

BREAST CANCER ASSESSMENT AND SELF- EXAMINATION PRACTICE OF UNDERGRADUATE STUDENTS OF NILE UNIVERSITY OF NIGERIA**¹Bashir Saratu Aminu & ²Dr. Nurudeen Ayoola Hussein***Email:saratu.bashir@bazeuniversity.edu.ng***¹Department of Nursing Science, Baze University, Abuja****²Dean, Faculty of Health Sciences, Baze University, Abuja****ABSTRACT**

This study was carried out to investigate breast cancer assessment and self-examination practice of undergraduate students of Nile university of Nigeria. A descriptive survey using 424 self-administered questionnaire were administered randomly in proportion to students at all Levels in the departments. Data collected was presented using frequency distribution tables/percentages and multiple regression and analyzed accordingly. The findings showed that majority of students do not practice breast self-examination (BSE) and nearly half of the students practice it. The medical students were more likely to practice BSE than the non-medical students. Almost all of those that practice breast self-examination practice it at any time, a few practices it once a month while a very few practices it twice a month. 3% of the respondents perform BSE before their menstrual cycle, 1.2% perform it some days after, none of them perform it during their menstrual period while majority of the respondents don't have a particular time they perform BSE. Only 31.4% of the respondents practice BSE by standing in front of the mirror, 23.1% practice it lying down while 24.9% of the respondents practice breast self-examination during shower. It was concluded that the willingness to practice BSE, close to two-third respondents (64.5%) in the health-related faculties were willing to practiced BSE compared with over one-third (37.0%) among respondents in non-health related faculties. Overall, about 42.2% of the total respondents practiced BSE reflecting a low level compared with the respondent's level of knowledge about breast cancer. There is need to promote BSE among this study population. It was then recommended that organization of one health week per session where the medical students educate and demonstrate to the non-medical students how to perform BSE hence creating awareness about the disease and methods of preventing it and or early detection of the disease; and that the federal ministry of health should introduce structured health education module course into academic curriculum for students to be informed on important health issues like breast cancer and the proper breast self-examination, early detection of a lump or breast injury to the appropriate hospitals and clinics.

Keywords: Assessment, Breast cancer, Practice, Self-examination and Undergraduates.

INTRODUCTION

With the rising incidence of breast cancer and the absence of any uniform breast screening strategy in most nations (Harding, et al, 2015), it is important to assess the knowledge of breast cancer and the practice of breast self-examination (BSE) in various age groups. By the name, BSE is carried out by oneself. This involves the individual touching and feeling her breast for any change or abnormality that was not there initially. Irrespective of the multiple benefits of BSE, various studies identified a wide knowledge application gap with regards to BSE, the practice of BSE remaining low and variable in different nations like 54% in England (Philip, et al., 1986), varying from 19% to 43.2% in Nigeria (Gwarzo, et al., 2009) and varying from 0 to 52% in India (Yadav & Jaroli, 2010). BSE is effective and not expensive, but when an abnormality or change is noticed in the breast during the period of BSE, a biopsy of the concerning lump is done to confirm the diagnosis of breast cancer. Further tests determine if cancer has spread beyond the breast and which treatments it may respond to ((NCI, WHO 2020). There are various signs of breast cancer apart from the lump in the breast, including a change in the breast shape, a red or scaly patch of the skin, and skin dimpling ((NCI, WHO 2020). According to Saunders and Jassal (2009), there may be bone pain, shortness of

breath, swollen lymph nodes or yellow skin in those with distant spread of the disease or metastasis of cancer. Surgical removal of both breasts is another preventive measure in some high-risk women (McGuire 2016). Several treatments may be used in those diagnosed with cancer, including surgery, radiation therapy, chemotherapy, hormonal therapy, and targeted therapy ((NCI, WHO 2020). Breast reconstruction may occur at the time of surgery or a later date. Reports show that the type of surgery varies from breast-conserving surgery to mastectomy. Winters and Bernaudo (2018) found that the type of breast-conserving surgery (BCS) compared to mastectomy remains uncertain. Survival rates in the developed world are high with between 80% and 90% of those in England and the United States alive for at least five years. The treatments aim to improve the quality of life and comfort for those in whom cancer has spread to other parts and systems of the body (NCI, WHO 2020).

Nile University of Nigeria is a community with individuals from different parts of Nigeria. The age range of the majority of female undergraduates is between 16-25years. The increasing number of breast cancer cases and the disease's fatality can be reduced by detecting abnormalities in the topography of the breast in the early years.

Statement of the Research Problem

From an estimated 12 million new cases and 7.6 million deaths in 2008, the incidence of cancer worldwide is expected to rise to 26.4 million with 17 million deaths by 2030. Most of these new cases of cancer are expected to occur in the developing world, particularly India and China (World Health Organization 2003). Breast cancer is currently the most common cancer among women worldwide and the second most common cancer among both sexes, making up 12.3% of all cancers (excluding non-melanoma skin cancer) and 23% of all female cancers (Bray, 2018). Although breast cancer is thought to be a disease of the developed world, nearly 50% of breast cancer cases and 58% of deaths occur in less-developed countries (Ferlay 2010).

Early detection is usually done through screening, and screening methods include breast self-examination (BSE), clinical breast examination (CBE), and mammography. Breast self-examination (BSE) is a screening method used in an attempt to detect early cases of breast cancer. This method involves the woman herself looking at and feeling each breast for possible lumps, distortions or swelling. BSE is a low-cost, low risk procedure that can be repeated at frequent intervals and has been advocated as a self-performed screening procedure. Due to fewer numbers of experts and lack of advanced diagnostic techniques in developing countries, promoting regular BSE has been said to be the feasible screening option for early detection of breast cancer. BSE has a positive effect on the early detection of breast cancer (Ahmed, et al., 2019). Knowledge of BSE is important because it helps the individual to detect abnormality with the breast and prevent the occurrence of breast cancer. The level of awareness about BSE among women from studies in different African countries is relatively high; however, the level of practice is low, even among health workers (Johnson, 2019). Therefore, this study will assess the knowledge of breast cancer and breast self-examination for early detection of cancer among university students.

Aim and Objective of the Study

The aim of this paper was to assess the knowledge of breast cancer and breast self-examination among the students of Nile University of Nigeria. While the specific objective was to determine the practice of breast self-examination among the undergraduate students of Nile University.

Research Question

This study was guided to answer the following research question:

1. What proportion of the students practice breast self-examination (BSE)?

Review of Related Literature

Conceptual Review

Breast Self-Examination

Also known as self-awareness, breast self-examinations (BSE) are encouraged for women of any age by the American Cancer Society. Health care providers should instruct women about proper technique. Being a woman is a risk for breast cancer. In fact, American Cancer Society statistics show that one out of every eight women in the U.S. will develop breast cancer in her lifetime. Even men can get breast cancer. But thanks to better, more advanced treatments, many of those diagnosed with breast cancer will go on to live full, active lives. The Best Defense, Early detection is important, because treatments are more effective when cancers are small. Early detection is important, because when a cancer is detected in the early stages, treatments can be more effective. There are many screening tests for breast cancer. One of the easiest is the Breast Self-exam (BSE), a physical examination of one's own breast tissue. The BSE is something an individual can do by herself, in private, on her own schedule. By getting to know how one's breasts normally look and feel, the BSE can be an added defense against dying of breast cancer. In fact, eight of 10 breast lumps are found by women themselves.

Breast Self-Examination: Background

Early diagnosis of breast cancer is of extreme significance in improving the survival rates and quality of life especially in low-income countries (Rao, 2005). Although awareness about breast cancer has long been advocated across the world, unfortunately studies have revealed that a major proportion of women are still not breast aware. As discussed earlier, techniques such as breast self-examination (BSE), clinical breast examination (CBE) and mammography have been advocated for bringing about a marked reduction in breast cancer associated morbidity and mortality. As compared to CBE and mammography which require hospital visits and specialized equipment / technical expertise, BSE is helpful in the regard that it is cost-free, simple, non-invasive intervention carried out by women themselves (World Health Organization. (2020). Studies conducted in developing countries have established BSE as one of the most reasonable and feasible approaches in early detection of breast cancer (Parvani, 2011). BSE not only familiarizes women with the appearance/feel of their breast but also aids in early detection of breast cancer. Some of the studies have reported that BSE is highly effective in increasing sense of ownership about health, healthcare seeking behavior, encouraging adoption of preventive health behaviors and creating awareness about breast cancer among women (Austoker, 2003). Multiple studies have concluded that women who regularly perform breast self-examination present with smaller neoplasm and rare involvement of axillary lymph nodes (Smith et al.). On the other hand, some researchers have seriously questioned the usefulness of BSE, while others have revealed no added benefits of BSE in improvement of survival rates (Nelson, 2016).

Importance of Breast Self-Examination

Screening for early detection of disease and health problems is an important public health principle. BSE promotes early detection of breast cancer at early stages (36). The limited use of mammograms in developing countries due to high cost and limited availability makes BSE a convenient and low-cost method though less reliable.

Barriers to Breast Self-Examination

Though breast self-examination is considered an important tool in early detection of breast cancer, multiple barriers have been identified viz. awareness about breast cancer (Odusanya & Tayo, 2001). lack of time, shortage of self-confidence, fear of possible detection of a mass and feeling of awkwardness about breast handling (Brewer & Baldwin, 2000); health related assumptions; anxiety and forgetfulness; low socioeconomic status and poor access to health care facilities; negative socio-

cultural perception about breast cancer and strong belief in traditional medicine (Odusanya & Tayo, 2001), and lack of motivational support from parents, spouse or friends (Rosmawati, 2010).

Implications of Practice of Breast Self-Examination

There is an immense need for a public health education program to inculcate the practice of breast self-examination among women to minimize the fear, denial, myths and misconceptions. The messages and recommendations about breast cancer screening must be clear and the recognized barriers should be taken into consideration for maximization of the outcome. Every effort has to be taken to encourage the practice of BSE not only among women but also among men as there is visible increase in the incidence of male breast cancer. Healthcare professionals including grass root level health workers have to play a significant role in educating the public especially the high-risk men & women. The involvement of community, family especially parents and spouse should be facilitated to maximize the understanding of BSE. Non-governmental organizations can be roped in rural areas for this initiative. Concurrently, family physicians should be encouraged to raise awareness; offer clear and specific instructions on practice of breast self-examination and promote referral as well.

How often should breast self-examination be performed?

According to the National Comprehensive Cancer Network (NCCN) guidelines, a BSE should be performed each month. By becoming more familiar with one's normal breast tissue and appearance, it may make it easier for one to notice changes if and when they occur (Ferlay, et al., 2010). The ideal time for a BSE is seven to 10 days after the first day of one's menstrual period. The breasts are naturally less lumpy and tender at this time. If pregnant, or no longer have menstrual cycles, BSE can be performed at any time, but make it the same time each month (Rosmawati, 2010). BSE will only take a few minutes, but it is best to choose a time when one has some privacy and will not be disturbed.

Stand undressed from the waist up in front of a full-length mirror with arms relaxed at the sides. If one cannot stand comfortably, this part can be done sitting down. Get to know how your breasts look. Even a small visual change may be a significant early sign of a problem. Notify a health care provider immediately if any changes are noticed. Compare the breasts while turning from side to side. Look for any changes in breast size, shape, skin texture or color including redness, dimpling, puckering or retraction (pulling back of your skin). Notice any nipple changes, such as scariness, a pulling to one side, or a change in direction. Place hands on the waist and press inward, then turn from side to side to note any changes. If hands cannot be placed on the waist, try clasping hands together in front of you, to tighten the chest muscles. Tightening the chest muscles beneath the breasts in other ways can also help notice changes. Try different positions, such as putting hands above your head and turning side to side as you look. Place your hands at the waist and bow toward the mirror, letting your breasts fall forward. Note any changes in breast shape. Nipple discharge can be a sign of a problem. Look for any discharge in your bra or clothing, but do not squeeze the nipple or try to expel any secretions. Notify a health care provider if any discharge is noticed. Feel above and below your collarbone for pea- and bean-sized lumps or thickening. Applying skin cream or lotion can make this easier. Check for lumps or thickening under the arm while relaxing the arm at your side. Reach across with the other hand to feel the area. Check deeply up and down the inside of the armpit, and up and forward toward your chest. Note any changes from previous self-exams. Place a pillow or folded towel under your left shoulder. This helps the breast tissue spread evenly across the chest wall. Bend the left arm behind your head and reach across with your right hand to your left breast. A little skin cream or lotion on your fingers will make them more sensitive. Begin the exam at the armpit. Move your three middle fingers together using light, medium and deep pressures. Your hand should move in straight rows to cover all the breast tissue from the line where your blouse seam would fall (mid axillary line) to the bra line, the breastbone (sternum) and collarbone (clavicle). Then, repeat on the other side. Most commonly, lumps such as cysts, are

benign and are usually not a serious health problem. However, any changes in the breasts should always be reported to your health care provider. Note that breast tissue can vary in density naturally. The breasts may change during different times of the month if one is still menstruating. Breast tissue also changes with age.

Empirical Review

In a study by Gwarzo, et al., knowledge and practice of BSE were examined among 221 female students aged 16 – 28 years old studying at Ahmadu Bello University Zaria. It was found that despite nearly three quarters of the respondents (87.7%) had heard of BSE, only 19.0% of them were performing this examination monthly. Regarding the sources of information about BSE among respondents, media was found to be most common followed by health workers accounting for 45.5% and 32.2% respectively. Regular performance of BSE was significantly correlated with duration of stay in the University ($X^2 = 81.9$, $df = 3$, $P < .05$) and family history of breast cancer ($X^2 = 17.4$, $df = 2$, $P < .05$) (6)

Research was conducted by Ogunbode et al., (2015), in Nigeria to determine the prevalence and factors determining the practice of BSE in Nigerian women attending a tertiary outpatient clinic. Descriptive baseline cross-sectional study among 140 Nigerian women attending a tertiary outpatient clinic. Overall, self-reported prevalence of BSE practice was 62.1%, out of which only 12.6% performed it monthly. The highest prevalence was among older women, 76.2%; married women, 65.6%; and women with tertiary education, 68.9%; civil servants, 78.1%; women with previous history of breast disease, 68.2%; and women with family history of breast disease, 63.6% Bellgam and Buowari (2012) conducted a study to inquire about the practice of BSE among women in Rivers State, Nigeria. A cross-sectional study was conducted in three local government areas of River State, using self-administered questionnaire for 691 respondents Level of awareness of BSE was 39.65%, while 28.94% practiced it. Awareness and practice of BSE were associated with level of education of respondents.

A study was conducted by Tobin and Okeowo (2014), To assess the practice and perception toward BSE among secondary school teachers in Benin City A cross-sectional study was conducted among 300 female secondary school teachers in a selected LGA in Benin City All 100% had heard of BSE, while 79.3% had ever practiced it out of which only 19% practiced it monthly. Ignorance about the usefulness of BSE was identified as a barrier to the practice of BSE.

METHODOLOGY

Survey research design was adopted by physical administration of 80 questionnaire which was done before the students went on long vacation. An electronic mailing of questionnaire was also used for the other students through their school electronic mail addresses provided by the University Students Information Office and designated through purposive sampling techniques. Descriptive statistics, frequencies, percentages and a Multiple logistic regression analysis was used to determine the relationship between socio demographic characteristics and BSE using Statistical Program for Social Science (SPSS) package version 23 (IBM, SPSS Inc., Chicago, USA).

Findings

Data obtained from the respondents showed that majority of students do not practice BSE and nearly half of the students practice it. Findings from this study is lower than that reported by a Saudi Arabian study conducted in Qassim University, which revealed that 95.8% of medical students had heard of BSE compared with 93.3% of non-medical students (Nemenqani, et al., 2019). There were statistically significant relationship between practice of BSE and religion, level of the student in the university, the faculty the student belongs, course of study and knowledge of breast cancer. Those belonging to religions other than Christianity and Islam were most likely to practice BSE, followed by the Muslims, while the Christians were least likely, the ≥ 500 level student were most likely to

practice BSE, followed by 400 level and 100 level students, while the 300 level students were least likely. The students in health-related faculties were more likely to practice BSE than those in non-health related faculties. The medical students were more likely to practice BSE than the non-medical students. Almost all of those that practice breast self-examination practice it at any time, a few practices it once a month while a very few practices it twice a month. 3% of the respondents perform BSE before their menstrual cycle, 1.2% perform it some days after, none of them perform it during their menstrual period while majority of the respondents don't have a particular time they perform BSE. Only 31.4% of the respondents practice BSE by standing in front of the mirror, 23.1% practice it lying down while 24.9% of the respondents practice breast self-examination during shower. These findings were higher than those reported in a similar study from Saudi Arabia, where only 17% of the students reported performing monthly BSE compared with 39% who never performed it (Boulos & Ghali, 2013). There was a statistically significant association between practice of BSE and family history of breast cancer. The students without family history of breast cancer were more likely to have practice BSE (48.9%) than those with family history (27.4%). The most common reason for not practicing BSE among participants was that they did not know how to perform BSE, which was reported by the participants. This finding is lower than the 98.5% reported in a similar study of Turkish high school students who did not know how to perform BSE (Ahmed, 2010), but similar to the 55.9% reported among Yemeni non-medical students (Alshahrani et al., 2020). The non-Christian students were 4 times more likely to practice breast self-examination than the Christian students, and it could be as high as 6 times. The students in health-related faculties were two times more likely to practice breast self-examination than the students in non-health related faculties, and it could be as high as four times. The students with family member who had breast cancer were two times more likely to practice breast self-examination than those without family who had breast cancer, and it could be as high as four times. Contrary to the current study findings, a similar study showed no significant relation between breast cancer and socio-demographic variables by multivariable logistic regression (Alshahrani et al., 2020).

CONCLUSION

The willingness to practice BSE, close to two-third respondents (64.5%) in the health-related faculties were willing to practiced BSE compared with over one-third (37.0%) among respondents in non-health related faculties. Overall, about 42.2% of the total respondents practiced BSE reflecting a low level compared with the respondent's level of knowledge about breast cancer. There is need to promote BSE among this study population.

RECOMMENDATIONS

Based on results and conclusions of this study, the following recommendations are made:

1. Organization of one health week per session where the medical students educate and demonstrate to the non-medical students how to perform BSE hence creating awareness about the disease and methods of preventing it and or early detection of the disease.
2. The federal ministry of health should introduce structured health education module course into academic curriculum for students to be informed on important health issues like breast cancer and the proper breast self-examination, early detection of a lump or breast injury to the appropriate hospitals and clinics.

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