

**AWARENESS OF BREAST SELF-EXAMINATION AMONG UNDERGRADUATE STUDENTS, IN A NIGERIAN UNIVERSITY: IMPLICATION FOR POLICY ACTION IN CURBING THE INCREASING INCIDENCE OF BREAST CANCERS IN NIGERIA.**

**Omoregbe Isaac Newton<sup>1,2,3</sup>, Jonathan Mayen Akuabata<sup>1</sup>, Mbaka Uchechi Harriet<sup>1</sup>, Odike Keren Ifeoma<sup>1</sup>**

**Affiliations:** <sup>1</sup>Edo University Iyamoh, Edo state, Nigeria

<sup>2</sup>Irrua Specialist Teaching Hospital, Irrua Edo State, Nigeria

<sup>3</sup>Ambrose Alli University, Ekpoma, Edo State, Nigeria

Correspondence to: Omoregbe Isaac Newton

**Email:** omoregbeisaac@gmail.com

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**ABSTRACT**

**BACKGROUND:** Breast cancer is the most common cancer in the world and among Nigerian women. It contributed about 685,000 deaths globally in 2020. Breast self-examination (BSE) is considered one of the main screening methods in detecting earlier stages of breast cancer. It is a useful technique, cheap, and easy method for early diagnosis of breast cancer. In developing countries like Nigeria where the awareness regarding breast cancer and breast self-examination is poor, breast cancers are diagnosed at late stages resulting in a poor prognosis of the disease. Therefore, this research was intended to measure the knowledge and practice of breast self-examination among female medical students.

**METHOD:** A descriptive cross-sectional study was conducted among 112 respondents using a stratified sampling technique. An interviewer-administered questionnaire was used for data collection. The questions covered knowledge, practice, and barriers to breast self-examination. The chi-square test was used to test for the association; the level of significance was set as  $P < 0.05$

**RESULT:** The mean age (SD) of respondents was  $19.3 \pm 1.4$  years. Almost half of the respondents. While 49.1% of respondents demonstrated good knowledge of BSE, 50.9% had fair to poor understanding, indicating a need for improved awareness initiatives. 97.3% had heard of breast self-examination, mostly from the media (36.1%) and health workers (31.3%). About 70% of the students practised Breast self-examination, 47.4% had good practice; 27.7% had moderate practice and 24.9% had poor practice. The majority of the respondents 71.4% who practice breast self-examination started before the age of 20. However, only 50.9% had been trained in breast self-examination, primarily by health workers (29.5%).

Significant associations were found between knowledge and practice of breast self-examination with a p-value = 0.018.

**CONCLUSION:** The study reveals a high awareness of breast self-examination (BSE) among undergraduate students, with notable knowledge gaps in proper technique and practice consistency. While the internet serves as a primary information source, the findings underscore the need for structured, evidence-based educational interventions to enhance understanding and adherence to BSE recommendations. These results highlight the importance of integrating breast cancer awareness programs into academic and policy frameworks to address rising breast cancer incidences in Nigeria.

**Keywords: Breast cancers, Breast self-examination, Knowledge, and Practice.**

## **Introduction**

Breast cancer is a significant worldwide issue affecting a large number of women, and it is the most common cause of cancer-related deaths among women worldwide (Sadoh *et al.*,2021). The International Agency for Research on Cancer (IARC) reports that, with an anticipated incidence of 2.3 million new cases (11.7%), female breast cancer (BC) eclipsed lung cancer as the most commonly diagnosed disease in 2020. Lung cancer (11.4%), colorectal cancer (10.0%), prostate (7.3%), and stomach (5.6%) cancers and breast cancer is the fifth most common cause of cancer mortality worldwide, with 685,000 deaths in 2020 (Sung *et al.*, 2020, Release P. World Cancer Day 2021). About 99% of breast cancer is seen in females, and only 1% of men are affected by breast cancer. Breast cancer ranks first for cancer occurrences in 159 out of 185 nations and for fatality in 110. Among women worldwide, breast cancer accounts for 1 in 4 cancer cases and 1 in 6 cancer deaths (Release P. World Cancer Day 2021). Despite being uncommon in Africa, female breast cancer has become more common in recent years. Moreover, the death rate caused by breast cancer has increased in developing countries compared to developed countries (Release P. World Cancer Day 2021, Anyigba *et al.*,2021). In Nigeria, the age-standardized incidence of breast cancer incidence ranges from 43.6 to 56.7/100,000 with age-standardized mortality rates of 16.7–20/100,000 (Dimoko & Alagoa.,2023). BC is responsible for 14% of all malignancies in adolescents and young women (15–39 years old), with poorer results in this group while being more frequent in older women (Sadoh *et al.*,2021). According to Nigerian research, 28% of women with breast cancer who sought radiation treatment were under 40 years old (Ntekim *et al.*,2022). The incidence of mortality from BC is higher in underdeveloped nations because of delayed hospital admissions (Ntekim *et al.*,2022)

The rate of breast cancer death will go down with proper screening, early discovery of the disease, and the right treatment and drugs. Due to a noticeable increase in the incidence rates among younger girls and the delayed identification of cancer, breast cancer screening is currently receiving more attention in several developing nations, such as Nigeria, Ghana, and India (Release P. World Cancer Day 2021). There are three authorized, reasonably priced methods for screening for breast cancer: mammography, clinical breast examination (CBE), and breast self-examination (BSE) (Huang *et al.*,2022, Elmore *et al.*,2005). These methods aid in identifying the asymptomatic state. Breast self-examination (BSE) involves women examining their breasts for abnormalities such as lumps or changes in size or shape. It is a low-cost, safe, and simple method for early detection of breast cancer (Dagne *et al.*,2019). BSE is a crucial and simple technique that women may use on their own to detect breast cancer early on. According to some research, women may identify up to 90% of breast cancer cases on their own (Dagne *et al.*,2019). However, consistently doing breast self-examination on women does not guarantee that the illness will be discovered. Women can better understand the warning signs and symptoms of breast cancer by doing a breast self-examination (Dagne *et al.*,2019. These signs and symptoms include redness of the breast skin, changes in the size of the breast or nipple, a breast lump, pain in the breast or armpit, a lump under the armpit, nipple rash, changes in the shape of the breast or nipple, bleeding or discharge from the nipple, pulling of the nipple, dimpling of the breast skin, and changes in the position of the nipple (Dagne *et al.*,2019). To raise awareness of breast health issues and enable early identification of abnormalities, particularly for individuals without access to modern laboratory investigations for the diagnosis of breast cancer, breast self-examination is also crucial. The World Health Organization advises breast self-examination to increase women's awareness of breast cancer, even though it is no longer a reliable way to identify breast cancer in its early stages. The greatest strategy to combat the increased incidence of breast cancer is secondary prevention, which monthly breast self-examination may achieve (Karayurt *et al.*,2008). Reducing the morbidity and death of breast cancer is largely dependent on early detection of the disease by self-examination and diagnosis. Early identification of breast cancer through breast self-examination and diagnosis plays an important role in reducing its morbidity and mortality (Zhang *et al.*,2024). But most women fail to perform breast self-examination because of a lack of awareness and lack of knowledge of breast self-examination. It is important to adequately motivate women to regularly carry out BSE to curtail the increasing mortality rate from breast cancer (Agwu *et al.*,2013). regular

BSE has been suggested as part of the overall health promotion concept. The practice of BSE can help women to know the structure and composition of their normal breasts thereby enhancing their sensitivity to detect any abnormality at the earliest time. In many countries, there are cultural attitudes that make women feel uncomfortable receiving information about BSE from male healthcare personnel. Female health workers and medical students are crucial role models in these settings. They should be well-informed about BSE, have a good attitude about it, and practice it frequently. For medical students to teach patients after they graduate, they must, therefore, be well aware of BSE and practice BSE appropriately while in school. Additionally, medical students have a responsibility to give instructions to other women on how to perform BSE correctly in primary healthcare settings. The problem of inadequate breast self-examination (BSE) among female undergraduate medical students is a critical issue that raises concerns about their health and their future role as healthcare providers. Regular BSE is vital for the early detection of breast abnormalities, including signs of breast cancer, which can significantly improve treatment outcomes and survival rates. The failure to practice regular BSE could lead to delayed detection and missed opportunities for early medical intervention. This gap in proactive health management among medical students suggests a potential deficiency in their health awareness and their future ability to advocate preventive health measures, including breast health, to patients (Karayurt *et al.*,2008). The rising incidence of breast cancer in Uganda, from 11 to 39.2 per 100,000 over the past 30 years, coupled with increasing adoption of unhealthy lifestyles and poor breast cancer screening awareness, further amplifies the urgency of addressing this issue. Despite the importance of BSE, its practice remains inconsistent among women, particularly in developing countries, including Nigeria. This study focuses on addressing these gaps. Studies show many women, including medical students, are either unaware of breast cancer risks or neglect regular self-examination. Promoting BSE among these students is essential, as women themselves detect 90% of breast tumours, and early detection is key to reducing the high mortality rates from breast cancer (Karayurt *et al.*,2008).

## **Material and Methods**

**Study Area:** The study was conducted at Edo State University, Uzairue, (EDSU) located in Iyamho in Edo state, Nigeria.

**Study Design and Setting.**

An institution-based cross-sectional study was conducted from February 1<sup>st</sup> to August 31<sup>st</sup>, 2024, at Edo State University, Uzairue (EDSU), which is in Iyamho, Edo state, Nigeria. The Edo State University, Uzairue (EDSU) is one of the famous higher education institutions in Nigeria.

### Study population

The study population comprised female undergraduate medical students at Edo State University, Uzairue, spanning academic levels from 100 to 600.

### Selection criteria

All consenting female medical students from 100 to 600 levels at Edo State University who were available during the study period were included in the study. Female medical students who were unavailable at the time of data collection or were unwell and unable to participate were excluded from the study.

### Sample size determination

Sample size determination using the Cochran formula for the descriptive cross-sectional study design (Ofori *et al.*,2021, Adetokunbo.,2015)

$$n = \frac{Z^2 P q}{d^2}$$

n= minimum desired sample size

Z = the standard normal deviation, usually set as 1.96 which corresponds to the 95% confidence level.

p= the estimated prevalence from a previous article on good knowledge of breast self-examination of 90.3% in Edo state = (0.903) (Olowokere.,2012)

q=1-p (complementary probability)

d=degree of accuracy desired, usually set at 0.05

$$n = \frac{Z^2 P q}{d^2}$$

$$n = \frac{(1.96)^2 \times 0.903 \times (1 - 0.903)}{0.05^2}$$

$$n = \frac{3.8416 \times 0.903 \times 0.097}{0.0025}$$

$$n = \frac{0.3364895856}{0.0025}$$

$$n = 134$$

Using correction formula

$$s = \frac{n}{1 + \frac{n}{N}}$$

Where s is the desired sample size

n is the sample size from the previous calculation which is 134

N is the population size which is the total number of female medical students in Edo State University = 416

$$s = \frac{134}{1 + \frac{134}{416}}$$

$$s = \frac{134}{1 + 0.3221153846}$$

$$s = \frac{134}{1.3221153846}$$

$$S = 101$$

Assuming a non-response rate of 10%, the required minimum sample would be.

$$= \frac{101}{1 - 0.1}$$

$$= \frac{101}{0.9}$$

$$= 112$$

= 112 students.

A stratified sampling technique was used to divide the study participants into six strata based on their academic levels, from 100 to 600. The distribution of female medical students across each level was as follows:

- 100 Level: 92 students
- 200 Level: 92 students
- 300 Level: 97 students
- 400 Level: 58 students
- 500 Level: 46 students
- 600 Level: 31 students

With a total population of 416, a sample size of 112 was drawn. To ensure proportionate representation from each stratum, the number of students in each level was divided by the total population and then multiplied by the required sample size. The calculations for each level were as follows:

$$100L: 92/416 \times 112 = 25$$

$$200L: 92/416 \times 112 = 25$$

$$300L: 97/416 \times 112 = 26$$

$$400L: 58/416 \times 112 = 16$$

$$500L: 46/416 \times 112 = 12$$

$$600L: 31/416 \times 112 = 8$$

Each stratum was treated as an independent sub-population. Within each stratum, participants were randomly selected using a simple random sampling technique, with random serial numbers drawn from each class list until the desired sample size was achieved. This approach ensured that every individual within a stratum had an equal probability of being selected.

### Sampling technique

A Stratified random sampling technique was used to divide the participants into 6 strata using their levels from 100–600. The number of female medical students at each level was:

- 92 females in 100 Level

- 92 females in 200 Level
- 97 females in 300 Level
- 58 females in 400 Level
- 46 females in 500 Level
- 31 females in 600 Level

A stratified random sampling method was used to proportionally allocate 112 participants across six academic levels. Participants were then randomly selected within each stratum, and the total population is 416. To get the proportionate size for each stratum, the size of each class is divided by the total population and then multiplied by the sample size required.

For Example,

$$100L: 92/416 \times 112 = 25$$

$$200L: 92/416 \times 112 = 25$$

$$300L: 97/416 \times 112 = 26$$

$$400L: 58/416 \times 112 = 16$$

$$500L: 46/416 \times 112 = 12$$

$$600L: 31/416 \times 112 = 8$$

Each stratum will then be sampled as an independent sub-population, out of which individual is randomly selected using simple random sampling technique by selecting random serial numbers from each class list until I get my desired sample size. Hence every unit in a stratum has equal chance of being selected.

### **Data collection**

Questionnaire survey: A Structured self-administered questionnaire, which focused on the socio-demographic characteristics, family and personal history of BC, knowledge of BC and BSE, and practice of BSE was used to collect data from the participants. The researchers designed the questionnaire following an exhaustive literature review and consultations with experts in the field. Throughout the data collection process, we engaged in ample interactions with the students and aided those who required clarification or further explanation regarding the questionnaire content.

### **Data Analysis**

The data were analysed using the Statistical Package for Social Sciences (SPSS) software version 27.0. The independent variables included student socio-demographic characteristics such as age, level of education, marital status, occupation, and religion. The dependent variables were knowledge of BC and BSE, as well as the practice of BSE. Socio-demographic characteristics were measured using a nominal scale, while knowledge and practice of BSE were measured using an

ordinal scale. Categorical variables were presented in tables, frequencies, pie charts, and percentages. Mean and standard deviation were used for continuous variables. Knowledge was assessed based on the total number of correct responses to 11 questions related to breast self-examination (BSE) practices. They were scored 1-4 as poor, 5-7 as moderate, and 8-11 as good for knowledge of Breast Cancer and BSE<sup>16</sup>. BSE practice was assessed by using 7 questions with the responses of 'Yes or No' type like 'Did you perform BSE in the last 6 months? Practice scores were categorized as 1–2 indicating poor practice, 3–4 moderate practice, and 5–7 good practice of BSE.<sup>16</sup> The Chi-square test was applied to examine associations between Knowledge and practice of BSE, with statistical significance set at a P-value of less than 0.05 at 95% confidence level.

**Ethical consideration:** Ethical clearance to conduct this research was obtained from the Health Research and Ethics Committee of Edo State University, Uzairue. Information obtained was treated with utmost confidentiality and respect. The study was conducted in line with the principles of responsible conduct of biomedical research, namely non-maleficence, justice, beneficence, and autonomy. Furthermore, the study was conducted in compliance with the fundamental principles of medical ethics as well as the tenets of the National Code for Health.

## **Results**

The study sample comprised 112 female participants with a mean age of 19.3 years, predominantly between 15-19 years old (75.9%). Most were in 300-level (23.2%) or lower academic levels, with fewer in advanced levels. Nearly all participants were single (89.3%) and Christian (89.3%). The group demonstrated ethnic diversity, with the largest representations from Etsakor, Igbo, Bini, and Esan backgrounds. (Table 1).



**Table I: Socio-demographic characteristics of the participants.**

Characteristics	Number N=112 (%)
<b>Age (Years)</b>	
15-19	85 (75.9)
20-25	27 (24.1)
Mean ± SD	19.3 ± 1.4
<b>Gender</b>	
Female	112 (100.0)
<b>Level</b>	
100	25 (22.3)
200	25 (22.3)
300	26 (23.2)
400	16 (14.3)
500	12 (10.7)
600	08 (7.2)
<b>Marital Status</b>	
Single	100 (89.3)
Married	12 (10.7)
<b>Religion</b>	
Christian	100 (89.3)
Muslim	12 (10.7)
<b>Ethnicity</b>	
Etsakor	21 (18.8)
Igbo	21 (18.8)
Bini	14 (12.5)
Esan	12 (10.7)
Urhobo	11 (9.8)
Yoruba	6 (5.4)
Hausa	3 (2.7)
Others	24 (21.3)

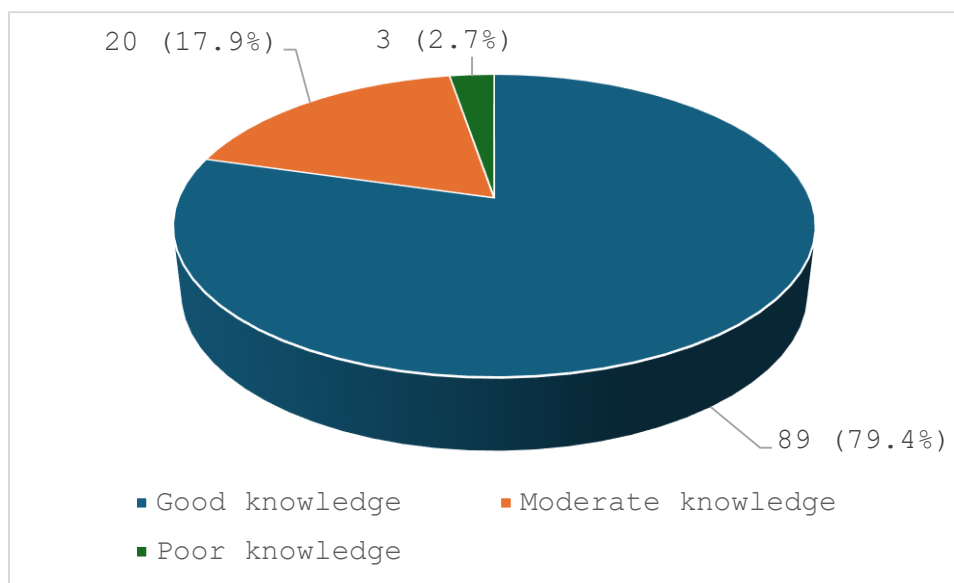
SD Standard Deviations

**Table 2. Awareness and Knowledge Levels of Breast Cancer Among Respondents**

<b>Characteristics</b>	<b>Frequency (112)</b>	<b>Percent (%)</b>
<b>Heard of Breast Cancer</b>		
Yes	107	95.5
No	5	4.5
<b>The main source of information about BC</b>		
Peers and Neighbors	13	11.6
Television, Radio, Newspaper, Books	36	32.1
Internet	70	62.5
Health care providers	33	29.5
<b>Causes of breast cancer</b>		
Exposure to cancer-causing agents	87	77.7
Prolonged and early use of oral contraceptives	15	13.4
Exposure to X-ray before the age of 30 years	24	21.4
Estrogen replacement therapy	16	14.3
BRCA1&2 Mutation	42	37.5
Genetics	89	79.5
I have no idea	05	4.5
<b>Risk factors to breast cancer</b>		
Family history of breast cancer	83	74.1
Diet and diet related factors e.g. overweight	23	20.5
Exposure to radiation	59	52.7
Lack of exercise	12	10.7
Smoking	31	27.7
Alcohol	20	17.9
I don't know	01	0.9
<b>Symptoms of breast cancer</b>		
Lump in the breast	105	93.8
Discharge from the breast	54	48.2
Pain or soreness in the breast	40	35.7
Change in the size of the breast	34	30.4
Ulceration of the breast	45	40.2
Weight loss	38	33.9
Change in the shape of the breast	35	31.3
Pulling in the nipples	30	26.8
<b>Methods of detecting breast cancer</b>		
Mammography	43	38.4
Breast self-examination	90	80.4
Clinical breast examination by health workers	37	33.0

\*=Multiple responses

Most respondents (95.5%) have heard of breast cancer, with primary information sources being the internet (62.5%), followed by media such as television and books (32.1%), and healthcare providers (29.5%). Regarding knowledge of breast cancer causes, 77.7% recognized exposure to cancer-causing agents, while genetics was acknowledged by 79.5% of respondents, indicating a reasonable awareness of genetic risks. A significant portion of respondents identified family history as a primary risk factor (74.1%), followed by exposure to radiation (52.7%) and smoking (27.7%). Most participants (93.8%) recognized a breast lump as a symptom of breast cancer, with other noted symptoms including discharge (48.2%) and ulceration of the breast (40.2%). In terms of detection methods, breast self-examination was the most widely recognized (80.4%), followed by mammography (38.4%) and clinical breast exams by health workers (33.0%). (**Table 2**).



**Figure 1: Knowledge of breast cancer among Edo State University undergraduate students.**

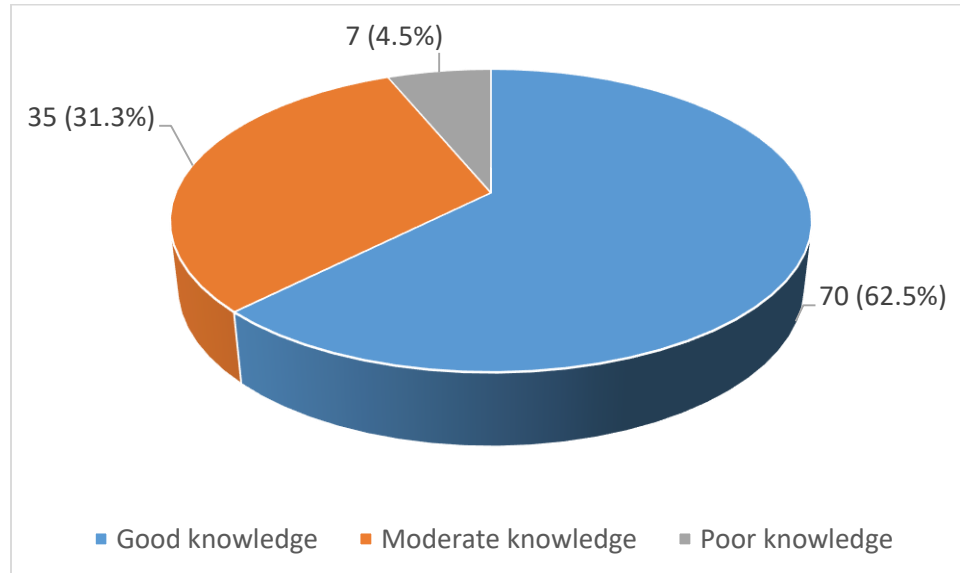
Most participants 89 (79.4%) demonstrated good knowledge, 20 (17.9%) had moderate knowledge, and only 3 (2.7%) displayed poor knowledge. This distribution highlights that while most respondents are well-informed, a significant portion have only moderate knowledge, and a small group has limited understanding, which could benefit from further educational efforts.

**Table 3. Respondent's knowledge of Breast Self-Examination**

<b>Variables</b>	<b>Frequency</b>	<b>Percent (%)</b>
Heard of breast self-examination		
Yes	109	97.3
No	3	02.7
<b>The main source of information about BSE</b>		
Peers and Neighbours	65	58.0
Television, Radio, Newspaper, Books	89	79.5
Internet	101	90.2
Health care providers	79	70.5
<b>Know how to perform BSE</b>		
Yes	79	70.5
No	5	4.5
I don't know	28	25.0
Age at which BSE should be started?		
Less than 20 years	87	77.7
More than 20 years	25	22.3
<b>What do we look for during BSE</b>		
Breast lump	7	6.3
Size of the breast	3	2.6
Change in nipple colour	2	1.8
Nipple discharge	6	5.4
All the above	94	83.9
<b>Which examination technique applied during BSE</b>		
Inspection	4	3.6
Palpation	3	2.6
Both inspection and palpation	100	89.3
I don't know	5	4.5
<b>How often do you practice BSE?</b>		
Daily	19	17.0
Weekly	21	18.8
Monthly	40	35.7
Yearly	5	4.5
Anytime	27	24.0
<b>How is BSE done?</b>		
Palpating breast with one finger	7	6.3
Palpating with a minimum of three fingers	102	91.1
Anyhow	3	2.6

A large majority of respondents (97.3%) reported being aware of breast self-examination (BSE). The internet was the most cited source of information about BSE (90.2%), followed by media sources such as television, radio, and newspapers (79.5%), and healthcare providers (70.5%).

Although 70.5% of respondents indicated they knew how to perform BSE, 25% expressed uncertainty. In terms of the recommended age to begin BSE, most participants (77.7%) indicated it should start before the age of 20. When asked what changes to look for during BSE, the vast majority (83.9%) correctly identified multiple indicators (such as breast lumps, changes in breast size, nipple colour, and nipple discharge) rather than just one. Nearly all participants (89.3%) understood that BSE involves both inspection and palpation techniques, indicating a comprehensive understanding of the examination method. Regarding frequency, 35.7% practiced BSE monthly, while others did so weekly (18.8%), anytime (24.0%), or daily (17.0%). Most respondents (91.1%) correctly reported that BSE should involve palpation with at least three fingers, reflecting a strong grasp of proper technique (Table 3).



**Figure 2: Knowledge of breast self-examination among undergraduate students of EDSU.**

The data shows varying levels of knowledge among respondents. Many participants (62.5%) demonstrated good knowledge of BSE, suggesting they have a strong understanding. Moderate knowledge was observed in 31.3% of respondents, indicating a fair level of understanding but with some knowledge gaps. This distribution suggests that while most respondents are well-informed, a portion could benefit from further education to enhance their comprehension in Figure 1

## **Discussion**

This study assessed the socio-demographic characteristics and knowledge of breast cancer and breast self-examination (BSE) among undergraduate students at Edo State University. The findings provide valuable insights into awareness levels, knowledge gaps, and opportunities for targeted educational interventions. The sample comprised young, predominantly female respondents with a mean age of 19.3 years, which aligns with similar studies conducted among university students in Nigeria and other developing countries. The age distribution suggests that the participants represent a cohort at an ideal stage for preventive education, as awareness campaigns targeted at this age group can have long-term benefits in fostering early detection behaviours. Nearly all participants (95.5%) had heard of breast cancer, indicating a high level of awareness. This finding is comparable to studies in other Nigerian universities, where awareness of breast cancer was similarly high, often exceeding 90%. The internet was the primary source of information (62.5%), highlighting the role of digital platforms in disseminating health knowledge among youth. However, reliance on the internet could also expose participants to misinformation, underscoring the need for credible online health resources.

The study found reasonable awareness of breast cancer risk factors, with most participants recognizing genetic predisposition (79.5%) and family history (74.1%) as significant contributors. These findings are consistent with research from other developing regions, where familial risk and genetics are commonly acknowledged. However, awareness of lifestyle-related risk factors, such as diet (20.5%), smoking (27.7%), and alcohol consumption (17.9%), was relatively low. This gap mirrors observations from similar studies in Sub-Saharan Africa, where emphasis on genetic risks often overshadows modifiable lifestyle factors in public health campaigns. Regarding symptoms, the recognition of a breast lump as a key symptom was almost universal (93.8%), aligning with global findings that lumps are the most recognized sign of breast cancer. However, other symptoms such as changes in breast shape (31.3%) and pulling in of the nipples (26.8%) were less frequently identified, suggesting partial knowledge that could limit early detection. Awareness of BSE was high (97.3%), with the internet again serving as the primary information source (90.2%). While the majority (70.5%) reported knowing how to perform BSE, a quarter (25%) were unsure, indicating a knowledge gap. These findings echo similar research in Nigeria and other African countries, where high awareness often does not translate into a comprehensive understanding or proper practice of BSE techniques. The study revealed that most respondents (77.7%) correctly

identified that BSE should begin before the age of 20, a practice supported by health guidelines emphasizing early screening behaviours. Furthermore, 83.9% correctly identified multiple indicators to observe during BSE, and 89.3% recognized the importance of using inspection and palpation techniques, reflecting strong foundational knowledge. However, the frequency of BSE practice varied widely, with only 35.7% adhering to the recommended monthly practice. This inconsistency aligns with findings from other African studies, where practical adherence to BSE recommendations often lags awareness due to factors such as perceived low risk, lack of confidence in technique, or competing academic priorities. Compared to findings from other Nigerian and African universities, the high levels of awareness and knowledge observed in this study suggest that health promotion efforts within this population may be more effective than in some other settings. However, gaps in understanding lifestyle risk factors and inconsistent BSE practices highlight areas for improvement. Notably, a significant portion of participants (31.3%) demonstrated only moderate knowledge of BSE, similar to findings in Ghana and Kenya, where substantial knowledge disparities persist despite widespread awareness campaigns.

### **Implications for Public Health**

The study underscores the critical role of targeted health education in bridging knowledge gaps and fostering consistent preventive behaviours. Integrating breast cancer awareness and BSE education into university curricula or leveraging digital platforms for targeted campaigns could enhance understanding and adherence to recommended practices. Further, addressing misconceptions about lifestyle risk factors and emphasizing the importance of regular BSE practice could improve early detection rates, ultimately reducing breast cancer morbidity and mortality.

### **Conclusion**

This study highlights a high level of awareness of breast cancer and BSE among female undergraduate students at Edo State University but identifies significant knowledge gaps and inconsistencies in practice. These findings underscore the need for comprehensive and targeted educational interventions to promote early detection and preventive behaviours among young women.

**CONFLICT OF INTEREST:** We hereby declare zero conflict of interest in this study.

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