Race and ethnicity play roles in breast cancer mortality, particularly for African American women. As a result, a three-pronged integrated community education model (i.e., faith-based, community, and state agencies) was generated and tested in a medically underserved area with high mortality rates from breast cancer to increase participation in breast health education, provide early screening and detection practices, and provide access to annual mammograms and referral sources. The model provided three women with life-saving early diagnoses, in addition to providing potentially hundreds of women with a network of breast health, self-monitoring, and referral sources for future issues.

Breast cancer is the most common nonskin cancer in women, the number one cause of cancer deaths in Hispanic women, and the second most common cause of cancer deaths in Caucasian, African American, Asian Pacific Islander, American Indian, and Alaska Native women in the United States (American Cancer Society [ACS], 2009). About 230,000 cases of invasive breast cancer are estimated to be diagnosed, and about 40,000 deaths are expected from the disease annually (ACS, 2011; National Cancer Institute [NCI], 2011). Mortality is linked to the stage of cancer at time of diagnosis, with later stages having poorer prognoses. Race and ethnicity play serious roles in these statistics (NCI, 2011). In Caucasian women, the incidence of breast cancer is highest; however, African American women have a greater breast cancer mortality rate than any other racial or ethnic group. They present with more advanced disease at a younger age and have lower rates of adherence with the screening guidelines for mammography (Lisovicz et al., 2006; Stelger, Samkoff, & Karoullas, 2003). African American women are 1.5–2.2 times more likely to die from breast cancer than Caucasian women (Lisovicz et al., 2006; Stelger et al., 2005).

At a Glance

- Breast cancer mortality is higher among African American women than Caucasian women of comparable age and cancer stage because this population is more likely to be diagnosed in advanced stages.
- Psychological and social barriers to breast health in African American women include lack of health insurance, financial burden, preconceived beliefs or lack of knowledge, undertreatment, cultural views of past events with the healthcare system, and attitudes regarding screening procedures.
- More publicity, outreach programs, and education should be implemented to counter the lack of information available.
Cultural Issues for African American Women

The disparity between African American and Caucasian women has been attributed to a number of psychological and social reasons, including lack of health insurance, financial burden, preconceived beliefs or lack of knowledge regarding the importance of screening, attitudes regarding screening procedures, cultural views of past events with the healthcare system, and undertreatment (Fouad et al., 2004; Frisby, 2002; Thomas, 2004, 2006). Susan G. Komen for the Cure (2007) noted that,

[A]rranging reliable and affordable transportation, need to arrange for time off work, scheduling child care, and saving to make copayments for each treatment were emphasized as financial burdens primarily in rural areas, but was a challenge for urban women as well (p. 3).

Several authors have cited a lack of information regarding the availability of services to healthcare providers and underserved African American women as another barrier to early screening, suggesting that more publicity, outreach programs, and education should be implemented to rectify this common problem (Danigelis, Worden, Flynn, Skelly, & Vacek, 2005; Susan G. Komen for the Cure, 2007).

Frisby (2002) and Susan G. Komen for the Cure (2007) discussed psychological responses that have been identified as personal factors inhibiting African Americans from participating in cancer health-promotion behaviors, such as fear, fatalism, and misperceptions about the disease. For example, some women were afraid of finding a cancerous lump, and some believed incorrectly that mammography reduces the incidence of breast cancer or that breast cancer is not a serious disease. Others shared a lack of belief in the efficacy of breast cancer treatment, with many participants sharing a belief that surgery caused cancer to spread throughout the body (Susan G. Komen for the Cure, 2007).

Frisby’s (2002) study also suggested that a lack of media sources designed specifically to inform African Americans about risk factors and preventive measures could be interpreted by these women as proof that breast cancer is not their problem or that they rarely would develop the disease. Providing culturally sensitive health information to reinforce teaching is essential to reach African Americans of all socioeconomic and educational levels (Coleman et al., 2003).

Thomas (2004) asserted that cultural beliefs embedded in memories and personal feelings about breasts also may act as barriers and serve as negative influences on African American women’s willingness to engage in breast cancer screening. In an exploratory study involving 12 African American women with middle-to-high incomes, Thomas (2006) summarized the women’s descriptions of their first mammogram experience as “painful, impersonal, embarrassing, and feelings of humiliation with no explanation from the physicians or nurses about what to expect” (p. 368). The women shared that it was common in their families to avoid open discussion about breast health practices, and particularly breast cancer. The participants suggested that healthcare providers take the time to talk with their patients before and after clinical breast examinations (CBEs) and medical procedures, such as mammograms, to help alleviate insecurities.

Many African American women are doubtful that cancer treatments work and use their faith in God as the primary source for healing (Lisovitz et al., 2006). The church, particularly in rural southern communities, serves as a strong and highly visible entity for support, education, and guidance in health care, particularly when a health crisis exists. Bowie, Wells, Juon, Sydnor, & Rodriguez (2008) found that those who had stronger religious beliefs of health were more likely to have their first mammogram by the recommended age of 40 than those who had weaker religious beliefs of health. Churches’ strong influence for a majority of African American women led the current study’s investigators to determine this was the best way to reach this underserved population. Churches also are an integral part of the community and are accessed easily, even by those who are not a part of the congregation. The investigators believed that developing partnerships with congregations and providing healthcare screenings, educational awareness, referrals, financial assistance, transportation, and treatment could provide a powerful impetus for the study.

Eight communities in the United States had evidence of significantly higher mortality rates from breast cancer for all women (Susan G. Komen for the Cure, 2007). The Susan G. Komen for the Cure (2007) study also identified several common factors among these eight communities that influenced the statistics. One of the major factors revolved around little to no access to screening because of a lack of insurance coverage and poor socioeconomic status. The issue of access to care, coupled with higher mortality rates in those counties, served as the impetus for the current study.

The purpose of the study was to generate and test an integrated community education model in a medically underserved area. Goals were designed to increase participation in breast health education, provide early screening and detection, and provide access to annual mammograms and referral sources for treatment of problems, thereby decreasing the disparity in a population of higher-risk women.

Research Objectives

The objectives of the current study were to identify the psychosocial and cultural issues and barriers that affect breast health screening and early detection practices in the study population, identify any perceived differences between rural and urban areas in terms of breast health care, develop and implement a culturally sensitive educational program to empower these women to become more active in breast health, provide specific interventions to facilitate access to breast health screening and treatments, and evaluate the success of the Train the Trainer sessions by surveying breast health with a self-report follow-up with the study population.

Methodology

The project was written and developed by a team of investigators from an academic health science center’s school of nursing, located in the southern United States. The research team obtained
grant funding from the state’s Institute for Improvement of Geographic Minority Health, a subaward of the National Institutes of Health. Institutional review board approval was obtained.

The target county selected for the study was one of the eight communities identified by Susan G. Komen for the Cure (2007) as having high mortality. The selected county had a population of about 88,000 people. Fifty-two percent of the population was female and 59% was Caucasian, 38% was African American, and 1% was Hispanic (U.S. Census Bureau, 2006). The median income for a household in the county was $46,970; about 10% of families and 14% of the population were below the poverty line. More than 25% of the population in seven towns located in the target county was below the poverty level. Those towns also had the areas of greatest concentration for medically underserved women within the county.

The investigators developed a three-pronged, integrated community intervention model (i.e., faith-based, community, and state agencies) to impact late-stage breast cancer diagnoses in an underserved rural area (see Figure 1). The Integrated Community Team hoped to provide specific services to 100 medically underserved and uninsured women of all ages and races from the rural southern county. The investigators developed community partnerships with a number of organizations.

The school of nursing provided outreach Train the Trainer seminars on breast health education to 20 key women in 10 churches in the county. In addition, each screening session required that each participant would receive printed educational materials; an interactive educational session on breast self-examinations (BSEs), provided by school of nursing faculty; and a CBE, provided by volunteer nurse practitioners. Undergraduate and graduate nursing students provided educational sessions and collected data.

The Caring Hands Clinic, a faith-based church ministry in the county, served as the primary provider to order and receive mammogram results and establish follow-up for clients, as needed. The local county medical center, which includes a hospital and an outpatient clinic, served as a partner to provide the screening mammograms on four designated Saturdays, marketed as Pink Lady Days. The screening mammograms, along with radiologist interpretation, were provided to 19 uninsured women who were financially unable to pay for the services. The nominal fee of $105 per person was covered by the grant. Women with insurance, Medicaid, or Medicare were given a CBE and then referred to their primary care providers for mammography, as necessary.

The state department of health’s breast and cervical cancer program served as the primary referral source. The program enrolled women with abnormal mammograms into the program and then into Medicare or Medicaid for follow-up, biopsy, and treatment, as necessary.

A network of four churches in the county area, chosen for their easily accessible locations within the community, was selected to serve as the screening locations for the Pink Lady Days, and to participate in publication of the events. Each church held one event, for a total of four Pink Lady Days. The Pink Lady Days also were publicized through the local radio station, in addition to flyers posted in local businesses. A contract with a cab company for transportation of clients to and from the churches and the mammography center was coordinated by one of the investigators.

Implementation

The first phase of the project was developing and conducting the Train the Trainer sessions. Each training session lasted about two hours and consisted of various teaching and learning strategies, including didactic lecture, videos, hands-on practice, and demonstration, along with return demonstrations for teaching BSE methods to others and successful responses to participant-driven questions, as part of the evaluation process.

The participants also served as resources to elicit women to attend the Pink Lady Days for free breast screening outreach and education. Each participant in the Train the Trainer sessions received a facilitator’s guide, educational video and materials, and a breast model to learn and then teach the most current information regarding breast health. Study investigators taught the new trainers recommended methods of BSE using breast models. The investigators also taught the new trainers how to teach others using the breast models. Seven sessions of Train the Trainer were conducted, attended by 20 participants representing 10 county churches. The investigators developed the curriculum for the Train the Trainer sessions, planned the implementation of the curriculum, contacted 10 local churches
to identify key women leaders for training, and conducted the sessions onsite at the four selected churches.

The goals of the sessions were to educate key women leaders of the church about the importance of breast health and provide information related to breast cancer awareness, how to perform BSEs, and how to provide education to others in the communities.

The second phase of the project was to provide four Pink Lady Days implemented in four county churches on four separate Saturdays. These sessions were held to provide educational information to women from the community (e.g., practice stations, printed materials) and to provide a CBE by a nurse practitioner. Prior to the CBE, participants were asked to complete a form about insurance and resources. All demographic data were recorded anonymously. Several additional questions were included to determine the psychosocial and cultural barriers for the participants in the current study.

If any woman had an abnormal CBE and met the criteria for a free mammogram (i.e., no payment source), the woman was transported to the mammogram center via the taxi and then back to the church. Women with abnormal CBEs and a pay source were referred to their primary care provider for evaluation and follow-up.

Results

A total of 53 participants attended the Pink Lady Day screenings, including 20 women who participated in the Train the Trainer sessions. Forty-eight participants (90%) were African American and five (10%) were Caucasian. The average participant age was 52 years, with a range from 12–71 years (see Table 1). Fifteen participants (28%) were in the 40–49 year age range, the target population for the project.

All participants aged 40 and older (n = 38) were asked when they last received a mammogram. About half of the participants had received a mammogram within the last one to two years, with the other half never receiving one. Nine participants aged 40–49 years never had received a mammogram.

Seventeen participants indicated a family history of breast cancer, with six participants—who all fell into the 39 years and younger age range—indicating both a sister and mother as having cancer. One participant was a breast cancer survivor that had been diagnosed at age 40 and was now 71.

Nineteen participants who met the financial no-pay-source requirement were sent for mammography. Of the 19 mammograms performed, 10 returned with abnormal results requiring follow-up. Each of these participants was referred to the breast and cervical cancer program for enrollment and long-term follow-up. Of the 10 participants referred with abnormal mammography, five were evaluated with spot compression re-examination, and three were referred to a breast oncologist for biopsy. As a result of the program, three participants, aged 49, 48, and 37 years and all African American women, were diagnosed as having early-stage breast cancer. The 37-year-old woman had an abnormal CBE and a family history of breast cancer and, therefore, was sent for mammography even though she was below the target age for the project. The outcomes for each of the project objectives are described in the following sections.

### Psychosocial and Cultural Issues Affecting Screening and Early Detection Practices

All participants indicated they knew about mammograms prior to the screening date, and 70% of all participants aged 40 or older indicated they had had a previous mammogram. Sixteen (31%) indicated the lack of funds as the primary reason for not obtaining regular mammograms. Of the 18 participants (34%) that indicated they had never had a mammogram, 10 cited the following reasons: lack of financial resources (n = 7), lack of access to healthcare provider (n = 1), lack of transportation (n = 1), and lack of trust in healthcare providers (n = 1).

Thirty-three participants (62%) indicated they performed BSEs on a monthly basis. For the women not performing BSEs, the following responses were given as reasons: do not know how to perform (n = 6), forget (n = 3), embarrassed to touch body in that way (n = 2), time (n = 2), and don’t understand the importance (n = 1).

Participants were asked several open-ended questions, such as “What new information have you learned today?” The following were their responses: “proper technique for breast self-exam,” “how important it is,” “everything,” “improvement in present way of doing exam,” “signs of breast cancer,” “effectiveness of doing it,” “better caring for myself,” “what a lump feels like,” “to have a mammogram every year,” and “being able to share the information.”

It was evident from the participant responses that they experienced many of the same psychosocial and cultural issues previously identified in the literature review, such as lack of trust for the healthcare system and healthcare providers and correlation of disease with certain religious beliefs.

### Table 1. Sample Characteristics

<table>
<thead>
<tr>
<th>CHARACTERISTIC</th>
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<tr>
<td>Age (years)</td>
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<tr>
<td>Uninsured</td>
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N = 53
Perceived Differences Between Rural and Urban Residents

One question asked participants: “What reasons would keep you from going to a doctor if you found a knot/lump in your breast, or found drainage coming from your breast?” Responses included “fear of cancer,,” “scared/fear,,” “shy,” “no pain,” “no insurance,” “finances,” and “lack of knowledge.” Similar responses were given to the question, “What reasons would keep you from having a mammogram?”

Discussion

The results of the current study that explain why women do not receive regular mammogram screenings are validated in the literature. Reasons cited in the current study as well as in the literature include cost or lack of finances, access, lack of knowledge, fear, mistrust of healthcare providers, and lack of primary healthcare provider (Ahmed, Fort, Fair, Semenya, & Haber, 2009; Lopez, Khoury, Dailey, Hall, & Chisholm, 2009; Ngenda, Caballero, & Gonzalez-Robledo, 2009; Schueler, Chu, & Smith-Bindman, 2008).

The results of the study that identify barriers affecting the health of African American women and women of lower socioeconomic status also are supported by the literature. Of particular concern is the lack of knowledge, as previously noted by other researchers (Ahmed et al., 2009; Avis-Williams, Khoury, Lisovicz, & Graham-Kresge, 2009).

Rodriguez, Bowie, Frattaroli, & Gielen (2009) linked community churches with community partner assessments to address health disparities in an underserved community. They found that the best results occurred when the religious or spiritual program elements did not overpower the importance of reaching community participants with critical healthcare information.

Lisovicz et al. (2006) used the well-developed Deep South Network, which encompassed two southern states in academic and community settings, to address cancer disparities in the African American community using a model based on community theory by Paulo Freer. The project’s goals were to promote cancer awareness and early detection practices, generate awareness of clinical trials, and provide current and culturally relevant key cancer messages on a large scale to target populations. A grassroots community infrastructure was used to build partnerships within communities. Community health advisors were trained to spread cancer awareness messages within underserved populations. The results of their actions were impressive increases in Papanicolaou smears and mammograms within the study population.

Adams (2007) designed and described the African American Breast Cancer Outreach project, intended to positively impact the number of African American women screened for breast cancer in Texas. The project specifically targeted were poor and medically underserved women. A primary lesson learned was the effectiveness of structured team building and networking with community leaders in underserved areas. Using this community model significantly impacted the number of women screened for cancer. Shallwani, Ramji, Ali, and Khuwaja (2010) used a similar research methodology, creating a community-based health education intervention plan to positively impact BSEs among women and testicular self-examinations (TSEs) among men in a geographically defined area of Pakistan. Postintervention, significant improvements were reported in BSE and TSE practices as a result of the educational intervention at the community level.

The previously mentioned studies clearly link the positive influence of community-based health education models on health practices. The data demonstrated in these studies support the current study methodology and the ongoing practice of faith-based educational interventions at the community level by key leaders. The current research project provided three women with life-saving early detection for breast cancer. The integrated community model also provided potentially hundreds of women with an ongoing source of breast health, self-monitoring, and referral sources for problems in the future. The strengths of the study are that it (a) provided important information, (b) used teamwork to get the project off the ground in a short turnaround time, (c) identified women at risk for breast cancer, (d) raised awareness in the community regarding the importance of breast health, (e) created networking opportunities to continue education and intervention within the community, (f) established ongoing partnerships formed between education, service, and community (e.g., churches), and (g) provided an ever-expanding pool of breast health knowledge and referral sources for women with breast health problems. Limitations for the study include the potential for bias by using faith-based institutions in the interventions and recruiting women who are more likely to have mammograms. In addition, limited generalizability of the findings may exist related to women who are not affiliated with nor have access to a faith-based institution. Another limitation is the small sample size. The authors believe that the timing of the grant activities impacted the sample size by providing less time for advertising and marketing strategies to be implemented.

Implications and Recommendations

The purpose of the current study was to generate and test an effective integrated community education model to reduce late-stage breast cancer diagnoses in medically underserved women. The integrated community model was effective in assisting with early breast cancer detection.

Replication of the study in other rural areas would help to validate findings. Identification and involvement of key leaders in communities also might encourage a larger number of participants. Follow-up studies at designated periods with community participants might provide additional information related to ongoing access to care and determine whether barriers were overcome. The findings from the current study can be compared to national and state data related to breast health knowledge and barriers to the provision of care. This community partnership model may be duplicated easily for future projects, which may include additional educational components regarding facts about current cancer treatments to dispel myths and reduce fear. That hopefully would reduce the fear of the diagnosis of breast cancer and encourage women to remain vigilant in breast health and to seek medical diagnosis and treatment before the cancer advances. The largest barrier to obtaining routine mammography in this underserved population was the lack of financial resources. With current and projected healthcare cost containments, that barrier will remain difficult to overcome.
The investigators concluded that a community-based referral system with a flexible network linkage to churches, nonprofits, community organizations, and state or local health centers provides the strongest likelihood to overcome financial constraints.

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**References**


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