with little formal education, and elements with entertainment value, such as music. Throughout the film, African American women conveyed messages that reinforce the importance of early screening and the necessity of actively requesting mammograms. A voice-over announcement was added to the end of the video, notifying women that they may receive a follow-up telephone call (Forte, 1995).

During the 8-month period of the pilot study, the mobile unit provided mammograms every fourth Saturday, rotating salon sites each month. The evaluation questionnaire was administered at the site of the mobile unit and the exit interviews were conducted with each consenting client. Follow-up telephone surveys to determine adherence to breast-self examination, clinical breast examination, and mammography

screening guidelines were conducted (Forte, 1995). There was no statistical data reported in the article.

Witness Project® Model

Components of the Witness Project®

The Witness Project® was created in 1990 to increase survivorship skills and awareness in the African American community. This non-traditional program was based on a simple concept, to provide culturally appropriate role models who promote behaviors that find cancer early. Two objectives for the project were identified, to increase participation in cancer screening programs and to decrease death and sickness from cancer (Spatz, 1996). The first program was held in 1991.

Witnessing in the role model intervention program focuses on a woman's recognition and discovery of a breast lump or the abnormal outcome of a Pap test, the treatment process, her personal philosophy regarding survival, and the benefits of early detection. The intended effect is to empower others to take responsibility for their health and to practice early detection behaviors. Specifically, the role models challenge the excuse woman use for not performing breast self-examination (BSE), or having Pap tests or mammograms. Therefore, the Witness Project® uses the format and methods of the African American church to incorporate cancer education messages to change behaviors and reduce morbidity and mortality from breast and cervical cancer (Spatz, 1996; The Witness Project® Implementation Guide, 1998).

The Witness Project® is designed to meet the specific cultural, educational, knowledge, and learning style level of rural, underserved African American women. It is a community-based project.

The Witness Project® is made up of two components, the Witness Role Model (WRM) and the Layhealth Advisor (LHA). Witness role models are ordinary African American women who happen to be breast cancer survivors and who witness (talk) about their cancer experiences. They answer questions about their personal experiences, fears, and concerns. Their presence as survivors is seen as a blessing and proof that cancer is not a death sentence. As cancer survivors, the witness role models demonstrate: (1) It's okay to talk about cancer; (2) Cancer is not a punishment; (3) God is still with them; (4) There are ways, like mammography, breast-self examination, and clinical breast examination, for women to take care of themselves; and (5) Women have a right and a duty to take care of themselves (Witness Project® Implementation Guide, 1998). They are recruited at program sessions, as well as through personal contacts, exhibits and displays, and some local advertising. Specific criteria provide a basis for selection of trainees. Training sessions are scheduled as 1-day (8-hour) programs during which LHAs and WRMs meet together for the first 2 hours, then separate into groups for specialized training. LHAs learn about cancer facts and early detection, while WRMs develop their narratives. WRMs who want to teach BSE and serve in a dual role return for a second day of training and complete the LHA agenda (The Witness Project® Implementation Guide, 1998).

for a second day of training and complete the LHA agenda (The Witness Project® Implementation Guide, 1998).

The Witness Project® intervention follows the 4MAT® System, which presents educational material sequentially to address four distinct learning styles and brain hemispheric preferences. The 4MAT model gives direction for organizing a presentation so that all participants will be addressed regardless of the learning style (McCarthy, 1987). According to research, a standard 1-hour presentation can be reorganized according to the 4MAT outline and produce better acquisition and retention (Spatz, 1991). Research data indicates that participants who learned BSE from the 4MAT model performed superior to those who were taught by the standards of the American Cancer Society (Spatz, 1991). The intervention consists of having members of a Witness Project® team of African American breast and cervical cancer survivors speak or witness in groups of two to five at Witness Programs that are scheduled by the researcher and the Witness Project® volunteers at churches and community organizations (Spatz, 1996; Witness Project® Implementation Guide, 1998).

The statistical design consisted of pre- and posttest results. An analysis of covariance (ANCOVA) of the posttest scores using pretest scores as the covariate produced a measure of acquisition. An ANCOVA of the follow-up scores using the pretest scores as the covariate produced a measure of retention. Both ANCOVAs were based on the same sample of participants: those who completed the pretest, posttest and follow-up questionnaire. Significant F values were followed by pair-wise comparisons of the three means using Fisher's protected LSD t tests (Spatz, 1991).

Background

The term *witnessing* is familiar to many southern African American women and is derived from behaviors noted within the church. Witnessing occurs in a variety of Christian churches, including Baptist, Church of God in Christ, Pentecostal, and other fundamentalist-based religious groups, especially in the south. When an individual shares with the congregation a personal religious experience, that person witness or testifies by explaining how his/her life has changed through a particular experience and a closer spiritual encounter. A witness might describe how she/he overcame some major hardship or how she/he is able to live with some continuing hardship through the strength of a higher power. The intended effect of witnessing is to help others within the congregation who are struggling with serious problems of life and to encourage behavior that supports the religious doctrine of that church (The Witness Project® Implementation Guide, 1998).

According to research, the Witness Project® has encouraged women to participate in breast cancer screening (Erwin, 1996). One Witness Project® study reported which implemented Witness Programs that significantly more women reporting ever having mammography postintervention [(attending a Witness Program), (52.7% preintervention versus 63.6% postintervention, $p<0.0001$)]. Increases in the practice of BSE (66.7% versus 79.5%) and BSE in the preceding month (50.0% versus 68.0%) pre- and postintervention also remained significant in the sample of women 40 or older $p<0.0001$ (Erwin, 1996).

Summary

To improve the survival of African American women from breast cancer in the United States, the factors that contribute to the development of breast cancer and the poorer prognosis in this group must be understood and continually attacked (Moormeir, 1996). Reaching women who are unaware of breast cancer screening is truly a public health challenge for both professional and public education (Mickey, 1995). A well-coordinated community effort, with cultural sensitivity, is needed to save lives from breast cancer (Mickey, 1995). The purpose of this chapter, then, was to provide an overview of the research literature related to content, methodology, and content combined with methodology, which dealt with breast cancer screening, barriers to screening, theory, and programs designed to educate and empower African American women in the area of breast cancer and screening.

CHAPTER III

METHODOLOGY

Introduction

The purpose of this chapter was to detail the methods used in the study. The chapter includes explicit instructions that were used to carry out the purpose of the study to answer the research questions. Much of the literature supported the concept of community-based health education and promotion for African American women in the area of breast cancer and screening. Furthermore, research indicated that culturally sensitive health promotion and disease prevention programs were needed to help reach the minority and underserved population. However, most studies of screening behaviors described the issues and the problems without demonstrating quantifiable methods of effectively increasing breast cancer screening in this population. It was decided that comprehensive research into the field of breast cancer screening among African American women in the East Tennessee Region was necessary. Also, by implementing the Witnessing In Tennessee Project in Tennessee, the project could be evaluated for its effectiveness in increasing breast cancer screening and awareness. Work began in June 1999, to coordinate the groundwork for developing the Witnessing In Tennessee Project in the East Tennessee Region. The methodology used in this research study is presented as follows: Population and Sample Selection, Instrumentation, Pilot Testing, The Intervention, Data Collection, Data Analysis, and Summary.

Population and Sample Selection

The population included African American women who participated in various activities held at predominately African American churches in East Tennessee. To determine the population that was used in the study, specific information relating to breast cancer screening among African American women was gathered from the Thompson Cancer Outreach Staff, Thompson Cancer Registry, UT Cancer Registry, UT Cancer Center, The Tennessee Health Department Staff, and the Internet. Much of the information reported the difficulty that the health promotion organizations where having in reaching the African American population in East Tennessee, especially those in the impoverished and underserved communities. Also, the information reported the absence of community-based culturally sensitive breast health programs designed for African American women. Thompson Cancer Outreach Services specifically reported that although the African American churches had been somewhat accepting to their services, the participation rate was very low because they had not developed an effective method of reaching the population. Finally, East Tennessee was chosen because it had no known community-based breast health projects that had been designed for and implemented among African American women. Also, the researcher and the Cancer Outreach Team recognized the great need to provide an intervention that embraced the culture of the population in efforts to increase breast cancer screening and awareness. East Tennessee was also chosen because segments of its population are impoverished and underserved. Afterwhich, the development and implementation process began with collaboration

between the researcher and the Cancer Outreach Services of Thompson Cancer Survival Center.

To secure the study sample the following was done:

(1) formed and met with a network of community, church, and health organization leaders in East Tennessee to discuss the intervention

(2) created a list of African American churches in East Tennessee

(3) randomly selected churches to participate in the intervention

(4) contacted the randomly selected churches

(5) mailed a letter and information about the intervention to the randomly selected churches

(6) completed a follow-up call to the randomly selected churches requesting them to participate in the intervention

(7) to encourage the randomly selected churches to participate, the importance of the breast cancer screening and the intervention was advertised in various community facilities and during a gospel music program hosted on a local radio station, which targets African Americans in East Tennessee

(8) scheduled dates with randomly selected churches who agreed to participate in the intervention

A multistage clustering technique was used to identify the sample. A multistage sample is one which natural groups (clusters) are sampled initially, with the members of each selected group being subsampled afterward (*Research Methods for Social Work*). From using a multistage clustering sampling technique, eight of the randomly selected

churches participated in the intervention. From the eight churches, 111 African American women initially participated in the intervention. However, due to age, those participants between ages 18 and 34 were omitted to identify the study sample because the American Cancer guidelines state that a woman must be at least 35 years of age to have a baseline mammogram.

Instrumentation

The original team of the Witness Project® had designed a baseline instrument and a follow-up instrument. However, the original baseline and follow-up instrument contained items that were not pertinent to the purpose of the study or the study population. After being reviewed by the researcher, a UT statistical consultant, the staff at Thompson Cancer Outreach Services, and the researcher's advisor, the instruments were revised to meet the requirements for the study. Items that did not relate to the purpose of the study or to the study population were deleted. Also, some of the items, which related to the purpose or to the sample had to be rewritten to specifically address this study. The revised baseline and the follow-up instrument were exactly the same, with the exception of the follow-up instrument having four items specifically addressing the effect of the Witnessing In Tennessee Project. The four items included:

(1) If you have ever had a Clinical Breast Examination, did you have it as a result of the Witnessing In Tennessee Project?

(2) If you have never had a Clinical Breast Examination, have you scheduled one since you attended a Witnessing In Tennessee Program?

(3) If you practice Breast-Self Examination, did you start as a result of the Witnessing In Tennessee Project?

(4) Did the messages from the Witnessing in Tennessee program scare you, encourage you, or teach you something new about breast cancer screening?

After the revisions, both of the instruments included 12 items on mammography, Breast-Self Examination, and Clinical Breast Examination, 4 items on knowledge about breast cancer and mammography, 7 items on attitudes/opinions about mammography, and 7 items on general background. All of the attitude/opinion questions were scaled using a 5 point Likert scale ranging from agree strongly to disagree strongly. The researcher's advisor, the statistical consultant, and the staff at Cancer Outreach Services reviewed the revised instrument before piloting it with a sample of the study population. During the pilot testing, the validity and the reliability of the instrument were established. After piloting the instrument, all of the necessary paper work was completed and the Institutional Review Board at the University of Tennessee, Knoxville granted approval for research with human subjects.

Pilot Testing

A sample of the study population was identified through a community-based health fair held at an African American church in East Tennessee. The procedures included making contact with key persons in the population, providing them with necessary information concerning the study and then, meeting with the contacts and discussing the Witness In Tennessee Project.

After the initial meetings, the researcher was contacted and invited to attend a community-based health fair that was being held in East Tennessee. During the health fair, 10 women met with the researcher and volunteered to participate in the pilot testing. The participants were explained the purpose of the pilot testing and were informed that they would meet two weeks later at the same facility to complete the follow-up instrument again for research purposes. The researcher obtained a signed consent form from each participant and administered the instrument. Two weeks later, the ten women met with the researcher to complete the follow-up instrument for the second time.

To test the reliability, it was important that both tests occurred under identical conditions (*Research Methods for Social Work*). The method used to test the reliability was test-retest reliability. This method was chosen because it deals with how *stable* a measurement is (that is, how consistent it is over time). If the measurement is not stable over time, then changes that the researcher observe in the study may have less to do with changes in the phenomenon being observed than with changes in the measurement process (*Research Methods for Social Work*). To assess test-retest reliability for the follow-up instrument, a correlation coefficient was computed on the two sets of responses to the instrument of each participant using (SPSS 10.0). The correlation between the two sets of responses to the follow-up instrument for each participant was (.76). A value greater than .70 or .80 represents a stable instrument. Therefore, the follow-up instrument was deemed to have acceptable stability.

According to *Research Methods for Social Work*, validity is defined as a descriptive term used of a measure that accurately reflects the concept that is intended to

measure. To test the validity of the instrument, a network of people was involved in the process. Content validity was used and it refers to the degree to which a measure covers the range of meanings included within the concept. Content validity includes elements of face validity, when one's colleagues look over an instrument and agree that it appears to measure the concept (*Research Methods for Social Work*). The researcher's advisor, the statistical consultant, the staff at Cancer Outreach, and the researcher reviewed the instrument. From reviewing each item on the follow-up instrument in respect to concept and the purpose of the study, the validity was established. Due to the baseline and the follow-up instrument containing the same items, except for the four items added to the follow-up to measure the effect of the intervention, by establishing the reliability and the validity of the follow-up instrument, the reliability and the validity for the baseline instrument was established.

The data collected during the pilot sample was reviewed to make sure that each item was clear and that the instrument was usable for the population. The researcher met with the pilot subjects and interviewed them about the instrument. The researcher went over their responses and found out how they decided to answer as they did. The researcher paid particular attention to their non-verbal reactions to the instrument. Also, the researcher noted the time used to administer the instrument. After the researcher finished with the pilot subjects, the completed instruments were coded and the data was typed into Microsoft Excel.

To complete the pilot testing, the instruments were analyzed. The analysis plan included descriptive analysis. The basic descriptive analysis included frequencies of the

demographics. Due to research related to the methodology of the study and comments from one of the founders of the original Witness Project®, the researcher and the statistical consultant decided that a paired t-test for practices, knowledge, and attitudes would be used in the study. Inferential statistics would also be used in the study. A paired t-test would be used to assess the effect of the intervention (SPSS, Version 10.0).

The Intervention

The intervention used in this study was the Witnessing In Tennessee Project programs. The Witnessing In Tennessee Project intervention followed the 4MAT® System, which presented educational material sequentially to address four distinct learning styles and brain hemispheric preferences. The 4MAT® System allowed breast cancer information to be presented in a very simple style, which allowed the women to process the information according to her learning style (Chapter 2). The intervention consisted of having members of a Witnessing In Tennessee Project team of African American breast cancer survivors speak (witnessing) in groups of two to five at the programs that were scheduled by the researcher and the Witnessing In Tennessee Project volunteers at the local churches (Chapter 2).

Church-based programs were conducted after worship services, during Sunday school, or at regularly scheduled church activity times. The programs followed the style of programs presented during the original Witness Project® programs. First, the host introduced the researcher and the researcher introduced the project, the volunteers and the staff of Cancer Outreach. Then, the program began with devotion. Afterwhich, the host

of the program turned the meeting over to the researcher. Then, the researcher discussed the consent form with the participants, and both the interviewer and the participants signed it. The signed consent form was kept for the researcher's records and one consent form was given to the participant for her records. The interviewer administered the baseline instrument form to each participant and collected the data and informed each participant that she would be contacted in one month to complete a follow-up instrument form. Next, the Witnessing to Save Lives Video was shown, survivors witnessed to the group about their personal experiences, and the participants were taught Breast-self examination skills using ethnic models by a layhealth advisor. A layhealth advisor passed around a sign-up sheet for women who wanted to schedule a mammogram with Thompson Cancer Survival Center. Lastly, questions were answered and the programs lasted about 1.5 hours. The ethnic models were left out on the tables for the participants to practice with before leaving the program.

Intervention Program Steps:

1. Devotion
2. Consent Form
3. Baseline Instrument Form
4. Witness to Save Lives Video
5. 2-3 Cancer survivors share their personal story (Witness) as structured by the project
    a. recognition and discovery of lump or abnormal Pap test
    b. treatment process
    c. personal philosophy regarding survival

d. benefits of early detection

6. Lay health advisor teach breast-self examination skills using ethnic models and share resources for mammograms
7. Sign-up for mammograms
8. Questions and answer period

Data Collection

The process for data collection centered on the Witnessing In Tennessee Project intervention (described in the above section). Data were collected from the study sample at time (1), before the Witnessing In Tennessee Program and at time (2), one-month after the Witnessing In Tennessee Program. Each Witnessing In Tennessee Program was presented at an African American church in East Tennessee. Each host church knew the outline of the program because the researcher had mailed an information packet, which included the outline, prior to scheduling the program. To start each session, the host person introduced the researcher and the researcher introduced the Witnessing In Tennessee Project, the volunteers, and the staff from Cancer Outreach Services. Then, the intervention program began. Some of the churches opened their program with a song, scripture, and a prayer and some of the churches opened their program with only a prayer. After the opening of each program, the host person turned the program into the hands of the researcher. The researcher discussed the study and passed out the consent forms. Prior to administering the baseline instrument, the interviewer discussed the consent form with each participant. Both the interviewer and the participant signed the

consent form. The interviewer kept a copy for the project's file and an additional copy was given to the participant for her records. The participant was also informed that she would receive a call from the project in one month to complete the follow-up instrument. All of the baseline instruments were administered to the participants before they were exposed to Witnessing In Tennessee (the intervention program steps). Most of the programs lasted about 1.5 hours because the Witnessing In Tennessee replaced the regular scheduled church activity. However, due to the question and answer period, a few programs lasted about 15 minutes longer. A total of 111 baseline instruments were completed. After each program, the completed instruments were reviewed and coded. The instruments that were completed by participants who were younger than 35 were omitted due to age criteria for a screening mammogram. To maintain confidentiality, after each program, the completed instruments were assigned an Identification Number. The ID numbers began with one and followed numerical order. Each baseline instrument item and response was coded. Then, each assigned ID number and the corresponding responses were placed on a data sheet in Microsoft Excel. Afterwhich, the baseline instrument was placed in a tickler file until time for the one-month follow-up call. As the follow-up instrument was completed, the same ID number assigned to the baseline instrument was assigned to it. Each follow-up instrument item and response was coded. Each assigned ID number and the corresponding responses were placed on a separate data sheet in Microsoft Excel.

Data Analysis

In an evaluation of the original Witness Project®, a pre-and posttest design was used (Witness Project Implementation Manual, 1998). According to Dignan, a before (time 1) and after (time 2) design can measure the difference in a population due to an intervention. Also, Dignan states that this design is widely used by administrators and practitioners (*Measurement and Evaluation of Health Education*). Therefore, this study used the one-group pretest-posttest design. According to *Research Methods for Social Work*, the design includes:

(1) measure the dependent variable in a single group (Baseline Instrument)

(2) administer the stimulus (Witnessing In Tennessee)

(3) remeasure the dependent variable (Follow-up Instrument)

(4) compare pretest and post test results (Compare Baseline Instrument Results and Follow-up Instrument Results)

The study used a pre-and posttest design to measure the effectiveness of the Witnessing In Tennessee to increase Breast-Self Examination, Clinical Breast Examination, and mammography in African American women in the East Tennessee Region. Also, the design was used to measure the effectiveness that the project had in improving knowledge and attitudes in the study sample. Since the instruments contained items that did not contribute to a total score based on correct and incorrect responses, test-retest reliability was used to determine *r*. The reliability of the instruments used in the research design was ($r = .76$). The data collected from the study population were used in the design. The baseline data and follow-up data from the intervention group were evaluated

with basic descriptive analysis and comparison of practices. The analysis plan included both descriptive and inferential analysis. (1) Descriptive: Basic descriptive analysis of demographics, practices, knowledge, and attitudes was done. These analyses included frequencies, means, and standard deviations. (2) Inferential: To assess the effect of the intervention on practices, knowledge, and attitudes, paired t-tests were used (SPSS, Version 10.0). SPSS 10.0 is a "comprehensive statistical software system designed to handle all steps in an analysis, ranging from data listing, tabulations, and descriptive statistics to complex statistical analysis" (SPSS, 2000). The baseline data, before the Witnessing In Tennessee Program (time-1) was compared to the one-month follow-up data, after the Witnessing In Tennessee Program (time-2).

Summary

The purpose of Chapter III was to present the research design. Using a multistage clustering sampling technique, 111 African American women initially participated in the study. Participants were administered the baseline instrument and they received the Witnessing In Tennessee program. Due to age, the study population contained 87 African American women who were 35 years of age or older. The eighty-seven women were given a one-month callback to complete the follow-up instrument instrument. Measurement was for screening practices (Breast-Self Examination, Clinical Breast Examination, and mammography), knowledge, and attitude changes. The analysis plan included descriptive and inferential statistics. The findings of this study are presented in Chapter IV.

CHAPTER IV

ANALYSIS AND INTERPRETATION OF THE DATA

Introduction

The purpose of this study was to determine the effectiveness of the Witnessing In Tennessee Project to increase Breast-Self Examination (BSE), Clinical Breast Examination (CBE), and mammography among African American women in the East Tennessee Region. The information included in this chapter is an analysis of the data collected during the course of this study. This chapter also presents findings based on the analysis of the data. Finally, the chapter contains the following major section Data Analyses.

Data Analyses

Pilot Population

A sample of the population was identified through a community-based health fair held at an African American church in East Tennessee. The Health Ministry of the church was sponsoring the health fair. According to the host church, an announcement of the health fair had been mailed to African American churches in the community and the surrounding areas. Men, women, and children from various communities in East Tennessee attended the health fair. During the health fair, the researcher had permission to speak with women concerning the Witnessing In Tennessee Project. From speaking with the women, the researcher identified 10 African American women who were at least 35 years of age and who agreed to participate in the pilot testing.

Study Population

The study included 111 African American women initially. The 111 women were reached through intervention programs presented at eight churches that were randomly selected from East Tennessee. The 111 subjects included 87 (78%) women 35 years of age or older. The study population size was N=87.

The summary of the study population includes the age, education level, the marital status, the employment status, income, insurance coverage, and mammogram expense. The ages ranged from 35 to 78 with an average age of 50.61 years. The study population years of education ranged from 4 to 20 with the average years of education being 14.37 years.

The marital status of the participants was reported in the following manner, 48 (55.8%) were married and 38 (44.2%) were not married (Table 4-1). One participant refused to answer the item.

The employment status of the study population was divided into six categories. The six categories included:

(1) Retired

(2) Not working and not looking for work

(3) Not working but looking for work

TABLE 4-1. PARTICIPANTS MARRIED AND NOT MARRIED

Married	48 (55.8%)
Not Married	38 (44.2%)

(4) Working part-time (outside the home)

(5) Working full-time (outside the home)

(6) Working in the home (housewife)

There were a total of 21 participants not working. Of the 21 women not working, eighteen (21.7%) were retired; one (1.2%) was not working and not looking for work; and two (2.4%) were not working but looking for work. There were a total of 62 participants working. Of the 62 women, six (7.2%) were working outside the home part-time; fifty-one (61.4%) were working full-time outside the home; and five (6.0%) were working in the home as a housewife (Table 4-2). Four participants refused to answer the item.

The household income for study population was broken down into six categories including:

(1) Less than $10,000

(2) $10,000 to less than $15,000

(3) $15,000 to less than $25,000

TABLE 4-2. PARTICPANTS WORKING AND NOT WORKING

Employment Status	N	Percent
Retired	18	21.7
Not working and not looking for work	1	1.2
Not working but looking for work	2	2.4
Working part-time	6	7.2
Working full-time	51	61.4
Working in the home	5	6

(4) $25,000 to less than $35,000

(5) $35,000 to $50,000

(6) Over $50,000

Out of the 87 participants, 72 of the women reported their household income. Twelve (16.7%) had an income less than ten thousand dollars. Eight (11.1%) had an income between $10,000 and less than $15,000. Twelve (16.7%) had an income between $15,000 and less than $25,000. Ten (13.9%) had an income between $25,000 and less than $35,000. Fourteen (19.4%) had an income between $35,000 and $50,000 and sixteen (22.2%) had an income over $50,000 (Table 4-3).

Most of the participants had insurance coverage. Of the 87 women, seventy-seven (88.5%) had insurance and ten (11.5%) did not have insurance (Table 4-4). Of the seventy-seven women having insurance, seven of them reported that if they were to have a mammogram, they would have to a portion of the expense.

TABLE 4-3. PARTICIPANTS HOUSEHOLD INCOME

Household Income	N	Percent
Less than $10,000	12	16.7
$10,000 to less than $15,000	8	11.1
$15.000 to less than $25,000	12	16.7
$25,000 to less than $35,000	10	13.9
$35,000 to $50,000	14	19.4
Over $50,000	16	22.2

TABLE 4-4. PARTICIPANTS WITH AND WITHOUT INSURANCE COVERAGE

Insurance Coverage	N	Percent
Yes	77	88.5
No	10	11.5

Screening Practices

The screening practices of the participants were addressed by their performance of Breast-Self Examination, Clinical Breast Examination, and mammography. For analysis purpose, time (1) represents before the Witnessing In Tennessee Project and time (2) represents after the Witnessing In Tennessee Project. To test if there was a significant difference in the proportion answering yes at time (1) compared to the proportion answering yes at time (2), a paired t-test was used (Chapter 3).

Breast-Self Examination

Eighty-seven women answered the question "Do you practice breast-self examination?" At time (1), 55 (63.2%) answered yes and at time (2), 84 (97.7%) answered yes. In order to test if the proportions were significantly different, a paired t-test was used. The t-test found a significant difference between time (1) and time (2), $t = -6.43$, $df = 85$, and $p < .001$ (Table 4-5). There was a 34% increase in breast-self examination. Of those that did not practice breast-self examination at time (1) and did practice at time (2), 31 (100%) of them stated that they were influenced by the Witnessing in Tennessee Project.

TABLE 4-5. PARTICIPANTS PRACTICING BREAST-SELF EXAMINATION

Time Point	N	Percent
Time (1)	55	63.2
Time (2)	84	97.7

$t = -6.42$, $df = 85$, $p < .001$
Time 1 = Before the program
Time 2 = After the program

Clinical Breast Examination

Eighty-seven women responded to the question "Have you had a clinical breast examination?" At time (1), 64 (73.6%) answered yes and at time (2), 80 (93%) answered yes. In order to test if proportions were significantly different, a paired t-test was used. The t-test found a significant difference between time (1) and time (2), $t = -4.57$, $df = 85$, and $p < .001$ (Table 4-6). There was a 14% increase of participants having a clinical breast exam after the program. Of those that had not received a clinical breast examination before the program but had received one after the program, 16 (94.1%) of them stated that they were influenced by the Witnessing in Tennessee Project.

TABLE 4-6. PARTICIPANTS HAVING A CLINICAL BREAST EXAMINATION

Time Point	N	Percent
Time (1)	64	73.6
Time (2)	80	93

$t = -4.57$, $df = 85$, $p < .001$
Time 1 = Before program
Time 2 = After program

Mammography

Eighty-seven women answered the question "Have you had a mammogram?" At time (1), 77 (88.5%) answered yes and at time (2), 79 (91.9%) answered yes. In order to test if the proportions were significantly different, a paired t-test was used. The t-test revealed no significant difference between time (1) and time (2), $t = -1.75$, $df = 85$, and $p < .083$ (Table 4-7). Even though the proportions were not significantly different, descriptive analysis showed that of the 21 women not having a mammogram before the program, 10 (almost 50%) had scheduled one at the time of the follow-call for a future date.

TABLE 4-7. PARTICIPANTS HAVING A MAMMOGRAM

Time Point	N	Percent
Time (1)	77	88.5
Time (2)	7 9	91.9

$t = -1.75$, $df = 85$, $p < .083$
Time 1 = Before program
Time 2 = After program

Knowledge and Attitudes

Knowledge

The data obtained for four items to ascertain breast cancer and screening knowledge were analyzed. The questions were used to address change in knowledge from time (1) to time (2). 87 women answered each question.

Question 1: Who do you think is more likely to get breast cancer? Possible answers were:

A. Women under age 50
B. Women between 50 and 65
C. Women over age 65
D. All groups at equal risk

The correct choice was D, with 64 (74.4%) answering correctly at time (1) and 84 (97.7%) answering correctly at time (2). In order to test if the proportions were significantly different, a paired t-test was used. The t-test found a significant difference between time (1) and time (2). There was a 23.3% increase after the program, $t = -4.362$, $df = 84$, and $p<.001$ (Table 4-8).

TABLE 4-8. PARTICPANTS CORRECTLY ANSWERING WHO IS MORE LIKELY TO GET BREAST CANCER

Time Point	Answered Correctly
Time (1)	64 (74.4%)
Time (2)	84 (97.7%)

$t = -4.362$, $df = 85$, $p<.001$
Time 1 = Before program
Time 2 = After program

Question 2: Do you think that if a woman has breast cancer, then she will start to have pain, to feel a growth, or to feel bad? Possible answers included (1) no, not necessarily, and (2) Yes. The correct answer was "no, not necessarily". Before the program, 75 (86.2%) answered correctly and after the program, 83 (96.5%) answered correctly. In order to test if the proportions were significantly different, a paired t-test was used. The t-test showed a significant difference between time (1) and time (2). There was a 20.3% increase after the program, $t = -2.386$, $df = 85$, and $p<.019$ (Table 4-9).

Question 3: If a woman your age does not have any breast problems or symptoms, how often do you think she should get a mammogram? Possible answers were:

(1) More than once a year
(2) Every year
(3) Every one to two years
(4) Every two years
(5) More than every two years
(6) Only when she has a problem/symptom
(7) When a doctor says no
(8) Never

TABLE 4-9. PARTICIPANTS CORRECTLY ANSWERING IF A WOMAN HAS BREAST CANCER WILL SHE HAVE PAIN

Time Point	Answered Correctly
Time (1)	75 (86.2%)
Time (2)	83 (96.5%)

$t = -2.386$, $df = 85$, $p<.019$
Time 1 = Before program
Time 2 = After program

The correct choice was "every year". At time (1), 61 (70.1%) answered correctly and at time (2), 80 (93%) answered correctly. In order to test if the proportions were significantly different, a paired t-test was used. The t-test found a significant difference between the time before the program and the time after the program, with a 22.9% increase at time (2), $t = -4.60$, $df = 85$, and $p < .001$ (Table 4-10).

Question 4: What is usually better for finding a breast cancer when it is very small, a mammogram or a breast exam by a doctor or nurse? The possible choices included (a) mammogram, (b) breast exam by a doctor or nurse, (c) both equally, and (d) neither. The correct choice was mammogram. Before the program, 43 (49.4%) answered correctly and after the program, 84 (97.7%) answered correctly. In order to test if the proportions were significantly different, a t-test was used. The t-test found a significant difference between time (1) and time (2). There was a 46.3% increase at time (2), $t = -8.61$, $df = 85$, and $p < .001$ (Table 4-11).

TABLE 4-10. PARTICIPANTS CORRECTLY ANSWERING HOW OFTEN SHOULD A WOMAN GET A MAMMOGRAM

Time Point	Answered Correctly
Time (1)	61 (70.1%)
Time (2)	80 (93%)

$t = -4.60$, $df = 85$, $p < .001$
Time 1 = Before program, Time 2 = After program

TABLE 4-11. PARTICIPANTS CORRECTLY ANSWERING WHAT IS BETTER FOR FINDING A BREAST CANCER WHEN IT IS SMALL

Time Point	Answered Correctly
Time (1)	43 (49.4%)
Time (2)	84 (97.7%)

$t = -8.61$, $df = 85$, $p < .001$
Time 1 = Before program
Time 2 = After program

Attitudes

The attitude section of the instrument utilized a Likert-type scale assessing attitudes towards various issues dealing with mammography. Seven statements were used. On the Likert scale, 5 indicated agree strongly and 1 indicated disagree strongly. This section deals with participants' overall responses to items. To test if there was a significant difference in the mean at time (1) compared to the mean at time (2), a paired t-test was used.

The attitude-mean scale was used because it allows one to interpret the results based on the Likert Scale of 5 representing agree strongly, 3 representing not sure, and 1 representing disagree strongly. Therefore, a mean value of 3.1 would indicate an attitude of not sure and a mean value of 4.8 would be interpreted as strongly agree.

Statement 1: A mammogram is now a very routine medical test. The mean at time (1) was 4.22 and the mean at time (2) was 4.81. In order to test the significance, a paired t-test was used. The t-test found a significant difference between time (1) and time (2), $t = -5.26$, $df = 85$, and $p < .001$. The means revealed that before the program (4.22), the study population agreed to the statement. However, after the program (4.81), their attitude was even stronger concerning a mammogram being a routine test (Table 4-12).

TABLE 4-12. ATTITUDE MEAN SCALE: MAMMOGRAM A ROUTINE TEST.

A mammogram is now a very routine test.	Mean	Standard Deviation
Time (1)	4.22	1.12
Time (2)	4.81	0.71

$t = -5.26$, $df = 85$, $p < .001$
Scale: 5 = Strongly agree and 1 = Disagree strongly

Statement 2: Eventhough a doctor gives me a breast exam and everything is ok, I should still get a mammogram. Before the program the mean was 4.69 and after the program the mean was 4.90. In order to test the significance, a paired t-test was used. The t-test found a significant difference between time (1) and time (2), $t = -1.998$, $df = 85$, and $p < .049$. The data revealed that the attitude of the participants was positive toward getting a mammogram, but their attitude became more positive after the program (Table 4-13).

Statement 3: I am not likely to have a mammogram unless I have some breast pain or discomfort. The mean at time (1) was 1.81 and the mean at time (2) was 1.34.

TABLE 4-13. ATTITUDE MEAN SCALE: I SHOULD GET A MAMMOGRAM.

Eventhough a doctor gives me a breast exam and everything is ok, I should still get a mammogram.	Mean	Standard Deviation
Time (1)	4.69	.72
Time (2)	4.90	.61

$t = -1.998$, $df = 85$, $p < .049$
Scale: 5 = Strongly agree and 1 = Strongly disagree

In order to test the significance, a paired t-test was used. The test found a significant difference between time (1) and time (2), $t = 3.15$, $df = 85$, and $p<.002$. Before the program the attitude of the participants was somewhat negative toward this item. They disagreed with the statement. After the program, the attitude of the participants shifted even more to the negative; they disagreed more strongly (Table 4-14).

Statement 4: If a mammogram shows that you need surgery, most of the time surgery is not necessary. The mean at time (1) was 2.56 and the mean at time (2) was 1.59. In order to test the significance, a paired t-test was used. The test found a significant difference between time (1) and time (2), $t = 5.85$, $df = 85$, and $p<.001$. Before the program, the attitude of participants was in agreement with the statement to a small degree. However, after the program (time 2), the participants disagreed with the statement (Table 4-15).

4-14. ATTITUDE MEAN SCALE: I WILL NOT HAVE A MAMMOGRAM.

I am not likely to have a mammogram unless I have some breast pain or discomfort.	Mean	Standard Deviation
Time (1)	1.81	1.24
Time (2)	1.34	1.01

$t = 3.15$, $df = 85$, $p<.002$
Scale 5 = Strongly agree and 1 = Strongly disagree

TABLE 4-15. ATTITUDE MEAN SCALE: SURGERY IS NOT NECESSARY.

If a mammogram shows that you need surgery, most of the time surgery is not necessary.	Mean	Standard Deviation
Time (1)	2.56	1.19
Time (2)	1.56	1.26

$t = 5.85$, $df = 85$, $p<.001$
Scale: 5 = Strongly agree and 1 = Strongly disagree

Statement 5: Mammograms find cancer in its earliest stages of growth, when it can be cured. The mean at time (1) was 4.21, indicating that the attitude of the participants agreed that mammograms can find cancer in its earliest stage. The mean at time (2) was 4.59, indicating that after the program, the attitude of the participants was in agreement even more with the statement. In order to test the significance, a paired t-test was used. The test found a significant difference between time (1) and time (2), $t = -2.59$, $df = 85$, and $p<.011$ (Table 4-16).

Statement 6: After you have had a couple of mammograms that are ok, you can skip a few years. The mean at time (1) was 1.59 and the mean at time (2) was 1.06. In order to test the significance, a paired t-test was used. The test found a significant difference in time (1) and time (2), $t = 4.45$, $df = 85$, and $p<.001$.

TABLE 4-16. ATTITUDE MEAN SCALE: MAMMOGRAMS FIND CANCER.

Mammograms find cancer in its earliest stages of growth, when it can be cured.	Mean	Standard Deviation
Time (1)	4.21	1.06
Time (2)	4.59	1.04

$t = -2.59$, $df = 85$, $p<.011$
Scale 5 = Strongly agree and 1 = Strongly disagree

The data revealed that the participants disagreed with skipping a few years between having a mammogram and after the program, time (2), they disagreed more (Table 4-17).

Statement 7: Mammograms are only good for women with breast of a certain size. Before the program, the mean was 1.42 and after the program, the mean was 1.05. In order to test the significance, a paired t-test was used. The test found a significant difference in time (1) and time (2), $t = 3.42$, $df = 85$, and $p<.001$. The participants disagreed with this statement before the intervention. However, after the intervention, they disagreed even stronger with the statement (Table 4-18).

TABLE 4-17. ATTITUDE MEAN SCALE: YOU CAN SKIP A FEW YEARS.

After you had a couple of mammograms that are ok, you can skip a few years.	Mean	Standard Deviation
Time (1)	1.59	1.00
Time (2)	1.06	0.44

$t = 4.45$, $df = 85$, $p<.001$
Scale 5: Strongly agree and 1 Strongly disagree

TABLE 4-18. ATTITUDE MEAN SCALE: MAMMOGRAMS ARE GOOD.

Mammograms are only good for women with breast of a certain size.	Mean	Standard Deviation
Time (1)	1.42	.89
Time (2)	1.05	.43

$T = 3.42$, $df = 85$, $p<.001$
Scale 5 = Strongly agree and 1 = Strongly disagree

Summary

This chapter contained results of the study, primarily the practice of Breast-Self Examination, Clinical Breast Examination, and mammography among African American women at time (1) and at time (2). This chapter presented the findings based on the analysis of the data. Also, this chapter contained the results of the study concerning knowledge and attitudes among African American women related to breast cancer and screening at time (1) and at time (2). There was a significant difference between time (1) and time (2) for Breast-Self Examination and Clinical Breast Examination. The findings revealed a significant increase in the practice of Breast-Self Examination and the receipt of Clinical Breast Examination. There was not a significant difference in mammography between time (1) and time (2), but almost 50% of those reporting not having a mammogram before the program had scheduled one for a future date at the time of follow-up. The findings also revealed that knowledge of the participants and that the attitudes of the participants improved concerning breast cancer and screening after the program.

CHAPTER V

SUMMARY, FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

Introduction

This chapter addresses four sections. The first section is a summary of the study. The second section is the findings of the study. In the third section, the conclusions relative to the findings will be presented. In the fourth section, recommendations will be presented.

Summary of the Study

The primary purpose of this study was to determine the effectiveness of the Witnessing In Tennessee Project to increase Breast-Self Examination, Clinical Breast Examination, and mammography among African American women in East Tennessee. To accomplish the purpose of this study, the following four hypotheses were formulated:

1. Women who participate in the Witnessing In Tennessee intervention will increase their performance of Breast-Self Examination.
2. Women who participate in the Witnessing In Tennessee intervention will increase their receipt of Clinical Breast Examination.
3. Women who participate in the Witnessing In Tennessee intervention will increase their receipt of mammography.
4. Women who participate in the Witnessing In Tennessee intervention will improve their knowledge and attitudes related to breast cancer and screening.

To achieve this purpose, a baseline instrument, the Witnessing In Tennessee Intervention, and a follow-up instrument was used. The findings of this study are reported in separate sections, which coincide with the hypotheses above and addressed in Chapter 1. The findings are based on analysis of the data obtained from the study population.

To collect data, African American women completed a baseline instrument, participated in a Witnessing In Tennessee Program, and completed a follow-up instrument. A multistage clustering sampling technique was used to obtain the study sample. Randomly selected churches hosted a program and the African American women who attended the program and completed the baseline and follow-up instruments were apart of the study sample. There were 87 women in the study population. Data received from the study population (N=87) were analyzed by percentage frequencies and paired t-test, using the SPSS 10.0 version and Microsoft Excel.

Findings

The finding section will be addressed according to the four hypotheses in numerical order.

Hypothesis 1: Women who participate in the Witnessing In Tennessee intervention will increase their performance of Breast-Self Examination.

Breast-Self Examination (BSE): Comparing time (1) and Time (2), there was a significant change in women practicing BSE, from 55 (63.2%) to 84 (97.7%). There was

a 34% increase in breast-self examination after the program. Of those that changed, 31, (100%) of them stated that they were influenced by the Witnessing In Tennessee Project.

Hypothesis 2: Women who participate in the Witnessing In Tennessee Project intervention will increase their receipt of Clinical Breast Examination.

Clinical Breast Examination: (CBE): Comparing time (1) and time (2), there was a significant change in women receiving a CBE, from 64 (73.6%) to 80 (93%). There was a 14% increase of participants having a clinical breast examination. Of those that changed at time (2), 16 (94.1%) of them stated that they were influenced by the Witnessing in Tennessee Project.

Hypothesis 3: Women who participate in the Witnessing In Tennessee intervention will increase their receipt of mammography.

Mammography: Comparing time (1) and time (2), there was not a significant change in women receiving a mammogram. At time (1), 77 (88.5%) had received a mammogram and at time (2), 79 (91.9%) had received a mammogram. Even though there was not a significant difference between the time before the program and the time after the program, descriptive analysis showed that of the 21 women not having a mammogram at time (1), 10 (almost 50%) of them had scheduled one at time (2).

Hypothesis 4: Women who participate in the Witnessing In Tennessee intervention will improve their knowledge and attitudes related to breast cancer and screening.

1. Knowledge: Overall, knowledge of the participants improved from time (1), with >90% of the sample at time (2) answering the four knowledge questions (items 14 – 17 on the follow-up instrument) correctly.
    a. Who do you think is more likely to get breast cancer? (item 14) Comparing time (1) and time (2), there was a significant change in women answering correctly, from 64 (74.7%) to 84 (97.7%). There was a 23.3% increase in participants answering the item correctly after the program.
    b. Do you think that if a woman has breast cancer, then she will start to have a pain, to feel a growth, or to feel bad? (item 15) Comparing time (1) and time (2), there was a slightly significant change in women answering correctly, from 75 (86.2%) to 83 (96.5%). There was a 20.3% increase after the program in participants answering this item correctly.
    c. If a woman your age does not have any breast problems or symptoms, how often do you think she should get a mammogram? (item 16) Comparing time (1) and time (2), there was a significant change in women answering correctly, from 61 (70.1%) to 80 (93%). There was 22.9% increase at time (2) in the participants answering this item correctly.
    d. What is usually better for finding a breast cancer when it is very small, a mammogram or a breast exam by a doctor or nurse? (item 17) Comparing time (1) and time (2), there was a significant change in women answering

correctly, from 43 (49.4%) to 84 (97.7%). There was a 46.3% increase at time (2) in participants answering this item correctly.

2. Attitudes: There were 7 items that were used to measure attitudes about mammography. Overall, the attitudes of the participants concerning mammography had improved from time (1) to time (2). From the seven statements (items 18 – 24 on the follow-up instrument) used, there was a positive change in responses at time (2) and all of the responses at time (2) showed a significant change.
    a. A mammogram is now a very routine medical test (item 18). Comparing time (1) to time (2), there was a significant change in the mean, from 4.22 to 4.81. After the program, the participants agreed even more with this statement.
    b. Eventhough a doctor gives me a breast exam and everything is ok, I should still get a mammogram (item 19). Comparing time (1) to time (2), there was a significant change in the mean, from 4.69 to 4.90. The participants agreed with this statement before the program and after the program, they agreed even more.
    c. I am not likely to have a mammogram unless I have some breast pain or discomfort (item 20). Comparing time (1) to time (2), there was a significant change in the mean, from 1.81 to 1.34. The mean indicates that the participants disagreed with this item before the program. However, after the program, their attitude shifted more in the negative direction. The participants disagreed even more.

d. If a mammogram shows that you need surgery, most of the time surgery is not necessary (item 21). Comparing time (1) to time (2), there was a significant change in the mean, from 2.56 to 1.59. Before the program, the participants agreed a little, but after the program, the participants strongly disagreed.

e. Mammograms find cancer in its earliest stages of growth, when it can be cured (item 22). Comparing time (1) to time (2), there was a significant change in the mean, from 4.21 to 4.59. Before the program, the participants agreed with the item and after the program, the participants strongly agreed.

f. After you have had a couple of mammograms that are ok, you can skip a few years (item 23). Comparing time (1) to time (2), there was a significant change in the mean, from 1.59 to 1.06. The participants disagreed with this item before the program, and after the program, the participants strongly disagreed

g. Mammograms are only good for women with breast of a certain size Item 24). Comparing time (1) to time (2), there was a significant change in the mean, from 1.42 to 1.05. The participants disagreed with this statement before the program and after the program, the participants strongly disagreed.

Conclusions

Based on the study's findings, the following conclusions were made as they relate specifically to the four hypotheses.

1. Participation in Witnessing In Tennessee significantly increased performance of Breast-Self Examination among African American women in East Tennessee.
2. Participation in Witnessing In Tennessee significantly increased receipt of Clinical Breast Examination among African American women in East Tennessee.
3. Participation in Witnessing In Tennessee had no effect on receipt of mammography among African American women in East Tennessee.
4. Participation in Witnessing In Tennessee improved knowledge and attitudes related to breast cancer and screening among African American women in East Tennessee.

Recommendations

1. Witnessing In Tennessee should be implemented in other counties in the East Tennessee Region. By implementing this project in other counties, the number of women, specifically African American can be encouraged to witness about breast cancer and encourage women that it is not a "death sentence.
2. Witnessing In Tennessee is faith-based and it uses a culturally sensitive approach in reaching women concerning breast cancer and screening. This type of an approach should be used to reach African American women or men concerning other health issues.

3. If further research is conducted evaluating the effectiveness of the Witnessing In Tennessee Project in other counties, the time between the initial and follow-up events should increase by at least two months.

CHAPTER VI

THE STUDY IN RETROSPECT

Introduction

This chapter provides a comprehensive look at the study, specifically, discussing the findings in relation to past studies, the researcher's experiences, those of Thompson Cancer Survival Center, the volunteers (role models and lay health advisors), the participants, and the general public. Also, this chapter addresses the strengths and weaknesses of the study. Lastly, this chapter details some of the most memorable moments of the study.

The Findings in Relation to Past Studies

The findings of this study conquer with findings from previous studies, specifically some of the studies that are covered in the literature review (Chapter 2). This study employed a methodology, which embraced African American women encouraging one another to participate in breast cancer screenings. Also, this study utilized actual breast cancer survivors and African American churches in getting the word out about breast cancer. Past research studies showed that by allowing African American women to serve as lay health advisors to share breast health information to other African American women and to serve as organizers of community education events, more women accepted the information and entered the health care system for necessary care. After the women shared information concerning breast health and screening practices, during the evaluation period, more women reported practicing Breast-Self Examination and receiving a Clinical Breast Examination. Also, this study's findings paralleled with

another article, which addressed the role of the African American church in health programs. This study illustrated the positive impact of faith-based health programs. Lastly, this study conquered with some of the results reported from a past study, which employed the original Witness Project®. The results from this study and the original Witness Project® reported an increase in Breast-Self Examination and Clinical Breast Examination post-intervention.

The Researcher's Experience

Dr. Scott Peck states, "Seeking joy in and of itself will not bring it to you; do the work of creating community, and you will obtain it". This statement describes the very essence of the researcher's experience with this study. After the dissertation topic was chosen and the proposal was approved, the journey began. One of the first things that had to be done was to recruit and train the women who would be the heart and soul of Witnessing In Tennessee. Truly, it was the volunteers that brought the power to the project; it could not have existed without them. The researcher was very fortunate to have secured financial support for this study through Thompson Cancer Survival Center and they paid for advertisement of the project in efforts to recruit African American women from communities of the study population. The advertisement sought out African American breast cancer survivors and African American women interested in participating in a breast health program. After getting some responses, the author met with the Cancer Outreach staff to begin planning for the first training! This was a very exciting time; this was reinforcement that the study was going to come to fruition. The author expressed that meeting the first set of volunteers was an awesome experience.

The training took place at Thompson Cancer Center; it was held on a Saturday and it was a success. During this time, work was still being done in scheduling the selected churches to host the Witnessing In Tennessee Program and recruiting more volunteers. There was a second training session and everyone was ready for action!

The first program was held on September 15, 2000 at 7:00pm and between nervousness and excitement, there was a feeling of empowerment in the air. The researcher was so proud of the volunteers and they were dynamic. To hear the stories of the survivors and see the energy of the lay health advisors, many were filled with joy. The author left each program with a feeling of inspiration. During each Witnessing In Tennessee program, seeing the ladies in action and seeing the audience response, many were encouraged to begin healthy practices concerning their breast. In fact, the findings of this study conquered with findings of previous studies, which employed similar methods as this study. There is much that could be shared concerning the researcher's experience with this study, but there were other memorable experiences during this study, including those with Thompson Cancer Center.

Thompson Cancer Survival Center

It has been said on different occasions how grateful Thompson Cancer Survival Center is for having the opportunity to be a part of Witnessing In Tennessee. When the researcher first began seeking out organizations to collaborate with in the efforts of starting the project, many contacts were made, but there were not any contacts with organizations that the researcher felt had a heart and goal for Witnessing In Tennessee. After the researcher's advisor suggested that she meet with someone in the Cancer

Outreach Services at Thompson, she called and spoke with their health educator, scheduled a meeting with the staff, and mailed them some information concerning the project. At the onset of the meeting, it was known that this was the organization to collaborate with, this was the place that Witnessing In Tennessee needed to be, and these were people who had a heart for outreach! They expressed how good it has been for them to build partnerships with the African American communities and serve the population in a culturally relevant way. Cancer Outreach Services had been trying to reach the African American population in the East Tennessee Region. Building a partnership with the volunteers, the African American churches, and the researcher was a major step for Thompson in efforts to create a method that would continually reach the population in an effective manner. Thompson has been pleased to have more African Americans participate in their services, in their activities, and in programs that they have been invited to, (i.e. Race for the Cure-The Survivors Luncheon).

Volunteers

The volunteers were such a special part of Witnessing In Tennessee. Without the volunteers, the program could not have existed. It was their stories, their skills teaching, and their commitment that maintained the project for the study to be conducted. The volunteers expressed how pleased they were to have a program designed for African American women. Many of the ladies stated that they were elated to have an opportunity to volunteer with a breast health project, which served the African American community. Knowing the seriousness of breast cancer, many of the ladies, especially the survivors, were delighted to have the opportunity to encourage women to practice BSE, have the

clinical breast exam, and to have the mammogram. The ladies were glad to share that breast cancer isn't a death sentence. The volunteers were glad to have a support system; for some of the ladies, Witnessing In Tennessee served as a support group. The ladies enjoyed the fellowship from the training sessions, the programs, and other activities. One of the major activities that was sponsored for the ladies was an appreciation dinner held at Thompson Cancer Survival Center. Each lady invited a guest of her choice and a gospel dance team performed. The researcher and a staff member of the Cancer Outreach Services presented gift bags and appreciation cards to each volunteer.

Study Participants, Churches, and General Public

The study participants, the churches, and the general public were receptive to Witnessing In Tennessee. While preparing to do this study, several people wondered how was an outsider going to do what the researcher had in mind. It had been said that the people in Knoxville were very closed to outsiders and that they would be very slow to support the project. However, reaching the gatekeepers, involving the community, and being open about the study, the researcher found that more and more people began to listen and desire to help. The study participants were accepting; many of them had questions during the program and some of them waited and talked with the survivors one-on-one after the program. Completing the instrument was one of the least liked aspects, but after the ladies were told the importance of evaluating the program and that they did not have to complete the instrument to stay for the program, usually, all of the ladies completed the instrument. They enjoyed the "Witnessing To Save Lives" video that was shown as a part of the program. Everyone watched the tape so attentively and displayed

their agreement to different statements made in the video by nodding or shaking their heads. The pastors encouraged their members to participate in the program. Some of the pastors scheduled the program themselves; they did not pass the responsibility on to the mission ladies, the parish nurse, or some other women's group and every church that hosted a program received great support from their pastor. The general public seemed to embrace the program. There were many people who shared their excitement concerning the program coming to their church. After each program, the host person expressed such gratitude and wanted the program to return to their church.

Strengths and Weaknesses

There were both strengths and weaknesses of the study. The greatest strength of the study was having actual breast cancer survivors. It was powerful having actual survivors share their stories. It was good to have ladies who related to the study population, teach skills and speak out about breast cancer. Another strength of the study was having the support from Thompson Cancer Survival Center. Having the support of a local institution made a major difference. Thompson provided a place for the training sessions, covered the expenses, and made sure that the researcher had everything that was needed to successfully conduct the project. Partnering with the community and the churches was another strength of the study. More researchers are conducting studies involving the faith-based community. It serves as a major voice in the community. There were weaknesses of the study. One of the major weaknesses of the study was the length of time allotted before completing the callback. It was difficult for some of the women to schedule and have a mammogram within one month. It is suggested that at

least two months be allotted before completing the callback. Also, to strengthen the study, the research design could be changed. There could be an experimental group and a control group, instead of the one-group pretest-posttest design. When there is a time constraint, sometimes there is not enough time to coordinate a control group prior to the starting of the intervention.

Most Memorable Moments

The last section of this chapter details some of the most memorable moments of the study. One memory relates to the researcher first meeting with the staff of Cancer Outreach to discuss the study and Witnessing In Tennessee. The very day that they met, destiny was taking place. The researcher expressed that to see the look on their faces when they watched the video, to see how attentive they were during the discussion of study, and to see the smiles on their faces when the collaboration began, made her know that this study was on its way. It was definitely a greater power intervening to bring these two parties together to implement a community-based project.

Another memorable moment deals with the training sessions. Each time there was a training session, the ladies introduced themselves and further into the training they shared their story or whatever they wanted to share. During one of the training sessions, a survivor shared how she found out about the program. The survivor shared how she never bought the Sunday's paper of the New-Sentinel but that something told her to buy a paper the Sunday the project was advertised. After buying the paper, she looked through it and saw the announcement about a new breast health program needing African American survivors. The survivor stated on that following Monday she called and

received more information. After she finished the phone call, tears of joy began to trickle down her face because she thought back to eight years ago when she was first diagnosed. At the time of her diagnosing with breast cancer, the survivor stated that she didn't understand why and that the question puzzled her very much because she was a single parent with grandchildren that needed her support. However, she said before the end of the day, something told her that "you will be a witness" and the survivor stated that now, eight years later, this has come to be. I am a "Witness". Of course, there was not a dry eye in the place!

The researcher had the opportunity to represent Thompson Cancer Survival Center on behalf of the Witnessing In Tennessee at the Ad Hoc Committee Meeting for the Tennessee Tobacco Settlement and given the opportunity to speak at the meeting to request funds for the Witnessing In Tennessee Project. The people at Thompson were pleased how the word about breast cancer was getting out, how the community was responding to the project, and how it was making a difference in the African American population that they wanted to expand the project to other counties in Tennessee. During the presentation, it seemed that everyone on the committee was fixed on the project; they were attentive to every word. In fact, after the presentation, the only question that the chair of the committee had was "How much money does the project want"?

The last memorable moment that will be shared was featured in the News-Sentinel. One of the writers called and asked the researcher to do an interview concerning Witnessing In Tennessee and during the interview, the writer was so enthused and inspired from the conversation that she wanted to speak with one of the survivors. One

of the greatest things that happened during the study relates to the breast cancer survivor that she interviewed. One of the witness role models actually joined the project as a lay health advisor. When she attended the first program and heard the survivors share the importance of a mammogram, she was encouraged to have one scheduled. Being 38 years old, the volunteer had never had a mammogram and wasn't thinking about having one until she turned 40. After having the mammogram, it came back positive. It showed that she had calcifications under her left breast. The survivor shared the information with her husband and scheduled to meet with the doctor. Every time she tells her story, the survivor tells how grateful she was for Witnessing In Tennessee. She was grateful to be informed prior to dealing with the experience of cancer. One of the most remarkable points in her story is that catching cancer early is definitely the key. Her cancer was caught so early that after having her mastectomy, she did not have to have chemotherapy or radiation. She is only taking tamoxifen (one tablet) once a day for six months for preventive measures. She always says that she thought she joined Witnessing In Tennessee to help others and to serve the community but that the program ended up helping her. In fact, she states that it helped save her life!

Summary

In conclusion, it was wonderful that this dissertation topic was chosen and that the study was completed. It was not an easy task, but nothing worth having comes without work. There were some difficult days with this study and there were some long days with this study. However, there could not have been a better topic chosen. This was the study that needed to be done and the population that needed to receive it!

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APPENDICES

APPENDIX A
INSTRUMENTS

BASELINE SURVEY

Hello, my name is _____, and I am a volunteer with Thompson Cancer Survival Center. Do you have a few minutes to answer a survey for us? We appreciate your time and honest comments. We hope your opinions will help us do a better job of reaching African American women.

Today's Date: _____

I.D. Number: _____

Name: _____

Address: _____

_____

Telephone: _____

Interviewer' Name: _____

BASELINE SURVEY

1. Has a doctor ever told you that you had a lump or tumor in your breast?

   ___ No ___ Yes (lump/tumor) ___ Benign breast disease

   ___ Fibrocystic breasts ___ a cyst

2. If yes, what year was the diagnosis? _____

3. Has a doctor ever talked with you about mammography? _____

4. How many mammograms have you had? _____ **(if 1 or more, skip to 6)**

5. Let's say that you wanted to get a mammogram. Would you talk to your doctor first, or would you make an appointment on your own?

   ___ Doctor first ___ Appointment on my own **(go to question 10)**

6. How long ago did you have your **first** mammogram?

   ___ One year or less ___ Between 1 and 2 years ___ More than 2 years ago

7. Why did you have your **first** mammogram?
   ___ The Witnessing in Tennessee Project
   ___ Breast problems
   ___ Other health problems
   ___ Routine check-up/self-referral
   ___ Physicians/nurse recommended
   ___ HMO sent reminder
   ___ Someone suggested it
   ___ Followed the recommended guidelines
   ___ Screening Program

8. How long ago was your most **recent** mammogram?

   ___ one year or less ___ between 1 and 2 years ___ more than 2 years ago

9. Why did you have your most recent mammogram?
___ The Witnessing in Tennessee Project
___ Breast problems
___ Other health problems
___ Routine check-up/self-referral
___ Physicians/nurse recommended
___ HMO sent reminder
___ Someone suggested it
___ Followed the recommended guidelines
___ Screening Program

10. When do you plan to have a mammogram?
___ Not planning to have one
___ Already scheduled one, if so when? _____
___ When I have a symptom
___ Only if the doctor recommends one

11. Have you ever had a clinical breast exam? ___ Yes ___ No

12. Do you practice monthly breast self-examination? ___ Yes ___ No

13. Who do you think is more likely to get breast cancer? Is it....
___ Women under age 50
___ Women between 50 and 65
___ Women over age 65
___ All groups at equal risk

14. Do you think that if a woman has breast cancer, then she will start to have pain, to feel a growth, or to feel bad?
___ No, not necessarily
___ Yes

15. If a women your age does not have any breast problems or symptoms, how often do you think she should get a mammogram?
___ More than once a year
___ Every year
___ Every one to two years
___ Every two years
___ More than every two years
___ Only when she has a problem/symptom
___ When a doctor says so
___ Never

16. What is usually better for finding a breast cancer when it is very small, a mammogram or a breast exam by a doctor or nurse?
___ Mammogram
___ Breast exam by MD or nurse
___ Both equally OK
___ Neither OK

ATTITUDES ABOUT MAMMOGRAPHY

Mammograms are a special type if x-ray for examining a women's breast. It is a test where the x-ray is taken only of the breast. Circle the correct number.

17. A mammogram is now a very routine medical test.

Agree strongly	Agree a little	Not sure	Disagree a little	Disagree strongly
1	2	3	4	5

18. Even though a doctor gives me a breast exam and everything is ok, I should still get a mammogram.

Agree strongly	Agree a little	Not sure	Disagree a little	Disagree strongly
1	2	3	4	5

19. I am not likely to have a mammogram unless I have some breast pain or discomfort.

Agree strongly	Agree a little	Not sure	Disagree a little	Disagree strongly
1	2	3	4	5

20. If a mammogram shows that you need surgery, most of the time surgery really is not necessary.

Agree strongly	Agree a little	Not sure	Disagree a little	Disagree strongly
1	2	3	4	5

21. Mammograms find cancer in its earliest stages of growth, when it can be cured.

Agree strongly	Agree a little	Not sure	Disagree a little	Disagree strongly
1	2	3	4	5

22. After you have had a couple of mammograms that are OK, you can skip a few years.

Agree strongly	Agree a little	Not sure	Disagree a little	Disagree strongly
1	2	3	4	5

23. Mammograms are only good for women with breast of a certain size.

Agree strongly	Agree a little	Not sure	Disagree a little	Disagree strongly
1	2	3	4	5

ATTITUDES ABOUT THE HEALTH CARE SYSTEM IN GENERAL

The next set of statements asks for your views about medical care in general, not just mammography. Again, please give your opinions on the following.

24. When I am sick, I try to cure myself rather than go to the doctor.

Agree strongly	Agree a little	Not sure	Disagree a little	Disagree strongly
1	2	3	4	5

25. When I am sick, I rely on God to be healed.

Agree strongly	Agree a little	Not sure	Disagree a little	Disagree strongly
1	2	3	4	5

26. If doctors were less expensive I would go more often.

Agree strongly	Agree a little	Not sure	Disagree a little	Disagree strongly
1	2	3	4	5

27. I only go to doctors as a last resort.

Agree strongly	Agree a little	Not sure	Disagree a little	Disagree strongly
1	2	3	4	5

28. I rely on God more than doctors for my health.

Agree strongly	Agree a little	Not sure	Disagree a little	Disagree strongly
1	2	3	4	5

GENERAL BACKGROUND

These final questions will ask for some general information about you.

29. How old are you____

30. Are you married? ___ Yes ___ No

31. What was the last year of school that you completed?

Elementary	1 2 3 4 5 6
Middle and High School	7 8 9 10 11 12
After High School	13 14 15 16 17 18 19 20+

32. What is your current employment status?
___ Retired
___ Not working and not looking for work
___ Not working but looking for work
___ Working part-time (outside the home)
___ Working full-time (outside the home)
___ Work in the home (housewife)

33. Can you tell me, approximately, how much is your family income per year?
___ Less than 10,000
___ $10,000 to less than $15,000
___ $15,000 to less than $25,000
___ $25,000 to less than $35,000
___ $35,000 to $50,000 or
___ $Over $50,000

34. Do you have health insurance that pays for at least some of your medical bills?
___ Yes ___ No

35. If you were to have a mammogram, would you have to pay for it out of your pocket? ___ Yes ___ No

Thank you for your time and remember that you will receive a 1-month follow-up call.

FOLLOW-UP SURVEY

Hello, my name is _____, and I am a volunteer with Thompson Cancer Survival Center. Do you have a few minutes to answer a survey for us? We appreciate your time and honest comments. We hope your opinions will help us do a better job of reaching African American women.

Today's Date: _____

I.D. Number: _____

Name: _____

Address: _____

_____

Telephone: _____

Interviewer' Name: _____

FOLLOW-UP SURVEY

1. Has a doctor ever told you that you had a lump or tumor in your breast?

   ___ No ___ Yes (lump/tumor) ___ Benign breast disease

   ___ Fibrocystic breasts ___ a cyst

2. If yes, what year was the diagnosis? _____

3. Has a doctor ever talked with you about mammography? _____

4. How many mammograms have you had? _____ **(if 1 or more, skip to 6)**

5. Let's say that you wanted to get a mammogram. Would you talk to your doctor first, or would you make an appointment on your own?

   ___ Doctor first ___ Appointment on my own **(go to question 10)**

6. How long ago did you have your **first** mammogram?

   ___ One year or less ___ Between 1 and 2 years ___ More than 2 years ago

7. Why did you have your **first** mammogram?
   ___ The Witnessing in Tennessee Project
   ___ Breast problems
   ___ Other health problems
   ___ Routine check-up/self-referral
   ___ Physicians/nurse recommended
   ___ HMO sent reminder
   ___ Someone suggested it
   ___ Followed the recommended guidelines
   ___ Screening Program

8. How long ago was your most **recent** mammogram?

   ___ one year or less ___ between 1 and 2 years ___ more than 2 years ago

9. Why did you have your most **recent** mammogram?
   ___ The Witnessing in Tennessee Project
   ___ Breast problems
   ___ Other health problems
   ___ Routine check-up/self-referral

___ Physicians/nurse recommended
___ HMO sent reminder
___ Someone suggested it
___ Followed the recommended guidelines
___ Screening Program

10. When do you plan to have a mammogram?

___ Not planning to have one
___ Already scheduled one, if so when? _____
___ When I have a symptom
___ Only if the doctor recommends one

11. Have you ever had a clinical breast exam? ___ Yes ___ No
(if Yes, go to question 11a) (if No, go to question 11b)

11a. Did you have it as a result of the Witnessing in Tennessee project?
___ Yes ___ No

11b. Have you scheduled one since you attended a Witnessing in Tennessee program?
___ Yes ___ No

12. Do you practice monthly breast self-examination? ___ Yes ___ No
(if yes, go to question 12a) (if no, go to question 13)

12a. If yes, did you start as a result of the Witnessing in Tennessee project?
___ Yes ___ No

13. Did the messages from the Witnessing in Tennessee program:
___ scare you?
___ encourage you?
___ make you want to know more?
___ help you?
___ answer questions you had?
___ teach you something new about breast cancer?
___ teach you something new about examining your breasts?
___ teach you something new about mammography?

14. Who do you think is more likely to get breast cancer? Is it....
___ Women under age 50
___ Women between 50 and 65
___ Women over age 65
___ All groups at equal risk

15. Do you think that if a woman has breast cancer, then she will start to have pain, to feel a growth, or to feel bad?
___ No, not necessarily
___ Yes

16. If a women your age does not have any breast problems or symptoms, how often do you think she should get a mammogram?
___ More than once a year
___ Every year
___ Every one to two years
___ Every two years
___ More than every two years
___ Only when she has a problem/symptom
___ When a doctor says so
___ Never

17. What is usually better for finding a breast cancer when it is very small, a mammogram or a breast exam by a doctor or nurse?
___ Mammogram
___ Breast exam by MD or nurse
___ Both equally OK
___ Neither OK

ATTITUDES ABOUT MAMMOGRAPHY

Mammograms are a special type if x-ray for examining a women's breast. It is a test where the x-ray is taken only of the breast. Circle the correct number.

18. A mammogram is now a very routine medical test.

Agree strongly	Agree a little	Not sure	Disagree a little	Disagree strongly
1	2	3	4	5

19. Even though a doctor gives me a breast exam and everything is ok, I should still get a mammogram.

Agree strongly	Agree a little	Not sure	Disagree a little	Disagree strongly
1	2	3	4	5

20. I am not likely to have a mammogram unless I have some breast pain or discomfort.

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21. If a mammogram shows that you need surgery, most of the time surgery really is not necessary.

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22. Mammograms find cancer in its earliest stages of growth, when it can be cured.

Agree strongly	Agree a little	Not sure	Disagree a little	Disagree strongly
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23. After you have had a couple of mammograms that are OK, you can skip a few years.

Agree strongly	Agree a little	Not sure	Disagree a little	Disagree strongly
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24. Mammograms are only good for women with breast of a certain size.

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ATTITUDES ABOUT THE HEALTH CARE SYSTEM IN GENERAL

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Agree strongly	Agree a little	Not sure	Disagree a little	Disagree strongly
1	2	3	4	5

26. When I am sick, I rely on God to be healed.

Agree strongly	Agree a little	Not sure	Disagree a little	Disagree strongly
1	2	3	4	5

27. If doctors were less expensive I would go more often.

Agree strongly	Agree a little	Not sure	Disagree a little	Disagree strongly
1	2	3	4	5

28. I only go to doctors as a last resort.

Agree strongly	Agree a little	Not sure	Disagree a little	Disagree strongly
1	2	3	4	5

29. I rely on God more than doctors for my health.

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GENERAL BACKGROUND

These final questions will ask for some general information about you.

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31. Are you married? ___ Yes ___ No

32. What was the last year of school that you completed?

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Middle and High School	7 8 9 10 11 12
After High School	13 14 15 16 17 18 19 20+

33. What is your current employment status?
___ Retired
___ Not working and not looking for work
___ Not working but looking for work
___ Working part-time (outside the home)
___ Working full-time (outside the home)
___ Work in the home (housewife)

34. Can you tell me, approximately, how much is your family income per year?
___ Less than 10,000
___ $10,000 to less than $15,000
___ $15,000 to less than $25,000
___ $25,000 to less than $35,000
___ $35,000 to $50,000 or
___ $Over $50,000

35. Do you have health insurance that pays for at least some of your medical bills?
___ Yes ___ No

36. If you were to have a mammogram, would you have to pay for it out of your pocket? ___ Yes ___ No

APPENDIX B
CONSENT FORM

CONSENT FORM AND INFORMATION REGARDING
"Increasing Breast Cancer Screening Among African American Women"

INTRODUCTION

You are invited to participate as a subject in this study through the University of Tennessee, to evaluate health beliefs, and learn about breast self-examination. Approximately 100 women from Knox and Blount counties will be included in the study. It is believed that the results of this study will give us valuable information that will enhance breast cancer screening among African American women.

STUDY DETAILS

As a participant in this study you will be asked to complete a survey composed of questions concerning mammography, clinical breast examination, and self-breast examination. Also, you will listen to speakers and learn how to perform breast self-examination using synthetic models. This will take approximately 1-½ hours. Afterwhich, you will be given a one-month follow-up call, which will also serve as a reminder and a follow-up to practices.

You were selected as a possible participant in this study because you are an African American woman, live in Knox or Blount county, are 35 years of age or older, and able and willing to learn about breast and cervical cancer screening. You will be one of 100 subjects chosen to participant in this study.

CONFIDENTIALITY

This information is for research purposes only; it will be kept strictly confidential. Any information published from this study will be reported in-group form only, and you will not be identified by name.

RISKS

There are no known risks to you as a subject in this study.

BENEFITS

You will have the opportunity to learn the proper skills to perform a self-breast examination. Also, you may have the opportunity to have a mammogram (breast x-ray) if you are 35 years or older and have health insurance that will cover the cost of the mammogram or if you may pay for it.

CONTACT INFORMATION

If you have any questions about this research project you may contact the investigator, Precilla L. Belin at the University of Tennessee, Department of Health and Safety Science, 1914 Andy Holt Ave., Knoxville Tennessee, 37996. She may be reached by telephone at (865) 974-5041. If you

have questions about your rights as a participant, contact the Compliance Section of the Office of Research at (865) 974-3466.

_____ Participant's initials

PARTICIPATION

Participation in this study is voluntary, and if you decide not to participate it will not affect your relation with your doctors, church or community. If you decide to take part, you are free to stop whenever you want.

CONSENT

I have read the above statement or someone has read it to me and I have been able to ask questions and express concerns, which have been satisfactorily responded to by the investigator. I understand the purpose of the study as well as the potential benefits and risks that are involved. I hereby give my informed and free consent to be a participant in this study.

This form will remain on file for three years past the completion of the study at the HPER building in suite 390 in a locked file cabinet at the University of Tennessee, Knoxville.

_____ _____

Participant's Signature Date

_____ _____

Investigator's Signature Date

APPENDIX C
INFORMATION SHEET

Purpose

Witnessing is Tennessee (WIT) is program that uses methods from the original Witness Project® to raise the awareness of African American women. As the original project, WIT is a culturally sensitive community-based breast cancer education program through which cancer survivors and lay health advisors increase awareness, knowledge, screening, and early detection behaviors in the African American population in an effort to reduce the mortality and morbidity from cancer.

It is said, "In church, people witness to save souls.
At the Witness Project®, they witness to save lives!

Need

African Americans have the highest overall age-adjusted rates of cancer incidence and mortality of any United States population group. Despite a somewhat lower incidence rate, the five-year survival rate for African American women with all stages of breast cancer is notably lower than the rate for white women. And, African American women are twice as likely to develop cervical cancer and nearly three times as likely to die from it. Pap tests, mammography, and monthly breast self-examination (BSE) are proven methods for increasing the early detection of cervical and breast cancer, and decreasing death. Poor, minority and elderly women, however, especially in rural areas, are less likely to practice cancer screening.

Surveys consistently find that African Americans are less knowledgeable than whites about most cancer-related issues. They often delay seeking health care, so their cancers are frequently diagnosed at later stages. Although screening mammography rates continue to rise in the general population, minority and low-income women have increasingly lower utilization rates. Thus, there is a definite need for this program!

Witness Programs

The programs are presented in churches and community centers by witness role models (WRMs) and lay health advisors (LHAs). WRMs are African American women who are breast or cervical cancer survivors. Their presence as survivors is seen as a blessing and proof that cancer is not a death sentence. LHAs are not cancer survivors themselves, but are women who want to work with the project to organize and publicize programs, network with community people, answer questions about services, and teach breast self-examinations. During each program session, participants will have an opportunity to sign up for a mammogram. For more information or to schedule a program, call 541-1312.

APPENDIX D
INFORMATION LETTER

Dear Pastor and Congregation:

Hello, I bring you greetings in the name of our Lord and Savior Jesus Christ.

My name is Precilla Belin, and I am an African American community health education specialist and the director of Witnessing in Tennessee," (WIT). I am contacting you as a reminder of our desire to share this very important program with you and your ministry. Again, WIT is an African American breast cancer education program through which African American cancer survivors and lay health educators increase awareness, knowledge, screening, and early detection behaviors in African-American women. Presently, we are scheduling programs in the East Tennessee Region.

Breast cancer is the second leading cause of cancer death in African American women. However, educating women about screening procedures and the importance of early detection can decrease the number of women dying from breast cancer. Our volunteers share the important message that breast cancer is NOT a death sentence.

We are reminding you that we want to share this program at your church. There is NO charge for the program and the participants will have an opportunity to sign up for a mammogram. We are a volunteer community outreach organization, and the program is entirely funded by grants from the Susan G. Komen Breast Cancer Foundation and Thompson Cancer Survival Center.

We have found that this type of program is very beneficial, and other churches in your area have been very receptive. Also, I have enclosed some information explaining the Witnessing in Tennessee program.

For more information or to schedule a program, please contact me or Linda Talbert with Thompson at 541-1312. May God be with each of you is my prayer.

Precilla L. Belin, MA, CHES

WIT Program Director and
Graduate Teaching Associate
University of Tennessee

VITA

Saying that it is "because of the plan of God for my life," and giving credit to a "wonderful mother and family that would not allow me to give up," Precilla Lorene Belin triumphed through many challenges to reach one of her most precious goals, completing a Ph.D. Belin is the daughter of Mrs. Clorene Belin and an honor graduate in the Crossett High School Class of 1985.

Belin began a distinguished career in the Crossett schools by joining the flute section of her sixth-grade band. She eventually became a section leader, later was president of the band and an All-Region performer. Her list of clubs and activities were extensive.

Following high school, Belin entered the University of Arkansas, intent on majoring in pharmacy. In 1987 she left UA and was accepted into pharmacy school at the University of Arkansas for Medical Sciences in Little Rock.

During her time at UAMS, Belin experienced what it was like to work in a retail pharmacy by working in the outpatient pharmacy at the Veterans Administration Hospital, and the hospital pharmacy at UAMS. She began to question whether pharmacy was her field. She dropped out of UAMS and went to work for a telemarketing firm in Sherwood, selling ads to raise money for charities.

While at UAMS, Belin had taken an elective course at the University of Arkansas-Little Rock, where she came into contact with Dr. Thea Spatz. During the whole time that Belin was doing telemarketing, she stayed in contact with Dr. Spatz, who later became her mentor. Dr. Spatz always encouraged Belin to get back into school.

Finally, heeding her mentor's advice, Belin in 1992 entered UALR as a junior. She graduated from UALR in May 1994 with a bachelor's degree in health education, and a minor in chemistry.

Belin had begun to be a witness for her faith teaching a dormitory Bible study at UA. She continued this at UALR. In August 1996, Belin was strong in her faith and again, with the love and support from her mother and family, she began her second degree. Through the love and encouragement from her family, her spiritual teachers, and her mentor, she completed her master's degree in gerontology with an emphasis on health education in May 1998. Belin distinguished herself at UALR with many different honors and awards. She was inducted into the *TRIO Hall of Fame*. She was named to both the dean's list and the chancellor's list, while also being inducted into the Golden Key National Honor Society. Belin was also a Ronald McNair Scholar and McNair Research Fellow.

Shortly before graduation, Belin learned that she had been accepted into the Ph.D. program at UT, with a Graduate Teaching Associate opportunity. At UT Belin again covered herself with honors. She was inducted into both Eta Sigma Gamma and Kappa Omicron Nu. Also during her tenure at UT, she received the *Outstanding Community Outreach as a Graduate Student Award*; she received the Human Ecology's *Helen Sharp Hakala Scholarship*; and she was certified as a health education specialist, through The National Commission For Health Education Credentialing, INC. She was also selected as a Graduate Student Council representative, and was Charter President for the Black Graduate and Professional Student Association. In addition, she was selected as a

Southern Regional Education Doctoral Scholar, a national fellowship program to assist students in obtaining a doctoral degree leading up to joining a faculty, teaching in the health field. Belin was a financial member of the American Public Health Association, the Society for Public Health Educators, and the American Alliance for Health, Physical Education, Recreation and Dance.

In addition to the honors mentioned above, Belin was truly proud to head the first African American breast health program in East Tennessee, known as Witnessing In Tennessee. Modeled after a program begun earlier in Little Rock, WIT attempts to increase the awareness of breast health among African American women. Belin has enjoyed her work with WIT and she knows that her research study has been a part of manifest destiny. Her career objectives are to mentor and encourage others and to continue walking into purpose and destiny! She knows that she has new territory to cover and many more lives to touch. Belin firmly believes that "what she helps to make happen for others, God makes happen for her"!