

Awareness of Breast Cancer and Perceived Practice of Breast Self- Examination Among Female Undergraduate Students in A Selected Private University in Ogun State

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Abstract:

Breast cancer is the commonest form of cancer among women across the world. If breast changes are detected early and treatment commenced early enough, the survival rate of breast cancer will be increased. The purpose of this study was to investigate the awareness of breast cancer and the perceived practice of Breast Self-Examination (BSE) among selected female undergraduate students of Babcock University. The research design for the study was descriptive survey. Crystal Hall in Babcock University was selected for the study. Proportional sampling method was used to obtain two hundred and fifty-three (253) participants across all levels of study. The age range of the respondents was between 19 to 25 years old. A validated questionnaire was used for data collection. Data were analysed using Statistical Package for Social Sciences (SPSS) version 23.0. Data derived from the questionnaire were analysed descriptively using frequencies and percentages. Pearson's Product Moment Correlation Statistics was used to test for relationships between breast cancer awareness and practice of BSE at 0.05 level of

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significance. The study revealed the awareness of breast cancer and BSE among the respondents to be 94.9%. Although 80.2% had practiced BSE before, majority had inadequate practice of BSE. A significant relationship was observed between breast cancer awareness and BSE practice ($P=0.014$). Findings revealed high level of awareness of breast cancer but low prevalence rate of BSE practice among the respondents. Findings also implied that higher level of awareness increases practice of BSE. Based on these findings, it was recommended among others that the importance of BSE in early detection of breast cancer should be stressed with emphasis on regular and proper practice of BSE.

Keywords: Awareness, Breast Cancer, Practice, Breast Self-Examination, Female, Undergraduate Students,



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Introduction

Cancer is the second leading cause of death globally, accounting for an estimated 9.6 million deaths (World Health Organization, 2018). About 25 million people are living with cancer, out of which breast cancer is the most common (Ramson, 2017). Breast cancer, a malignant tumour arising from the cells of the breast, poses a major public health problem as it is the most common invasive cancer in women, as well as the second main cause of death in women following lung cancer (National Breast Cancer Foundation (NBCF), 2018).

A woman has a risk of 1 in 8 for developing breast cancer at some point during her lifetime (Balentine, 2018), hence an estimated 93,600 new cases annually in Africa with about 50,000 deaths (NBCF, 2016). In Nigeria, breast cancer has been recognized as a major cause of morbidity and mortality with incidence rate ranging from 36.3 to 50.2/100,000 live birth, though figures for mortality are scarce (Amin, et al, 2018). Approximately 100,000 new cases of breast cancer are recorded in Nigeria annually (Amin, et al, 2018). Screening for early detection and diagnosis through BSE is an important public health principle (Oladimeji, et al, 2015). It is a low-cost, low risk procedure that can be repeated at frequent intervals, and has been advocated as a self-performed screening procedure (Segni, et al, 2016). It is one of the best approaches to early detection in developing countries with limited resources such as Nigeria because it is cost-free (Segni, et al, 2016). It is a screening method used to detect breast cancer at an early stage. It involves the woman looking at and feeling each breast for possible lumps, distortions or swelling (Oladimeji et al, 2015).

The high incidence of breast cancer which is 36.3 - 50.2 per 100,000 necessitates the need for early detection because this would increase the treatment options available to affected women and thereby improve survival rates (Oladimeji et al, 2015). Early diagnosis through breast self-examination can help 97% of women survive for more than 5 years (Sama, et al, 2017). This implies that the main issue pertaining to the cure of breast cancer is early recognition.

For women to present early at the hospital, they need to be "breast aware" and must be able to recognize symptoms of breast cancer (Oladimeji et al, 2015). The practice of BSE helps women take responsibility for their own health. Research has shown that there is an association between more favourable clinical pathological stages of breast cancer with more frequent breast self-examination as about 69% of women practising BSE detect their tumours by this method (Ramson, 2017). A study carried out among female undergraduate students in Akwa Ibom State, Nigeria showed the level of awareness of breast cancer and BSE among the respondents to be high at 99% and 91.3% respectively while the practice of BSE was poor, being only 9% of them who carried it out monthly (Motilewa, Ekanem & Ihesie, 2017).

The American Cancer Society (2014) recommends that BSE is an option for women starting in their early 20s. Most Babcock University undergraduate students are in this age category but lack of proper awareness of breast cancer and BSE practice hinders admission of symptoms being experienced in relation to breast cancer and therefore prevents early intervention. This possible gap in knowledge leaves a need for a study to assess awareness of breast cancer and the perceived practice of breast examination among selected female undergraduate students in Babcock University. This study therefore aims to assess the



awareness of breast cancer and the practice of breast self-examination among female undergraduates in Babcock University, Ilishan- Remo, Ogun State. This study specifically:

1. determined the prevalence rate of breast self-examination among female undergraduate students in Babcock University;
2. examined the awareness level of breast cancer among female undergraduate students in Babcock University;
3. assessed how female undergraduate students in Babcock University practise breast self-examination; and
4. examined the relationship between respondents' awareness of breast cancer and their practice of BSE.

Research Questions

The following research questions were raised for this study:

1. What is the prevalence rate of breast self-examination among female undergraduate students in Babcock University?
2. What is the awareness level of breast cancer among female undergraduate students in Babcock University?
3. How do female undergraduate students in Babcock University practise breast self-examination?

Research Hypothesis

This hypothesis was postulated for this study:

1. There is no significant relationship between respondents' awareness of breast cancer and their practice of BSE

Methodology

A descriptive cross-sectional design was used in this study. This study was carried out in Babcock University, Ilishan- Remo, Ogun State. It is a private Christian co-educational university in Nigeria owned and operated by the Seventh-day Adventist church, Nigeria. The target population for this study included female students within the age range of 15-25 years residing in Crystal Hall. Crystal hall was selected because it is the largest female hall in Babcock University having a capacity of about 800 students ranging from 100-500 levels and represented all the departments of study within the university. There were currently 756 students residing in Crystal hall, comprising students of all levels. Convenience sampling technique was used for this study. The sample size of 253 was selected across all levels based on their availability at that point. Proportional allocation of sample size was used to determine the number of students in each level that were to participate in the study.

The instrument for data collection was a questionnaire derived by the researcher from literature based on the objectives of the study. The questionnaire was structured using simple language and clearly stated questions. It included 48 items with 20 assessing awareness of breast cancer and 23 assessing the practice of BSE. The validity of the instrument was ensured through face and content validity by experts of Tests and Measurement and Nursing. The reliability of the instrument was determined through the internal consistency method which was administered on 10% of the sample size in order to test the reliability of the instrument. Cronbach's Alpha statistics was used to analysed the collected data which yielded coefficient value of 0.839.



Due consent was gotten from voluntary participants and explanations relating to the questionnaire were provided. Copies of the questionnaire were administered on the respondents and were filled under the supervision of the researcher. The completed copies were collected from the respondents the same day of administration. The responses from the questionnaires were coded after which the findings were summarized and presented in tables, percentages and charts to aid understanding. Data collected were analysed using computer-based Statistical Package for Social Sciences (SPSS) analytical tool version 23. Pearson's Product Moment Correlation set at a significant level of 0.05 was used for the analysis of the hypothesis.

Results

Research Question 1: What is the prevalence rate of breast self-examination among female undergraduate students in Babcock University?

Prevalence rate of practise of BSE among undergraduates

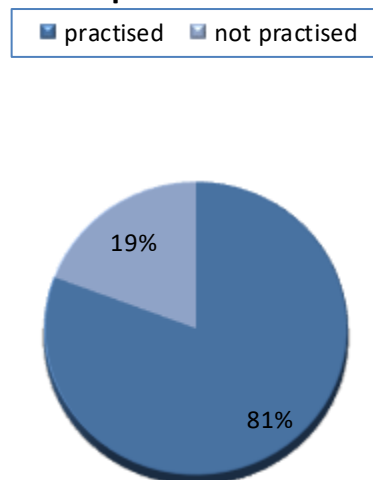


Figure i indicate that there is high prevalence of BSE practice among female undergraduates. 203(80.2%) of the respondents perform BSE while few, 50(19.8%) of the respondents do not.

Research Question 2: What is the awareness level of breast cancer among female undergraduate students in Babcock University?

Table 1: Respondents' Level of Awareness of Breast Cancer

| | Yes | No | Mean | Max(min) |
|---------------------------------------|--|----------|------|----------|
| Have you ever heard of breast cancer? | 240(94.9%) | 13(5.1%) | 0.95 | 1(0.0) |
| If yes, from where? | Parents- 57(22.5%) School- 137(54.2%) Health workers- 96(37.9%) Friends- 57(22.5%) Media- 107(42.3%) | | | |

Table 1 above revealed that majority of the students had high level of awareness towards breast cancer 240(94.9%), while very few 13(5.1%) of the students had low level of awareness with the major source of information being the school 137(54.2%).

Research Question 3: How do female undergraduate students in Babcock University practise breast self-examination?

Table 2a: Respondents' Practice of BSE

| | | Yes | No |
|---|---|-------------------------|---------------------------|
| 1 | Do you know how to perform BSE | 200(79.1%) | 53 (21%) |
| 2 | Have you ever practiced breast self-examination | 203 (80.2%) | 50 (19.8%) |
| 3 | How long do you use while examining your breast | 5-10 mins 10-20 mins | 187 (73.9%) 66 (26.1%) |

Table 2a above revealed that most (79.1%) of the participants know how to perform BSE and (80.2%) had practiced BSE before. Majority of the respondents (73.9%) examine their breasts within 5-10minutes.

Table 2b: Respondents' Performance of BSE

| | When is BSE best performed | Frequency |
|---|--|---|
| 1 | 3-5 days before menstruation | 60(23.7%) |
| 2 | 3-5 days after menstruation | 116(45.8%) |
| 3 | Daily before morning bath | 31(12.3%) |
| 4 | Daily at night before bed time | 219(86.6%) |
| 5 | Anytime in the month | 80(31.6%) |
| 6 | Specific dates of the month | 46(18.2%) |
| 7 | What part of the hand is used to palpate the breast during BSE | Wrist 12(4.8%) Palm 59(23.3%) Finger pad 182(71.9%) |

Table 2b above revealed that BSE is believed to be best performed daily at night before bed time (86.6%) and not 3-5 days after menstruation (45.8%). More than half (71.9%) of the respondents agreed that finger pad of the hand should be used to palpate the breast during BSE.

Table 2c: Sequential Order for Performing BSE

| | | 1 st | 2 nd | 3 rd | 4 th | 5 th | Don't know |
|---|---|-----------------|-----------------|-----------------|-----------------|-----------------|------------|
| 1 | Stand in front of mirror and observe breasts | 143(56.5%) | 34(56.5%) | 22(8.7%) | 20(7.9%) | 5(2%) | 30(11.9%) |
| 2 | Raise arms and look for the same changes | 26(10.3%) | 82(32.4%) | 48(19%) | 44(17.4%) | 24(9.5%) | 30(11.9%) |
| 3 | While standing in front of mirror, observe for signs of fluid coming out of one or both nipples | 6(2.4%) | 49(19.4%) | 65(25.7%) | 59(23.3%) | 44(17.4%) | 30(11.9%) |



| | | | | | | | |
|---|--|-----------|-----------|-----------|-----------|-----------|-----------|
| 4 | Feel breasts while lying down | 35(13.8%) | 26(10.3%) | 52(20.6%) | 30(11.9%) | 81(32%) | 30(11.9%) |
| 5 | Feel breasts while standing or sitting | 14(5.5%) | 41(16.2%) | 35(13.8%) | 70(27.7%) | 63(24.9%) | 30(11.9%) |

Table 2c shows the steps of BSE in the order in which the students perform them. According to the majority, the first step to take in BSE is to stand in front of the mirror and observe the breasts (56.5%), followed by raising of arms above the head to look for changes (32.4%), then while standing in front of the mirror, observe for signs of fluid coming out of one or both nipples (25.7%) after that feel the breasts while standing or sitting (27.7%) and lastly feel the breast while lying down (32%).

Test of Hypothesis

Hypothesis 1: There is no significant relationship between respondents' awareness of breast cancer and their practice of BSE

Table 3: Relationship between respondents' awareness of breast cancer and practice of BSE

| | | Practice of BSE | Remarks |
|-----------|---------------------|-----------------|------------------------|
| Awareness | Pearson correlation | .154* | Reject null hypothesis |
| | Sig. (2-tailed) | .014 | |
| | N | 253 | |

*. Correlation is significant at the 0.05 level (2-tailed).

The results in Table 3 revealed a significant relationship between the respondents' awareness of breast cancer and practice of breast self-examination ($r = .154$; $p = 0.014 < .05$).

Discussion

Result showed that there is low prevalence rate of BSE practice. This finding is in line with the study carried out by Myrna, Doumit, and Suha (2017) in Lebanon which asserted that over half of the participants had never practiced BSE, suggesting that low practice levels of BSE were related to a multitude of factors, including lack of guidance from a physician or primary care provider. The low prevalence could also be as a result of lack of understanding of BSE and its benefits or cultural beliefs of the respondents. For this study, the low prevalence rate can be as a result of misunderstanding specific details of BSE like appropriate steps or appropriate time for BSE. It could also be as a result of underestimating the role of BSE in the early detection of breast cancer.

Findings revealed a high awareness of breast cancer among respondents. This finding is linked to a study carried out among female undergraduate students in Akwa Ibom State University, Nigeria by Motilewa, Ekanem and Ihesie (2017), which concluded that the level of awareness of breast cancer among the respondents was high. Also, Koc, et al (2019), established high awareness of breast cancer. From the researchers' point of view, breast cancer being the commonest form of cancer among women and a major public health



problem accounts for the high level of awareness recorded in most studies as it is well known among people across the world. However, Ramathuba, Ratshirumbi and Mashamba (2015) established low awareness in their study conducted among women residing in a rural South African community, concluding that few women were aware of the breast cancer and its screening methods. This could be due to the fact that the study was done among women in a rural environment, whereas this study was carried out among undergraduate students in an urban environment with access to regular and frequent educations from school and health workers from the health facilities which are readily available.

Results revealed that although most of the respondents claimed to know how to practise BSE and have practised it before, subsequent responses to some of the items revealed that they did not know how to practise BSE. Among the participants who practiced BSE, most were practising monthly, purposely to know earlier if they have any change on their breast. Similar result was revealed in a study carried out by Kalayu, et al (2017), who reported that 61.9% of the participants were practising BSE monthly to detect any change on their breast early. However, few of the participants were not practicing BSE because of their ignorance to symptoms of breast cancer and how to conduct BSE. This could be as the result of the fact that some of the respondents are 100l students who are new to the school and are yet to get adequate health education on breast cancer and BSE practice, based on the finding of the school being the major source of information to the students. Most respondents reported using 5-10 minutes for BSE practice.

Finding shows that majority of the respondents believed BSE is best performed daily at night before bed time instead of 3-5 days after menstruation. This finding corresponds to that of Carlson, et al (2017) which revealed that only 7% of the participants knew that the appropriate time to perform a BSE was few days after menstruation. This proves that most of the respondents do not know how to practise BSE as they do not perform it at the right time. However, more than half of the respondents agreed that finger pad of the hand should be used to palpate the breast during BSE.

Finding also revealed that respondents do not practise BSE steps sequentially. Most of the respondents stated that breast self-examination should take the following steps: standing in front of the mirror to observe breasts, raising arms above head to check for changes, observing for signs of fluid coming out of one or both the nipples while still in front of the mirror, feeling the breast while standing or sitting then feeling the breasts while lying down. This result revealed that the respondents' do not practise BSE the right way as the appropriate steps according to breastcancer.org are standing in front of the mirror to observe breasts, raising arms above head to check for changes, observing for signs of fluid coming out of one or both the nipples while in front of the mirror, feeling the breast while lying down and finally feeling the breasts while standing or sitting. These results show that the respondents have high awareness of breast cancer resulting from the constant health education made available yet respondents have not understood the specific details on how to practise BSE.

Conclusion

This finding revealed a high level of awareness of breast cancer, high practice and high prevalence rate of BSE practice.



Recommendations

Based on the findings in this study, the following recommendations are made:

1. Babcock university should include in depth health education regarding breast cancer and BSE through the use of articles posted on notice boards and other media means
2. Health talks should be planned and included in school activities like hall worships and chapel seminars to create awareness and encourage regular practice of BSE.
3. There should be programs involving youths in a healthy relationship with a caring adult, while working in a specialized area the youth already appreciates.
4. The students should also be encouraged to pass the information they get about breast cancer and practice of breast self-examination to others as a means of positive influence.

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