Knowledge, attitude, and practice of self-breast examination among female university students at Presbyterian University College, Ghana

Linda Akuamoah Sarfo[1*], Dorothy Awuah-Peasah[2], Elizabeth Acheampong[1], and Florence Asamoah[1]

Presbyterian University College of Ghana, Department of Nursing[1], PO Box 42, Asante-Akyem, Ghana West Africa

Christian Service University College, Kumasi, Ghana[2]

[*]Corresponding author: linda.sarfo@presbyuniversity.edu.gh

ABSTRACT

Breast self-examination (BSE) is a screening method used to detect early breast cancer which involves the woman herself looking at and feeling each breast for possible lumps, distortions or swelling. The main aim of the study was to determine the knowledge, attitude, and practice of SBE among female university students. The study took place at the Presbyterian University College of Ghana, Asante Akyem Campus. A disproportionate stratified sampling technique was used to select a sample size of 250 nursing students. Self-administered questionnaires were used to collect the data. The data was compiled and analyzed using SPSS. The results revealed using Pearson's correlation, ($p=0.05$, $r=0.37$) that students in a higher level of education performed BSE properly. The results revealed 95% respondents had ever heard of breast cancer and BSE. Majority of respondents cited the media and formal education as their source of information on breast cancer and BSE. Even though the majority of respondents claimed they had heard of SBE, only 80% knew how to perform it. The study showed that majority of respondents were aware of breast cancer as a disease and self-breast examination as a screening method, but their knowledge and understanding of the method of BSE was very low. Breast cancer and self-breast examination awareness campaigns are therefore necessary to improve early breast cancer detection.

Key words: knowledge, perception, breast cancer, breast self-examination BSE, and Presbyterian University College

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Introduction

Breast cancer is second only to lung cancer as a cause of cancer related deaths among women (Burke *et al*, 2007). It is a worldwide major health problem. It is estimated that more than 212,000 women and 1,700 men develop the disease and more than 41,000 die of it annually (WHO, 2006 in Okolie, 2012). In addition, breast cancer is responsible for 12% of deaths worldwide in women (Balogun & Owoaje, 2004). Also, breast cancer appears to be a major global health problem of both the developing and developed countries (World Health Organization, 2009).

In Ghana breast cancer is now the most common malignant disease in women and is responsible for the majority of cancer related deaths (Wiredu & Armah, 2006). According to a study conducted by Clegg-Lamptey & Hodasi, (2007) breast cancer accounted for 15.4% of all malignancies, and this number is increasing annually. Approximately 70% of women who are diagnosed with breast cancer in Ghana were in the advanced stages of the disease (Kirby, 2005).

Diagnosis of breast cancer first begins with detection. The earlier breast cancer is detected; the better the effectiveness of the treatment and the likely of the survival. Breast cancer screening includes breast self-examination, clinical breast examination, and mammography, and these are usually done in combination.

Breast self-examination (BSE) is a screening method used to detect early breast cancer which involves the woman herself looking at and feeling each breast for possible lumps, distortions or swelling. BSE is a simple, inexpensive, non-invasive procedure which helps a woman to know her breast and allows her to detect changes in the breast; such as breast masses or lumps (Burke et al., 2007). Although BSE is a simple, quick and cost-free procedure, it appears that many women either perform it incorrectly or not at all.

Statement of Problem

Over the past years, international delegations and nongovernmental organizations have started paying attention to the growing problem of breast cancer in Ghana. In particular, the Breast Health Global Initiative and Susan G. Komen for the Cure established a Ghana Breast Cancer Alliance to help increase early detection and reduce the breast cancer mortality rate in the county (McCormack & dos Santos Silva, 2006). Despite the awareness that has been created by international delegations and nongovernmental organizations on the benefits of BSE for early detection of breast cancer, late presentation of cases at advanced stages when little or no treatment can be done from any form of therapy has remained the hallmark of breast cancer in Ghanaian women.

Nurses are in the best position to educate and motivate women on breast cancer screening in health care institutions. In order for nurses to be effective as educators they must attain the appropriate knowledge and perception beliefs concerning the health behavior being promoted (Bastani et al., 1994). Nurses are the forerunners in the education of patients; therefore there is a need to explore nurses' knowledge, attitude, and practice on self-breast examination which can indirectly influence their patients' understanding and practice of breast cancer screening. No research has actually been conducted to know the level of knowledge and practice of self-breast examination among female university students in Ghana.

Objectives of the study

The objectives of the study were to assess the knowledge, attitude, and practice of self-breast examination (SBE) among female university students.

Methodology

Study area and design

The study took place at the Presbyterian University College of Ghana, Asante-Akyem Campus. It is the third campus of the College, which was established 28th September; 2007 and is located at Agogo in the Asante-Akyem North District in the Ashanti Region of Ghana. Like the other campuses, Agogo is also on the hill that form part of the Akuapem-Mampong Gambaga range.

The Asante-Akyem campus; which is also called the Faculty of Health and Medical Sciences offers Bachelors of Science in both Nursing and Physician's Assistant. The population of the students in the Department of Nursing is four hundred and eleven (411) and the Department of Physician's Assistant has a total population of two hundred (200). The Department of Nursing female students were the focus of the study. The female students in the Department of Nursing comprise of 320 students and males students comprise of 91 students. In Level 100 there are 121 female students, in Level 200 there are 76 female students, in Level 300 there are 62 female students, and Level 400 there are 61 female students (Presbyterian University College, President's report, 2012). Considering the goal of the study, the mode of inquiry used was the case study approach, which is perceived in this research to be the most useful as compared to other strategies. A single case study approach was used in this study, because conclusions from single-cases are considered to be appropriate if the research is carried out well (Yin, 2003).

Study population, instrument, and procedure

The study population was female nursing students at Presbyterian University College of Ghana. A disproportionate stratified sampling technique was used to select a sample size of 250 nursing students. A total of 100 students was selected (stratified by the educational level of the student) from Level 100 and 50 students were selected respectively from Level 200, 300, and 400 (Polit & Beck, 2004). Self-administered questionnaires were used to gather information about the student's knowledge, attitude, and practice of self-breast examination. The study took place in April, 2013. Since the respondents could read and write, the questionnaires were given to them to fill at their own conveniences and later submitted to the researchers. It took the respondents an average of three weeks to complete the questionnaires. The data was analyzed using Statistical Package for Social Sciences (SPSS) software and Pearson's Correlation. The research received a Human Subjects Protections Committee Review from the Department of Nursing administration, and was approved prior to the conduct of the research. Also, consent was obtained from the respondents before administration of the questionnaires.

Results

Demographics of the respondents

The majority of respondents, 53% were between the ages of 18-21 years, 39% were between the ages of 22-25 years, and 8% and were between the ages of 26-29 years. Majority of respondents, 92%, were Christians and 8% of the respondents were Muslims. Respondents were asked how many children they had and 6% had 1-3 children and 94% had no children. Majority of respondents, 91% were single and 9% of the respondents were married.

Knowledge on breast cancer and self-breast examination

Respondents were asked on their knowledge of breast cancer and BSE, and majority of the respondents, 95%, stated they had knowledge about breast cancer and BSE while 5% stated they have no knowledge on breast cancer or BSE. Respondents were further asked on their source of information on breast cancer and BSE and 48% mentioned the media, 36% stated formal as their source of information, 16% stated the health center as their source of information. Respondents were asked on the method of breast cancer detection and 19% stated mammography as a method, 15% stated clinical examination of the breast, and 60% stated breast self-examination, 4 % stated x-ray, and 2% ultrasound respectively. Respondents were asked if they knew how to perform breast self-examination and 80% responded in the affirmative and 20% responded in the negative. Furthermore, respondents were asked on the methods of performing breast self-examination and 38% indicated standing and looking for discharges in front of the mirror, 9% indicated feeling for changes in their breast while showering, 49% indicated feeling for changes in the breast while lying down, and 4% stated all the above.

Attitude on Breast Cancer

Respondents were asked if they discovered a lump in their breast, how fast would they seek medical attention and majority, 89%, stated that within one week of discovery, while 7% stated within one month, and 4% stated within 1-3 months. Respondents were asked if they believe that breast cancer only occurred in elderly women and 34% stated yes while 66% stated no. In addition, respondents were asked if they were at risk for developing breast cancer and 25% did not perceive themselves at risk, 10% perceived they had a low risk of developing breast cancer, and 30% believed to be at a medium risk and 35% stated that they were at a high risk for

developing cancer. For clarification, respondents were asked about their knowledge on risk factors for developing breast cancer and 28% of respondents cited increasing age as a risk factor, 15% stated smoking cigarettes as a risk factor, 4% stated race/ethnicity, 9% cited alcohol consumption, 4% stated childbirth at late age, 4% cited late menopause, 5% said stress, 4% stated having large breast, 18% stated putting money in their bra, while 9% believed spiritual curses as a potential risk factor for developing breast cancer.

Practice of breast self-examination

Respondents were asked if BSE is necessary and 65% of respondents strongly agreed that it is necessary, while 35% of respondents agreed that is not necessary. Respondents were asked if they performed BSE and 76% respondents responded yes and 24% responded no. The minority of respondents (24%) who did not perform BSE, were further asked on their reasons for not performing BSE and 30% said they do not have time, 11% said they didn't feel it was necessary, while 59% did not have a specific reason for not performing BSE. Respondents were further asked how often did they perform BSE and 8% responded every day, 11% said weakly, 31% stated monthly, 29% said yearly, and 21% stated they performed BSE at random. Respondents were asked on the appropriate time for performing BSE and 11% stated that the appropriate time to perform SBE is before menstruation, 4% said during menstruation, while 62% stated some days after menstruation, and 23% stated that there is no particular time to perform BSE.

Respondents were asked how they performed BSE and 43% responded in front of the mirror, 10% responded that they performed while showering and 47% indicated they lay down on the bed to examine their breast.

The respondents who stated that they perform BSE in front of the mirror were further asked on the steps used to perform the procedure and 59% claimed they stand or sit with their arms at their sides, 30% stated that they raise their arms above or behind their head, 7% indicated that they place their hands on their hip and press down to make their chest muscle tense, and 4% indicated squeezing each nipple gently for any discharge.

Respondents who indicated that they performed BSE in the shower were further asked on the steps they used to perform the procedure and 18% indicated they started by raising their arms behind their head, 11% indicated using soapy hands to press firmly on the breast against the

chest wall, 13% stated they used the palm of their hand to examine the breast and 58% indicated they did not practice any of the above.

In addition, the respondents who claimed that they performed BSE while lying down were further asked on the steps they followed and 28% indicated they lie down on their back for comfort, 11% indicated they placed a pillow under their shoulder on the side of the breast that was to be examined, 24% said they used the palm of their hand to examine the breast while 37% claimed they used the tip of their hand to examined their breast.

Respondents were asked about the factors that hindered their performance of BSE and 23% stated time as a factor, 15% indicated procrastination, 25% indicated forgetfulness, 6% attributed it to laziness, 13% stated the fear of discovering a lump in their breast, 6% indicated that they do not trust in their ability to perform the procedure correctly, 6% stated they have no available specific training program to guide them to perform the procedure correctly, and 6% stated they were anxious.

A Pearson's correlation was used to determine the significance between the educational level of the student and the ability to perform BSE. The results are statistically significant ($p=0.05$, $r=0.37$) in that the ability to perform BSE improved as the educational level improved.

Discussion

The study revealed that the majority of the respondents had knowledge on breast cancer and BSE. This was expected due to the students being taught about breast cancer and BSE and the results are in line with a study conducted by Bassey et al (2011). The respondent's knowledge level of the different methods of screening of breast cancer was generally poor. Most of the respondents cited the media and formal education as their source of information on breast cancer and BSE. In addition, majority of respondents cited BSE as a method of BSE. Majority portrayed a good attitude toward breast cancer in that upon discovery of lump in their breast; they will seek medical treatment within a week. Majority of respondents professed knowing how to perform BSE; as well as actually performing it. Also, majority of respondents were aware of the different methods of performing BSE. Furthermore, majority of respondents perceived themselves at risk for breast cancer. This result is in contrast to a study conducted by Parsa et al (2008) among 425 female secondary school teachers; the general perception of the female

secondary school teachers was that young women do not consider themselves at risk for developing breast cancer as they believe that it is a problem that affects the older women. Most of the respondents performed BSE monthly. Although respondents practiced SBE, less than half of them performed it on the recommended monthly basis. Also, most of the respondents attributed forgetfulness as a risk factor for not performing BSE. The results are in line with a study conducted by Fatma et al., (2007) who concluded that nurse do not practice BSE due to forgetfulness. The alarming finding is that even though majority of respondents have knowledge on BSE and performed BSE, the methods being carried out is not being done correctly. The findings conclude that there is no relationship between having been taught on BSE and that actual practice of it (Chong et al., 2002). This is a disturbing finding since the nursing students are the future nurses who are expected to educate others in the community. However, there was a relationship the ability to perform BSE and the educational level of the student.

Conclusion

In conclusion, majority of the female nursing students had knowledge on BSE. In addition, majority of respondents cited BSE as a method of breast cancer screening. Also, most of the respondents believed BSE was necessary. Furthermore, majority of respondents performed BSE but not correctly. The study had demonstrated that majority of respondents were aware of breast cancer and self-breast examination as a screening method, but their knowledge and understanding on the method of BSE was very low. Breast cancer and BSE awareness campaign is therefore necessary to improve early breast cancer detection.

Recommendation

Based on the research conducted, it is recommended that there is a need to create awareness about the importance of SBE amongst women so as to improve the practice of it. Furthermore, public awareness on the importance of SBE should be intensified using mass media and the health service personnells should promote SBE during their contact with female clients. In order to function as effective promoters of breast cancer control through early detection, nurses/nursing students should possess the accurate knowledge and the appropriate attitude and

practice concerning the disease and its early detection. Nurses should adopt such preventive screening procedures and act as role models for the community.

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