

The Awareness and Practice of Breast Self-Examination(Bse) Among Female Polytechnic Students In the Polytechnic, Ibadan

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Abstract: *This study examined the awareness and practice of Breast Self-Examination (BSE) among female students at The Polytechnic, Ibadan, Nigeria. A total of 423 respondents participated in the study, with a focus on socio-demographic factors, knowledge, attitudes, and behaviors related to breast cancer and BSE. The results indicated that while a significant proportion of respondents were aware of breast cancer and BSE, their knowledge of the correct BSE technique was limited. Despite this awareness, BSE practice was inconsistent, with a notable lack of regularity. Various factors, including age, marital status, religion, ethnicity, level of education, and awareness, were found to influence BSE practice. Attitudinal barriers such as embarrassment, perceived ineffectiveness, and unpleasantness were identified as hindrances to regular BSE. This study highlights the need for improved public health education, particularly targeting young women, to enhance their understanding of breast cancer and promote regular BSE. Health campaigns should emphasize normal and abnormal breast awareness, and healthcare professionals should play a more active role in patient education. Furthermore, involving men in awareness initiatives and fostering collaboration between governments and healthcare practitioners are recommended to establish and maintain effective health promotion programs for younger women, ultimately leading to better breast health awareness and practices.*

Keywords: *Breast Self-Examination (BSE), breast cancer, awareness, practice, young women, public health education, Nigeria.*

BACKGROUND

Cancer arises from genetic mutations or abnormal changes in genes responsible for regulating cell growth and health. It is a significant global health challenge, particularly affecting women. In developed countries, cancer is the second leading cause of death, accounting for 22% of fatalities, while in developing nations, it ranks third after infectious diseases and cardiovascular conditions, contributing to 9% of total deaths (World Health Organization, 2008).

Breast cancer, in particular, is a major public health concern worldwide. Annually, it affects over 1 million women, leading to more than 400,000 deaths, with approximately 4.4 million women living with the disease. It is the most common specific cancer in women and the leading cause of cancer-related deaths among females globally. Despite being about 100 times more common in women than men, survival rates are similar for both genders (National Cancer Institute, 2006; Cancer Research, 2007; American Cancer Society, 2007). Early detection through screening plays a vital role in reducing the impact of breast cancer on health, potentially achieving a 95% survival rate if diagnosed at an early stage (Yarbrough and Braden, 2001).

The experience of women with breast cancer encompasses various phases, including diagnosis, primary treatment, considerations related to non-invasive breast cancer, genetic risk management, treatment completion, survivorship, potential recurrence, and palliative care (National Research Council, 2004). Screening methods for breast cancer include mammography, clinical breast examinations by healthcare providers, and breast self-examinations (Bse) (Kayode et al., 2005).

Bse is a screening technique for early breast cancer detection, emphasizing breast familiarity to detect changes or abnormalities. Performing monthly bse, typically between the 7th and 10th day of the menstrual cycle, can facilitate early cancer detection, leading to better treatment outcomes (Schechter, 1999). The American cancer society and the national cancer institute recommend regular mammograms, clinical breast examinations, and monthly bse for early breast cancer detection

(American Cancer Society, 2005). Studies have shown that women are more proficient in conducting bse when taught by healthcare professionals (Soyer et al., 2007).

Despite the benefits of bse, its practice remains inconsistent among women, and many lack proper knowledge of how to perform it effectively. Some studies have even revealed low awareness of breast cancer among women in certain regions (Pillay, 2002). In Nigeria, breast cancer has surpassed cervical carcinoma in hospital incidence, and its prevalence is a growing concern (Adebamawo and Adekunle, 1999). The incidence of breast cancer is known to peak between the ages of 45 and 55, with increased cases observed in younger populations (Fancher et al., 2011). Early diagnosis is crucial for improving survival rates, and bse is considered a feasible approach, particularly in developing countries due to its low cost and applicability (Park, 2002). This study aims to assess the awareness and practice of breast self-examination(BSE) among female polytechnic students in the polytechnic, Ibadan, to address these important public health issues.

METHODS

Study Area

The study was carried out in The Polytechnic, Ibadan, Oyo State. The Polytechnic, Ibadan was established under the provision of the Provost cited as The Polytechnic edict, 1970. It is located around Sango- Eleyele road in Ibadan with a coordinate of 7^o26'36"N 3^o52'58"E 7.4433875, 3.8827148. It became a successor of the erstwhile technical college founded in 1960. There are 15000 students in the institution. There are five faculties; Engineering, Science, Environmental studies, and Business and Communication studies.

Study Population

The research sample comprises female students who reside in the female hostels at The Polytechnic, Ibadan, specifically in Olori and Ramat Halls. These students come from diverse backgrounds and belong to various socioeconomic groups, reflecting the institution's annual intake of students.

Study Design.

A cross-sectional research approach was utilized to evaluate the level of awareness and the extent to which female students in the institution engage in breast self-examination.

Sampling Technique

A multistage sampling technique was used to recruit subject for the study. The Polytechnic has two Female Hostels; Olori and Ramat Hall with 7 blocks and 4 blocks respectively. Each block has 30 rooms. The two hostels were selected for the study. Five and three blocks were randomly selected from Olori and Ramat Hall respectively using a ballot paper for each hostel, the first stage. Simple random sampling technique was used to select two respondents in each of the rooms also using ballot paper, till the desired number of sample size was obtained (423), the second stage.

Data Instrument

Data were gathered using a structured self-administered questionnaire, adapted from a previous study conducted by Iruhe et al. in 2011. The questionnaire encompassed 45 questions, with nine focusing on respondents' personal information, including date of birth, age, ethnic group, religion, and education. The remaining questions were categorized into sections related to breast cancer knowledge, awareness of self-breast examination, attitude towards self-breast examination, and practice of self-breast examination. Responses were measured on a five-point summated Likert scale, ranging from "strongly agree" to "strongly disagree."

Data management involved the utilization of Statistical Package for Social Science (SPSS) version 21.0. Routine data cleaning and editing were conducted to identify and rectify errors. The relationship between awareness and the practice of breast self-examination was examined through the chi-square test, and logistic regression was employed to evaluate the influence of various independent variables

on the practice of breast self-examination.

Ethical clearance was secured from the Research and Ethical Committee of the Ministry of Health in Ibadan, Oyo State. The assurance of confidentiality and the right to withdraw from the study at any point were conveyed to participants.

RESULTS

Table 1: Respondent's Socio demographic characteristics

Respondent characteristic	Frequency(n)	Percentage (%)
Age		
15-24	276	65.2
25-45+	147	34.8
Marital status		
Married	26	6.1
Unmarried	397	93.6
Religion		
Christianity	327	77.3
Islam	92	21.7
Others	4	.9
Ethnic group		
Yoruba	389	92.0
Others	34	8.1
Level of Education		
OND	154	36.4
HND	269	63.6
Hostel		
Olori Hall	300	70.9
Ramat Hall	123	29.1

Result from table 1 above showed that the mean age of the participants was 22.5 years, with a range from 15 to 45 years. The survey data highlights that most of the respondents fell within the 15-24 age bracket (65.2%), were unmarried (93.6%), followed the Christian faith (77.3%), identified as Yoruba ethnically (92.0%), and had varying educational backgrounds, with 36.4% having OND qualifications and 63.6% holding HND qualifications. Furthermore, a significant proportion of the participants were residents of Olori Hall (70.9%), while a smaller percentage resided in Ramat Hall (29.1%).

Table 2: Awareness of breast cancer

Variable	Frequency (n)	Percentage (%)
Have you heard of breast cancer?		
Yes	404	95.5
No	19	4.5
Source of Information		
Media	277	65.5
Hospital	37	8.7
Friends	76	18.0
Family	6	1.4
Others	8	1.9

Breast cancer is a hard or soft single or multipl noodle		
Yes	287	67.8
No	16	3.8
Don't know	101	23.9
What are the likely sequelae of breast lump		
Goes away on its own		
Yes	212	50.1
No	75	17.7
Don't know	117	27.7
Remains as it is		
Yes	287	67.8
No	13	3.1
Don't know	104	24.6
Grow painful		
Yes	278	65.7
No	20	4.7
Don't know	106	25.1
May become cancerous		
Yes	289	68.3
No	13	3.1
Don't know	102	24.1
What is breast cancer?		
The presence of abnormal painless breast lump		
Yes	82	19.4
No	259	61.2
Don't know	63	14.9
Swollen and enlarged breast		
Yes	132	31.2
No	212	50.1
Don't know	60	14.2
The following is a cause of breast cancer		
Age		
Yes	89	21.0
No	83	19.6
Don't know	251	59.3
Family history		
Yes	291	68.8
No	73	17.3
Don't know	59	13.9
Smoking		
Yes	106	25.1
No	58	13.7

Don't know	259	61.2
Diet		
Yes	281	66.4
No	80	18.9
Don't know	62	14.7
Breastfeeding		
Yes	29	6.9
No	140	33.1
Don't know	254	60.0
Exercise		
Yes	18	4.3
No	103	24.3
Don't know	302	71.4
Multiple sexual partners		
Yes	40	9.5
No	300	70.9
Don't know	83	19.6
The following are signs/symptoms of breast cancer		
Lump in the breast		
Yes	307	72.6
No	19	4.5
Don't know	97	22.9
Discharge from the breast		
Yes	127	30.0
No	38	9.0
Don't know	258	61.0
Pain or soreness in the breast		
Yes	360	85.1
No	13	3.1
Don't know	50	11.8
Discharge from the vagina		
Yes	26	6.1
No	307	72.6
Don't know	90	21.3
Discoloration/dimpling of the breast		
Yes	116	27.4
No	22	5.2
Don't know	285	67.4
Body pain		
Yes	70	16.5
No	87	20.6
Don't know	266	62.9
Inversion of nipple		
Yes	269	63.6
No	23	5.4

Don't know	131	31.0
Difficulty in swallowing		
Yes	34	8.0
No	100	23.6
Don't know	289	68.3
How can breast cancer be diagnosed?		
Pathological examination of breast tissue by FNAC		
Yes	300	70.9
No	14	3.3
Don't know	109	25.8
Breast self examination		
Yes	340	80.4
No	20	4.7
Don't know	63	14.9
Clinical breast examination		
Yes	350	82.7
No	13	3.1
Don't know	60	14.2
Mammography		
Yes	280	66.2
No	30	7.1
Don't know	113	26.7
Chemotherapy		
Yes	98	23.2
No	217	51.3
Don't know	108	25.5
Can breast cancer be treated?		
Yes	171	40.4
No	17	4.0
Don't know	235	55.6
How can breast cancer be treated?		
Removal of the breast	334	79.0
Chemotherapy	305	72.1
Mammography	88	20.8
Tradomedical treatment	42	9.9
Radiography	95	22.5

In the survey of 423 female students, it was found that 95.5% had heard of breast cancer, with the primary source of information being media (65.5%) and hospitals (8.7%). Concerning the characteristics of breast lumps, 67.8% identified them as single or multiple nodules, and 50.1% believed they might go away on their own. However, only 31.2% recognized that breast cancer could cause swollen and enlarged breasts. When asked about the causes of breast cancer, respondents commonly mentioned age (59.3%), family history (68.8%), and diet (61.2%) as contributing factors. In terms of symptoms, 72.6% recognized the presence of a lump in the breast as a sign of breast cancer, while 85.1% were aware of discharge from the breast as a symptom. Regarding diagnosis, 82.7%

mentioned clinical breast examination as a method, and 80.4% acknowledged breast self-examination. In contrast, 66.2% recognized mammography as a diagnostic tool. Respondents generally believed breast cancer could be treated (40.4%), with the preferred treatment options being removal of the breast (79.0%), chemotherapy (72.1%), and mammography (20.8%). Tradomedical treatment and radiography were also mentioned by some respondents at 9.9% and 22.5%, respectively.

Table 3: Awareness of Breast Self Examination

Variable	Frequency (n)	Percentage (%)
Heard of BSE		
Yes	364	86.1
No	59	13.9
Source of Information		
Media	245	57.9
Hospital	44	10.4
Friends	55	13.0
Family	7	1.7
Others	13	3.1
Why should the breast be examined		
To detect lumps		
Yes	292	69.0
No	10	2.4
Don't know	62	86.1
To check for discharges		
Yes	110	26.0
No	218	51.5
Don't know	36	8.5
To check the size of the breast		
Yes	98	23.2
No	225	53.2
Don't know	41	9.7
To admire		
Yes	18	4.3
No	302	71.4
Don't know	44	10.4
When should a female begin to examine the breast?		
Childhood	13	3.1
Adolescence	329	77.8
Adulthood	18	4.3
At what period during a month should breast self-exam be performed?		

Before menses	8	1.9
After menses	24	5.7
At anytime	129	30.5
Don't know	262	61.9
How often do you think a woman should perform breast self examination?		
Daily	29	6.9
Weekly	90	21.3
Monthly	236	55.8
Once a year	6	1.4
Don't know	62	14.6
How is breast self examination done?		
Carefully examine with one finger	61	14.4
Carefully examine with palm and a minimum of two fingers	31	7.3
Carefully examine with palm and a minimum of three fingers	40	9.5
Anyhow	291	68.8
What components of breast self examination do you know?		
(1) Visual examination		
Yes	97	22.9
No	14	3.3
Don't know	231	54.6
(2) Circular palpation		
Yes	216	51.1
No	69	16.3
Don't know	53	12.5
(3) Three fingers used		
Yes	43	10.2
No	69	16.3
Don't know	229	54.1
(4) Finger pads used		
Yes	262	61.9
No	19	4.5
Don't know	333	12.3
(5) Axillae examined		
Yes	15	3.5
No	18	4.3
Don't know	300	70.9

Table 3 above shows that 86.1% of respondents had heard of Breast Self-Examination (BSE), with the primary sources of information being media (57.9%) and friends (13.0%). The main reasons for conducting breast examinations were to detect lumps (69.0%) and check for discharges (51.5%), while only a small percentage mentioned checking breast size (23.2%) or admiring (4.3%). The majority

believed that females should begin breast self-exams during adolescence (77.8%), and the preferred time during the menstrual cycle for BSE was after menses (30.5%). When asked how often women should perform breast self-examination, the most common response was monthly (55.8%). Regarding the technique for BSE, 68.8% mentioned carefully examining with palm and a minimum of three fingers. Respondents had varying knowledge of the components of BSE, with visual examination (54.6%) and circular palpation (51.1%) being relatively well-known, while fewer were aware of using three fingers (10.2%), finger pads (4.5%), or examining the axillae (12.3%).

Table 4: Respondents Practice of BSE (n= 423)

Variable	Frequency(n)	Percentage (%)
Have you ever performed breast self examination?		
Yes	342	80.9
No	49	11.6
Don't know	32	7.6
If yes why?		
Fear of checking for lumps	223	52.7
I was told to do it	95	22.5
Just for fun	9	2.1
Others	15	3.5
If no why?		
I don't have breast problem		
Yes	34	8.0
No	16	3.8
Too frequent to practice		
Yes	9	2.1
No	41	9.7
I don't feel comfortable doing it		
Yes	18	4.3
No	32	7.6
I don't think it is necessary		
Yes	13	3.1
No	37	8.7
Unsure about its benefit		
Yes	15	3.5
No	35	8.3
How often do you practice breast self examination?		
Daily	30	7.1
Weekly	255	60.3
Monthly	40	9.5
Once a year	12	2.8
At what age did you start examining		

your breast by yourself?		
< 19 years	168	39.7
19- 30 years	173	40.9
Don't know	82	19.4
When was the last time you performed breast self examination?		
Within the past 1 – 3 months ago		
4 – 6 months ago	280	66.2
7 – 12 months ago	28	6.6
Specify	13	3.1
	21	5.0
Where do you usually perform breast self examination?		
(1) Any convenient place		
Yes	287	67.8
No	55	13.0
(2) Lying on the bed		
Yes	249	58.9
No	95	22.5
(3) In the kitchen		
Yes	18	4.3
No	342	76.9
(4) In front of mirror		
Yes	119	8.1
No	223	52.7

In the table above, 80.9% of respondents reported having performed breast self-examination (BSE) before, with the primary reasons being fear of checking for lumps (52.7%) and being advised to do it (22.5%). However, some respondents mentioned doing it just for fun (2.1%) or for other reasons (3.5%). Among those who hadn't practiced BSE, reasons included not having breast problems (8.0%), finding it too frequent (2.1%), discomfort (4.3%), not considering it necessary (3.1%), or being unsure of its benefits (3.5%).

Regarding the frequency of BSE, 60.3% practiced it weekly, and 40.9% started examining their breasts between the ages of 19 and 30 years. The majority of respondents (66.2%) had performed BSE within the past 1-3 months, with some indicating other time frames (6.6% within 4-6 months and 3.1% within 7-12 months).

In terms of the location for BSE, many respondents conducted it in any convenient place (67.8%), while some did it lying on the bed (13.0%) or in front of a mirror (8.1%), and a smaller percentage in the kitchen (4.3%).

Table 5: Association between BSE practice and some socio demographic variables

Variables	Have you performed BSE?			Chi square	P value
	Yes	No	Total		
Age 15-24	217(63.5)	59(72.8)	276(65.2)	3.760	0.153
25-45	125(36.5)	22(27.2)	147(34.8)		
Marital Status					
Married	16(4.7)	12(14.8)	26(6.2)		

Unmarried	326(95.3)	69(85.2)	395(93.4)	22.361	<0.001
Religion					
Christianity	271(79.2)	56(69.1)	327(77.3)		
Islam	69(20.2)	23(28.4)	92(21.7)		
Others	2(0.6)	2(2.5)	4(0.9)	13.441	0.009
Ethnic Group					
Yoruba	323(94.4)	66(81.5)	382(92.0)		
Others	19(5.6)	15(18.5)	34(8.0)	26.488	<0.001
Level of Edu.					
OND	110(32.2)	44(54.3)	154(36.4)		
HND	232(67.8)	37(45.7)	269(63.6)	13.920	<0.001
Have your heard of BSE?					
Yes	324(94.7)	40(49.4)	364(86.1)	153.592	<0.001
No	18(5.3)	41(50.6)	59(13.9)		

From the above table, the performance of BSE is not significantly associated with age groups (15-24 and 25-45). Marital status significantly influences BSE practice, with unmarried individuals being more likely to have practiced BSE compared to married individuals. Religion has a statistically significant association with BSE practise. Christians are more likely to have practised BSE compared to Muslims and individuals of other religions. Ethnic group significantly impacts BSE practise, with those belonging to the Yoruba ethnic group being more likely to have practised BSE compared to individuals from other ethnic groups. Level of education significantly influences BSE practised, with individuals holding HND qualifications being more likely to have practised BSE compared to those with OND qualifications. Awareness of BSE is highly associated with its practice, as individuals who have heard of BSE are much more likely to have practice it compared to those who haven't heard of it.

DISCUSSION

This study assessed the awareness and practice of Breast Self-Examination (BSE) among students at Polytechnic of Ibadan, Nigeria. The majority of respondents (86.1%) were aware of BSE, which aligns with a similar study among young adults in Ilorin (81%) (Salaudeen et al., 2009) and another study reporting 91% awareness (Sami-Abdo et al., 2012). Media (57.9%) was the primary source of information on BSE, consistent with previous findings (Salaudeen et al., 2009), while friends and colleagues also played a role. Low information from hospitals was noted, reflecting the state of media governance in Nigeria. Educational level correlated with awareness and knowledge of BSE, with HND students demonstrating higher awareness. This echoes findings by Okobia et al. (2006) among Nigerian women. Of those aware of BSE, 80.9% practiced it, with a higher rate among those aged 15-24. This might be linked to lower income status, as economically disadvantaged individuals may prefer cost-effective screening like BSE (Sami Abdo et al., 2012). HND students showed higher practice rates, possibly due to their exposure to health awareness programs. Differences in practice among religious groups and geographical zones could be attributed to cultural beliefs. Ethnicity also played a role in breast cancer risk and screening (Ojikutu et al., 2009).

Despite claiming knowledge, 68.8% of respondents didn't know the correct way to perform BSE. Only 9.5% practiced it regularly, highlighting the need for Information, Education, and Communication (IEC) campaigns on breast cancer and BSE. This is consistent with other Nigerian studies (Odeyemi and Oyediran, 2002; Salaudeen et al., 2009). Attitudes and education were key predictors of BSE practice. Many respondents found BSE embarrassing (48.7%), time-consuming (48.0%), and unpleasant (47.5%), with a significant portion doubting its efficacy (56.3%) and importance (48.2%).

Education emerged as an enabling factor for health information and service uptake (Galobardes et al., 2006).

Study Limitation

This study, while valuable for young women's health awareness, had limitations due to its small sample size, which may limit generalizability to the broader population.

CONCLUSION AND RECOMMENDATION

A substantial portion of respondents in this study had awareness of BSE but lacked knowledge regarding its proper execution. The practice of BSE was influenced by knowledge, psychological factors, cultural beliefs, and perceptions, as well as various socio-demographic and socio-economic factors. Insufficient patient education efforts by healthcare professionals were also noted.

The study indicates a need for enhanced public health education, particularly targeting young women, to improve their understanding of breast cancer and BSE. Current campaigns may not effectively convey their messages or reach a sufficient audience, leading to misinformation. To address these issues, it is recommended to initiate breast health education at younger ages, focusing on normal and abnormal breast awareness. Continuous health education interventions are essential to stress the importance of health promotion consistently. Media and health organizations should also utilize opportunities like International Breast Health Awareness Month in October to reinforce breast health messages. Furthermore, involving younger men in awareness initiatives and seeking their support can be beneficial. Collaborative efforts between governments and healthcare practitioners are vital to establish and maintain targeted health promotion programs for younger women, ensuring they are well-informed and proactive in safeguarding their health.

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