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# Practice of Breast Self-Examination and Associated Factors among Female Students of College of Health Technology, Aba, Abia State, Nigeria

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**ABSTRACT**

**BACKGROUND**: Breast cancer (BC) is a type of malignant tumor that starts in the cells of the breast and commonly occurs in women, particularly in low and middle-income countries. It has been described as the most commonly diagnosed cancer in women and the leading cause of cancer death globally. It demands immediate action to prevent and detect BC early through the different screening methods. To facilitate early detection of BC, practice on the screening methods is essential.

**OBJECTIVE**: To assess practice of breast self-examination and associated factors among female students of college of Health Technology, Aba, Abia State, Nigeria.

**MATERIALS AND METHODS:** A descriptive-cross sectional study was conducted among female students of college of health technology Aba. Abia state. A semi-structured questionnaire was used to obtain data from the female students which were entered into SPSS version 26 for analysis. Binary logistic regression analyses were performed to identify variables having a significant association with students' knowledge.

**RESULTS:** The mean age of the respondents is 23±3.461, 398 (93.3%) students participated in the study with a non-responsive rate of 6.7%. Majority of the study participants 279 (70.1%) were in the 18-23 year-age group and 350 (87.9%) were single. The dominant tribe and religion were Igbo 380 (95.5%) and Christianity 387 (97.2%) respectively, 44 (11.1%) of them have children. One hundred and thirty-five (33.9%) had poor practice. Students' aged ≤ 23 years (AOR; 5.210 p = 0.002), students' husband educational level (AOR: 4.223, P=0.03), family history of breast cancer (AOR: 5.309, P=0.001) were statistically associated with students' practice of BSE.

**CONCLUSION:** Respondents had low level of practice of Breast self-examination. Husband's educational level, marital status, family history of breast cancer age and were predators to knowledge of BSE.

**KEYWORDS:** Practice, Breast self-examination, Associated factors breast cancer.

## I. INTRODUCTION

Breast cancer (BC) is a type of malignant tumor that starts in the cells of the breast and commonly occurs in women, particularly in low and middle-income countries.[1,2] The abnormal cells could destroy healthy tissues and then, spread beyond boundaries.[3]It has been described as the most commonly diagnosed cancer in women and the leading cause of cancer death globally.[4] In 2018, of the 8,6 million new cases of cancer globally, it accounted for 24.2% of which 8.1% occurred in sub-Sahara Africa (SSA). It also accounted for nearly 15% of the 4.2 million mortality due to cancer worldwide with SSA accounting for 11.8%.[4] It is estimated that 1 in 8 women will develop breast cancer over a lifetime and in the next decade 19.7 million new cases are expected globally by 2030 and 10.6 million will occur in low-and-middle-income countries (LMIC).[5,6]

These regional projections of BC incidence and mortality are worrying. Hence, demand immediate action to prevent and detect BC early through the different screening methods, as a

mandate to help achieve the agenda for sustainable development goal (SDG) 3.4 by 2030[7]. To facilitate early detection of BC, practice on the screening methods is essential.Prevention remains a fundamental strategy in the management of breast cancer. Therefore, screening and early detection play important roles in the treatment and prognosis of breast cancer. Breast self-examination(BSE) is a screening method that can be performed by students themselves. It is inexpensive and accessible and is, therefore a good screening method for resource-poor settings, where mammography is not readily available.[8]

The practice and health-seeking behaviour for breast cancer management are low in Africa,[9] such that majority of the affected patients present late to the hospital when little or nothing could be done in terms of treatment. It has been reported that most patients with breast cancer in developing countries present for the first time at advanced stages (III and IV).[10]This is possibly due to lack of early detection of the disease. The diagnosis of breast cancer during the early stage has been linked to a reduction in mortality, morbidity, and cost of management of illness.[11]Early detection is usually done through screening and screening methods like Breast self-examination(BSE) and Clinical breast examination(CBE) and mammography are available for use.[12] Due to fewer number of experts and lack of advanced diagnostic techniques in developing countries who promote it, regular BSE has been said to be the feasible screening option for early detection of breast cancer.[13]

Breast self-examination is regarded as a valuable screening tool for breast cancer when used as an adjunct to clinical breast examination (CBE) and mammography.[14] Furthermore, it can be utilized in enhancing breast cancer awareness among women.[15] Breast self-examination is recommended because it is inexpensive, private, painless, easy and safe and requires no special equipment.[8] It has also been shown to improve breast health awareness and thus potentially allowing the early detection of breast anomalies.[16] While screening programs with mammography have been effective in high income countries, research has shown that other strategies such as breast self-examination are equally important in reducing mortality from breast cancer particularly in low resource settings.[17]

Breast cancer is an international health concern associated with high levels of morbidity and mortality in developing countries as a result of late presentation. It is the most common female malignancy and the second most common cause of death among white and black women.[18]In 2008, it was estimated that the prevalence of breast cancer in women 15 years and above in sub-Saharan Africa was 23.5 per 100,000 women.[19]Breast cancer has been identified as a major public health concern both in developed and low-and-middle-income countries because of its high prevalence, overburdened health system and direct medical expenditure.[20]Global statistics show the annual incidence rate of breast cancer is increasing in countries with previously low incidence rate[21,22]. Findings from a study on prevalence of breast cancer in Nigeria in 2009-2010 showed that the incidence rate of breast cancer in Nigeria has risen significantly with a rate of 54.3 per 100,000 representing a 100% rise in the last decade.[23]In Nigeria breast cancer is responsible for about 16% of all cancer related deaths.

The two major components of early detection of breast cancer are education and screening. Modern procedures for screening include mammography, magnetic resonance imaging and sonography of the breast. Breast self-examination (BSE) and clinical breast examination (CBE) are other methods that are commonly used.[24]

Breast self-examination is a technique which allows a female to examine her breast for lump or any physical changes in shape, texture, size, and contour. It is often used as an early detection method for breast cancer[23] and should be performed at least once a month beginning at the age of 18 years. Breast self-examination remains a cost-effective method to detect breast cancer changes especially when clinical breast examination (CBE) and mammography are not readily available, accessible and affordable. The American Cancer Society also recommends that women from the age of 20 years should be taught the act of performing monthly breast self-examination.[25]Detecting breast cancer early and getting started with the cancer treatment are the most important strategies to prevent early deaths from breast cancer. A 5-year survival rate is 85% in early detection and decreases to 56% in later detection. The low survival rate in Nigeria can be attributed to late detection and treatment.[26]

Scantiness of practice associated with lack of public awareness of breast cancer and screening in tertiary institutions, absence of organized screening programs, lack of accessibility and effective treatment options and more importantly the role of culture has resulted to late detection and presentation. The goal of education and screening of breast cancer are to create awareness, change behaviour and detect any abnormality before clinical manifestation. Screening should continue

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as long as a woman is in good health and is expected to live 10 more years or longer.

## II. METHODS AND MATERIALS

### STUDY AREA

This study is to be carried out in the city of Aba South Local Government Area, Abia State. AbiaState is one of the 36 states of the Federal Republic of Nigeria. It was created on 27th August 1991 from part of the then Imo State. It is found in the south-east geopolitical zone and is located at latitude 5 25 N, 7 30 E and longitude 5 417 N, 7.500 E of the equator with an elevation of 2.214ft (385m) above the sea level. Its capital city is Umuahia. It has a land area[21] of 6,320km$^2$ with an estimated population of 2,833,999 according to the recent population census of 2006[22].

Aba is the largest commercial city in Abia State and second highest in Southeast Nigeria. It lies along the bank of Aba River and it is at the intersection of road leading to Port Harcourt, Owerri, Umuahia, Ikot Ekpene and Ikot Abasi. Its estimated population is 534,265 according to the 2006 census. It is located at latitude 507 N, 7022 E and longitude 5117 N, 7.367 E of the equator.[21]

Aba was established by the Igbo people in Nigeria as a market town and later military post was placed there by the British colonial administration in 1901. Aba is the major urban settlement and commercial center in the region that is surrounded by small villages and towns[43]. The indigenous people of Aba are the Ngwa people.

Abia State College of Health Sciences and Management Technology (ASCOTECH) formerly called School of Health was founded in the year 1948 by colonial masters. It is located at Aba south Local Government Aba, Abia State and surrounded by the different parts of the New Market viz: By North-New Market; South-Ngwa Road by Mosque; East-School road; West-Etche. It is the first among the registered colleges in Aba with a capacity of about 4000 students including male and female students with about (7) departments and male female ratio of 9/11 with female population of 2,200.

### STUDY DESIGN

The study is a descriptive cross-sectional study that was carried out between the month of August and November 2022.

### STUDY POPULATION

The study population was 2,200 female students of college of Health Technology Aba, Abia State.

**Inclusion criteria**

All female students 18 years and above who gave their consent for the study. Female students who have not been diagnosed of breast cancer.

**Exclusion criteria**

Female Students who did not agree to participate in the study.

**Sample Size Determination**

The sample size was determined using the formula[23]

$$N = \frac{Z^2PQ}{D^2}$$

Where N= required sample or minimum sample size

Z= constant (1.96) [standard normal deviation]

P= proportion with the desired characteristics

Q= 1-P

D= degree of accuracy (0.05)

$n = [(1.96)^2 \times (50/100) \times (0.5)/ (0.05)^2] = 0.9604/0.0025 = 384.$

Therefore, the minimum sample size will be 384

Adjustment for non-response

NS = n/response rate

Assumed response rate = 90% i.e. 0.9%

NS = 384/0.9 = 426.6

= 427

### SAMPLING TECHNIQUE:

This was by systemic sampling method in which a female student was selected in every 5 female students until the sample size was completed.

**Data Collection Method**

Data was collected using pre-tested semi-structured self -administered questionnaires.

**Data Analysis**

Data obtained was analyzed using Statistical Package for Social Science [SPSS].

Version 26.0. Variables were summarized in frequency distribution, tables and numerical variables by mean and standard deviation.Binary logistic regression analyses were performed to identify variables having association with students'practice.

### ETHICAL CONSIDERATION

Approval of this work was obtained from the Ethics and Research Committee, Abia State University Teaching Hospital, Aba. Informed consent was also obtained from the school authorities and students.

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## III. RESULTS:

Four hundred and twenty-seven students participated in this cross-sectional descriptive study with a response rate of 398 (93.3%)

Table 1: Socio-demographic Characteristics of the respondents

| Variables | | Frequency | Percentage (%) |
|---|---|---|---|
| Age group | 18-23 | 279 | 70.1 |
| | 24-29 | 102 | 25.6 |
| | 30-35 | 6 | 1.5 |
| | 36-41 | 7 | 1.8 |
| | 42-47 | 4 | 1.0 |
| Total | | 398 | 100.0 |
| Educational level | Tertiary institution | 398 | 100.0 |
| Husbands' educational level | Tertiary education | 268 | 67.3 |
| | Secondary school level and below | 130 | 32.7 |
| Total | | 398 | 100.0 |
| Marital status | Single | 350 | 87.9 |
| | Married | 48 | 12.1 |
| Tribe | Igbo | 380 | 95.50 |
| | Hausa | 5 | 1.30 |
| | Yoruba | 13 | 3.20 |
| Total | | 398 | 100.0 |
| Religion | Christianity | 387 | 97.2% |
| | Islamic | 8 | 2.0 |
| | African traditional | 3 | 0.8 |
| Total | | 398 | 100.0 |
| Have ever had children | Yes | 44 | 11.1 |
| | No | 354 | 88.9 |
| Presence of family history of breast cancer | Yes | 276 | 69.3 |
| | No | 122 | 30.7 |
| Total | | 398 | 100.0 |
| Number of children the respondents had | 1 | 21 | 5.4 |
| | 2 | 11 | 2.7 |
| | 3 | 10 | 2.5 |
| | 4 | 2 | 0.5 |
| | Not applicable | 354 | 88.9 |
| Total | | 398 | 100.0 |

Table 1 shows the socio-demographic variables of the respondents. Majority of the study participants 279 (70.1%) were in the 18-23 year-age group, all the participants are in the tertiary institution, Majority of the participants' husbands268 (67.3%) had tertiary education while 130 (32.7%) of the participants' husband had secondary education level and below. Majority of the participants are single 350 (87.9%). The dominant tribe and religion among were Igbo 380 (95.5%) and Christianity 387 (97.2%) respectively. Only about 44 (11.1%) of them had children, 276 (69.3%) of the participants had history of breast cancer in the family while 122 (30.7%) had no history of breast cancer in their families and majority of those 21 (5.4%) participants who had children had only one child.

Table 2: Factors associated with breast cancer:

| Variables | | Frequency | Percentage (%) |
|---|---|---|---|
| Factors associated with breast cancers | Positive family history | 151 | 38.2 |
| | Contraceptive use | 109 | 27.7 |
| | Alcohol consumption | 49 | 12.6 |
| | Smoking | 41 | 10.7 |
| | Obesity | 29 | 7.7 |
| | Nullity | 19 | 5.1 |
| Total | | 398 | 100.0 |

Table 2 shows factors associated with breast cancer and they are as follows; One hundred and fifty one (38.2%) deposed that positive family is a major factor that causes breast cancer, 109 (27.7%) stated that contraceptive use a cause, 49 (12.6%) stated that Alcohol consumption was a contributory factor, 29 (7.7%) stated that smoking is a factor and 19 (5.1%) stated that nullity is a factors.

Table 3: Symptoms of breast cancer

| Variables | | Frequency | Percentage (%) |
|---|---|---|---|
| Symptoms of breast cancer | Painless lump | 139 | 34.8 |
| | Blood nipple discharges | 71 | 17.7 |
| | Breast skin changes | 59 | 14.7 |
| | Nipple retraction | 63 | 15.7 |
| | Breast discomfort | 62 | 15.5 |
| | Loss of weight | 15 | 3.6 |
| Total | | 398 | 100.0 |

Table 3 shows possible symptoms of breast cancer and they are as follows: One hundred and thirty nine (38.2%) stated that painless lump is a symptom, 71 (17.7%) stated that blood nipple discharge is a symptom, 59 (14.7%) stated that breast skin changes is a symptom, 63 (15.7%) stated that nipple retraction is a symptom, 62 (15.5%) stated that breast discomfort is a symptom and 15 (3.6%) is a symptom.

Table 4: Members of their participants families who perform breast self-examination

| Variables | | Frequency | Percentage (%) |
|---|---|---|---|
| Members of their participants families who perform breast self-examination | Mother | 49 | 12.3 |
| | Sister | 62 | 15.6 |
| | Grandmother | 55 | 13.7 |
| | Maternal Aunts | 54 | 13.6 |
| | Paternal Aunts | 56 | 14.1 |
| | Not applicable | 122 | 30.7 |
| Total | | 398 | 100.0 |

Table 4 shows members of the participants' family who perform breast self-examination; Forty nine (12.3%) stated that their mothers perform breast self-examination, 62 (15.6%) stated that their sisters do, 55 (13.7%) stated that their grandmothers do, 54 (13.6%) stated that their maternal Aunts do, 56 (14.1%) stated that their paternal Aunts do and 122 (30.7%) of the participants stated that none of their family members does.

Table 5: The age for starting BSE

| Variables | | Frequency | Percentage (%) |
|---|---|---|---|
| The age for starting BSE | <20 years | 166 | 44.2 |
| | ≥20 years | 215 | 55.8 |
| Total | | 398 | 100.0 |

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Table 5 shows the ages for starting BSE as chosen by the participants, 166 (44.2%) stated that <20 years is the starting ages of BSE and 215 (55.8%) stated that ≥20 years is the starting ages.

Table 6: Actions to be taken on identifying abnormality in the breast.

| Variables | | Frequency | Percentage (%) |
|---|---|---|---|
| Actions to be taken on identifying abnormality in the breast. | Tell mother-in-law | 42 | 11.4 |
| | Tell spouse | 76 | 19.6 |
| | Consult doctor/nurse | 265 | 66.6 |
| | Consult mother | 6 | 1.4 |
| | Consult traditional healers | 4 | 1.0 |
| Total | | 398 | 100.0 |

Table 6 shows actions to be taken on identifying abnormality in the breast, 42 (11.4%) stated they will tell their mother-in-law, 76 (19.6%) stated that they tell their spouses, majority of the participants 265 (66.6%) stated that they will consult doctor/nurses, 6 (1.4%) of the participants stated they will consult their mothers and 4 (1.0%) stated they will consult traditional healers.

Table 7: Willingness to practice BSE if taught.

| Variables | | Frequency | Percentage (%) |
|---|---|---|---|
| Willingness to practice BSE if taught. | Yes, I will | 355 | 89.2 |
| | No, I will not | 20 | 4.8 |
| | I don't think so | 7 | 1.8 |
| | I don't know | 16 | 4.0 |
| Total | | 398 | 100.0 |

Table 7 shows willingness to practice BSE if and when they are taught and they are as follows; Three hundred and fifty-five (89.2%) stated they will, 20 (4.8%) stated they will not, 7 (1.8%) stated that they don't think so, and 16 (4.0%) stated that they don't know.

Table 8: Frequency for the performance of BSE

| Variables | | Frequently | Percentage (%) |
|---|---|---|---|
| Frequency for the performance of BSE | Daily | 27 | 6.8 |
| | Weekly | 90 | 22.6 |
| | Monthly | 150 | 37.7 |
| | Yearly | 101 | 25.4 |
| | I don't know | 30 | 7.5 |
| Total | | 398 | 100.0 |

Table 8 shows the frequency for the performance of BSE and 150 (37.7%) participants got it correctly that the exercise is done monthlyespecially after monthly menstrual period while other answered wrongly as shown 27 (6.8%) participants stated that the exercise is done daily, 90 (22.6%) participants stated that the exercise is weekly, 101 (25.4%) stated that the exercise is yearly and 30 (7.5%) said that they didn't know.

Table 9: Venue for performing BSE

| Variables | | Frequency | Percentage (%) |
|---|---|---|---|
| Venue for performing BSE | At home | 283 | 71.1 |
| | Hospital | 78 | 19.6 |
| | No idea | 37 | 9.3 |
| Total | | 398 | 100.0 |

Table 9 shows venue where BSE is performed, Two-hundred and eighty-three (71.1%) participants said that BSE is performed at home, 78 (19.6%) participants said that BSE is performed at the hospital and 37 participants said they had no idea as to where the exercise is performed.

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Table 10: Reasons for performing BSE

| Variables | | Frequency | Percentage (%) |
|---|---|---|---|
| Reasons for performing BSE | Advice from friends | 40 | 10.0 |
| | Medical reasons | 171 | 43 |
| | Family history of breast cancer | 94 | 23.6 |
| | Routine medical examination | 90 | 23.4 |
| Total | | 398 | 100.0 |

Table 10 shows the possible reasons for performing BSE and they are as follows; Forty (10.0%) stated that their reason to perform BSE was advice from their friends, 171 (43.0%) stated it was medical reasons that them perform BSE, 94 (23.6%) stated it was their family history of breast cancer that made them to perform BSE, 90 (23.45%)stated that BSE was a routine medical exercise as such they perform it.

Table 11: Possible barriers to performing BSE

| Variables | | Frequency | Percentage (%) |
|---|---|---|---|
| shows possible barriers to performing BSE | Ignorance | 80 | 20.1 |
| | Religion | 60 | 15.1 |
| | Trible/culture | 82 | 20.6 |
| | Forgetfulness | 86 | 21.6 |
| | Fears of discovering lumps | 90 | 22.6 |
| Total | | 398 | 100.0 |

Table 11 shows possible barriers to performing BSE and they include the following: Eighty (20.1%) participants stated that that ignorance is a possible, 60 (15.1%) stated that religion a possible barrier, 82 (20.6%) is a possible barrier, 86 (21.6%) stated that forgetfulness is possible barrier, 90 (22.6%) stated is a possible barrier.

Table 12: Level of practice of the respondents

| Variables | | Frequency | Percentage (%) |
|---|---|---|---|
| Level of practice of the respondents | Good Practice | 135 | 33.9 |
| | Poor Practice | 263 | 66.1 |
| Total | | 398 | 100.0 |

Table 12 shows the level of practice of BSE of the participants, 135 (33.9%) of the participants had good practice and majority of them 263 (66.1%) had poor practice of BSE

Table 13: The relationship between the socio-demographic variables and practice of BSE

| Variables | | Odds ratio | df | Sign | Exp | 95% C.I for EXP (B) | |
|---|---|---|---|---|---|---|---|
| | | | | | | Lower | Upper |
| The relationship between the socio-demographic variables and level of practice of BSE | Students' age<br>≤23<br>>24 | <br><br>5.210<br>1 | 1 | 0.002 | 16.210 | 4.024 | 86.541 |
| | Husbands educational level<br>Tertiary education<br>Secondary level & below | <br><br>4.223<br><br>1 | 1 | 0.03 | 22.100 | 2.264 | 471.581 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | History of breast cancer Yes No | 5.309 1 | 1 | 0.001 | 6.236 | 3.043 | 53.048 |
| | Religion Christianity Others | 2.415 1 | 1 | 0.23 | 9.184 | 3.025 | 58.764 |

Table 11 shows the Adjusted odds ratio of students' age ≤23 years(95% Cl: 4.024 – 86.541, p = 0.002) were 5 times more likely to practice BSE than students with age >24 years and is statistically significant. The adjusted odds ratio students' husbands educationalwith tertiary level were four time (95% Cl:2.264 – 471.581, p=0.03) more likely to practice BSE than students' husband education with secondary school and below and it is statistically significant, the adjusted odd ratio of presence of history of breast cancer in students' family were five times (95% Cl: 3.043 – 53.048, p=0.001) more likely to practice BSE than students with no such history of breast cancer in the family and this is statistically significant, the adjusted odd ratio of Christian students were twice (95% Cl: 3.025 – 58.764, p=0.23) more likely to practice BSE than students of other religion but this is not statistically significant.

## IV. DISCUSSION

This study assessed the level of practice of Breast Self-Examination and associated factors among student among female students of College of Health and Technology Aba. Majority of the participant (table 1) of this study is in the age group of 18 – 23 years and this is similar in a study done Ghana,[27]sub-Sahara Africa[28] and this is contrary to a study done in in Gondar town of Northwest of Ethiopia[29]in the age group of the participants was 20 – 70years. The similarity may be due to similarity to institutional study and differences in the later may be due to community-based study.In this study, all the participants were in the tertiary institution and their husbands' education ranged from primary, secondary and tertiary institutions whereas in in the studies in Ghan[27], sub-Sahara Africa[28] and Ethiopia [29] the participants' educational levels ranged from primary, secondary and tertiary institution. The difference in their educational levels affected their practices of BSE. In this study majority of the participants were single as it was in Ghana[27] and sub-Sahara Africapossibly because it is institutional based but in Ethiopia[29] majority were married possibly because it is community based and the age range was wide from 20 – 70 years of age. In this study,majority of the participants are Igbo and Christians possibly because the study was carried out in Igbo land and Christian dominated area and this is different because it was not done in Igbo land.

Symptoms of breast cancer as seen in table 3 include painless lump, blood nipple discharges, breast skin changes, nipple retraction, breast discomfort and loss of weight and these were indicated by the participants in this study and this is similar in a study done in Ghana,[27] sub-Sahara Africa[28] and the contrary was observed in the study done in Ethiopia.[1]

In this study, 135 (33.9%) of the participants performed BSE monthly as recommended, This is higher thanin the study in Ghana[27] where only 8.1% of the participants performed BSE monthly as recommended and also higher in the studies conducted in Saudi Arabia and Ghana[29,30,31]where low practice has been reported. It is also higher in Ethiopia[1] with 31%, Addis Ababa[32] with 28.4%, Arba Minch[33] with 13.3%,Turkey[34]with 8.5%, Libya[35] with 12.1%. The difference might be knowledge differences and in Arba Minch, the majority (45%) of the participants are illiterate. However, our finding is in contrast with the findings from a study among Ghanaian market women where 64% were reported to practice BSE once in a month,[36] on other studies conducted in Saudi Arabia[37] with 43%. Ghana[38] with 37.6%. The possible justification might be educational and knowledge differences. In Saudi Arabia, the majority (65%) of the participants had adequate knowledge about BSE, and 79% of the participants had an educational level completed university, whereas 88% of participants were aware of BSE in Ghana. This could be due to the fact that most market women are older and are much more aware that being postmenopausal is a risk factor of breast cancer and would want to detect the condition early. The difference may be because of the differences in environmental settings.

As said earlier in this study some participants were able to detect lumps and other abnormalities in their breast from regular practice

of BSE,[28,39,40,41, 42] It implies that planned tutorial on BSE will have a lot of impart especially among the health personnel's as reported in some studies[43,44,42]and if the women are taught to practice BSE regularly, knowing what is abnormal in their breast, and any detection will necessitate seeking early medical care since they would have known the consequences of delays in reporting breast abnormalities.[45,46,47,42] This study's findings showed most of the participants indicated that BSE was a form of screening methods for early detection of abnormalities, therefore, an intensive public and institutional education will be required on Knowledge, Attitude and Practice of BSE with the aiming at early detection of abnormalities and subsequently seeking of early medical care, thereby reducing morbidity and mortality associated with Breast Cancer.

In this study, all the participants were tertiary students and their husbands had educational level ranging from primary school to secondary school and to tertiary institution, The adjusted odds ratio students' husbands educational with tertiary level were four times (95% Cl: 2.264 – 471.581, p= 0.03) more likely to practice BSE than students' husband education with secondary school and below and it is statistically significant This is in line with studies conducted in Ethiopia[1] where spouse college and above were three times (AOR: 3.03 (95% Cl: 1.04 – 8.84)) more likely to practice BSE than spouses in secondary school and below.

In this study, the adjusted odd ratio of presence of history of breast cancer in students' family were five times (95% Cl: 3,043 – 53.048, p=.001) more likely to practice BSE than students with no such history of breast cancer in the family and this is statistically significant. This study was in line with the studies conducted in Ehiopia[1] where women who have a history of breast cancer were about 6 times (AOR: 6.06. 95% Cl: (2.19 – 16.74)) more likely to perform BSE than their counterpart. This is also in line with studies conducted in Libya,[35] Jimma,[48] and Addis Ababa.[49] A family history of breast cancer is positively affecting the practice of breast self-examination.[50] This could be women with a history of breast cancer performing breast self-examination at a regular basis and making them more cognizant, which in turn may lead to an earlier diagnosis of breast cancer

This could be due to the fact that most market women were older and were much more aware that being postmenopausal was a risk factor breast cancer and would want to detect the condition early. The difference may be because of the differences in environmental settings

## V. CONCLUSION

Our findings indicate that a majority of female students of College of Health and Technology, Aba have poor practice of breast self-examination.Husband's educational level, marital status, family history of breast cancer and student ages were predators to practice of Breast Self-Examination and were statistically significant.

## VI. RECOMMENDATION

This study recommends that studies on knowledge, practice, and attitude of BSE, to identify contextual challenges and provide evidence-based solutions to improve women's knowledge, practice, and attitude of BSE in Nigeria which will reduce mortality and morbidity rates of breast cancer among women in the country..We recommend integration of breast self-examination as a topic of discussion for new intakes in the tertiary institution. We recommend federal legislative bills that will promote free examination of the breast including mammography in various public health sector in order to isolate breast cancer at the early stage and target treatment.

**Conflicts of Interest**

The authors declare no conflicts of interest regarding the publication of this paper.

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