KNOWLEDGE AND PRACTICE OF BREAST SELF EXAMINATION AMONG FEMALE STUDENTS OF TERTIARY INSTITUTIONS IN ABIA STATE, NIGERIA

ABSTRACT

BACKGROUND: Early detection and diagnosis of illnesses by screening is a key public health premise. Breast self-examination is a cheap and convenient method of early detection of cancer of the breast, especially in resource poor countries; Women who frequently perform breast self-examinations (BSE) look for any lumps or abnormal changes in order to seek immediate medical assistance. There is increasing incidence of detection of breast cancer among young women, this has been attributed to a lack of knowledge and practice of breast self-examination (BSE).

AIM: To determine the knowledge, and practice of routine breast self-examination among the female students of tertiary institutions in Abia State, Nigeria.

MATERIALS AND METHODS: This was a cross-sectional study conducted among 609 female students from five tertiary institutions in Abia State, Nigeria. Research instruments were structured, self-administered and pretested questionnaires. Data collected were analyzed using Statistical Package for Social Sciences (SPSS Version 25).

RESULTS: Majority of the participants were between the ages of 18-22 years. Majority of the respondents had heard of BSE (88.8%) mostly from social media (37.7%). A good number knew the steps involved in BSE (72.7%); while 467(76.7%) of respondents, had practiced BSE before. However, frequency of practice was low, and majority who didn't practice frequently cited forgetfulness (38.5%) as their major reason. Most respondents agreed that BSE was very relevant (72.4%), and that families needed to be taught BSE (98.4%). Most respondents (81.3%) had no family history of breast lump while 87.8% had no family history of breast cancer. Occupation of respondents' father was associated with knowledge of BSE and this was statistically significant; $p< 0.05$.

CONCLUSION: This study demonstrates good knowledge, and good practice, however frequency of practice was low.

Keywords: BSE, Knowledge, practice, Students, Tertiary Institutions.

INTRODUCTION

The scourge of breast cancer is fast becoming a major global health problem in both developing and developed countries.[1] A rough estimate of about 25 million people are said to be living with breast cancer in the world today.[2] Breast cancer is a type of cancer that forms in the cells of the breast. It is the second most diagnosed cancer in women after skin cancers and the second leading cause of death in women, after lung cancer.[3] Of all cancers, breast cancer is the most common cancer amongst women, both in developing and developed countries.[4] It is also the leading cause of death among women aged 40-55 years.[4] Today, there is no race, country or ethnic group across the world, with truly a low risk of developing breast Cancer. Although, breast cancer is thought to be a disease of the developed world, almost 50% of breast cancer cases and 50% deaths occur in less developed countries.[5] Predisposing risk factors to this kind of cancer can be distributed into modifiable and Non modifiable risk factors. Non modifiable risk factors such as Age, race, Age at first menstrual period, Age at menopause, First degree relatives with breast cancer, etc. While modifiable factors include - Alcohol intake, cigarette smoking, diet, exposure to certain radiation elements, obesity, geographical influence, among others.[6]

Recent global cancer statistics indicates that breast cancer incidence is rising at a faster rate in population of developing countries. Breast cancer is differentiated from other types of cancer by the fact that it occurs in visible organ and can be detected and treated at an early stage.[7]

Breast self-examination is one of the safest and convenient screening methods which does not require expertise.[8] It can be done by both educated and uneducated women when practically shown how to do it. This is done by touching, palpating and observing the breasts, to know how they normally look or feel.

Breast cancer is often discovered by the patient or her physician as a discrete, painless and moveable mass.[9] Breast cancer spreads through lymphatic and hematogenous channels.[1]

Prevention is the best option to tackle the rising epidemic of breast cancer.[1] In this regard, health awareness programs and early detection are very imperative.[8] Breast self-examination is a cheap

and convenient method of early detection of cancer of the breast, especially in resource poor countries.[9] Early diagnosis can greatly increase the chances for a successful treatment and thus - increasing awareness of the possible warning signs of the disease among the general public becomes a necessity.[10]

MATERIAL AND METHODS

This is a descriptive cross-sectional study on the knowledge, attitude and practice on Breast Self-Examination amongst female students of tertiary institution in Abia State, Nigeria. This study was conducted in 6 Tertiary Institutions of Learning, two (2) each from the three (3) senatorial zones in Abia State. A minimum sample size of 380 female students was statistically determined using the formula for single proportion $N= Z^2PQ / D^2$.

A total of six hundred and fifty pre-tested structured self-administered questionnaires were administered on selected female students in these schools who met the inclusion criteria and six hundred and nine (609) were returned correctly filled. The questionnaire was divided into three sections to collect information on; socio-demographic characteristics of respondents, their knowledge and practice of BSE. All female students of the selected institutions who were at least 18 years of age at the time of the study were included while all non-consenting female students and female students not resident on the campuses were excluded.

Data obtained were entered and analysed using SPSS 25. The level of statistical significance was set at $P<0.05$ and confidence level of 95%.

RESULTS

TABLE 1

The 609 female students participated in this study. Table 1 shows the socio-demographic variable of the respondents. Majority of study participants (64.2%) were in the 18-22 age group with a mean age of 22±2 years. About 89.7% of the respondents were single. Female students whose fathers were in business/trade, made up majority of the respondents (45.3%) while 53.5% of the participants had mothers who had attained tertiary education. Majority (31.4%) of the respondents were in 400 level, as at the time of this study.

Table 2 below shows respondents level of knowledge of breast self-examination. A higher proportion of respondents 88.8%, have heard of BSE. Social media (37.7%) and health workers

(26.6%) were their major sources of information. 50.2% knew the right age to begin BSE (<20 years). A large number of respondents (86.4%) reported that BSE is a useful tool for early detection of breast cancer. On the steps involved in BSE and the routine of performing BSE: 72.7% knew the steps involved, while only 36.6% of respondents knew that BSE should be done monthly.

TABLE 3 is on practice of BSE.

Among the respondents studied, 76.7% of the participants have performed BSE, of which majority (74.3%) of the respondents indicated that they started practicing it at 15-20 years, 33.6% of the respondents, practiced randomly, followed by 33.2% who practiced monthly. Concerning how BSE was performed; 40.9% performed BSE in front of a mirror, 33.8% while lying down, and 26.1% while bathing. Forgetfulness (38.5%) was implicated as the main factor that hindered frequent practice, followed by procrastination (20.8%).

TABLE 4 shows association between socio-demographic of respondents and knowledge of BSE

Test of association between socio-demographic of respondents and knowledge of BSE was determined in Table 4.0, using chi-square test. Knowledge of BSE was higher but not statistically significant among respondents aged 33 years 30 years. Knowledge of BSE in association with fathers' occupation was statistically significant ($p< 0.037$). Statistically significant association was also found between knowledge of BSE and level of study($p<0.0001$).

DISCUSSION

The socio-demographic data in the study shows that the mean for the participants was 22±2.96 which is consistent with similar studies involving female students of tertiary institution.[11-13] The participants level of awareness of BSE was significantly high (88.8%).This high level of knowledge stands in contrast to low levels found in four researches conducted on rural and market women in Nigeria. In two studies conducted in Nigeria, it was found that participants' knowledge and health behaviour was significantly influenced by their education degree.[14] Fondjo et al evaluated the knowledge of senior high school and tertiary students in Ghana and found that 90-98% of participants had knowledge of BSE.[15]

Sarfo et al also reported 95% BSE knowledge among female nursing students; this is also comparable to other similar studies such as Nde et al in Cameroun[16], Casmir et al. [17] On practice, most respondents showed good level of Practice with 77% having practiced BSE, however, practice was not regular, as only 33.2% admitted to practice BSE monthly. This is in keeping with the findings of a study done in Lagos, which showed that 83.1% had practiced BSE, but only about half (43.5%) of the respondents had examined their breasts in nearly 1 year.[18]

In contrast, it was asserted that in a related research conducted in Brazil and the United Arab Emirates, that BSE was not largely practiced.[19,20] This can be attributed to the fact that such studies primarily targeted rural/market women who are unaware of the benefits of BSE. Another study conducted on female students of Usman Danfodio University, Sokoto, recorded poor practice with only 17.5% showing good practice out of 45% of respondents that have ever practiced. The disparity recorded between our study and that carried out on female students in Sokoto, might be attributed to religion, since the study participants in the Sokoto study were predominantly Muslims.

In this study, 72.4% of respondents agreed that BSE was very relevant in detecting breast cancer and 98% felt that families need to be taught BSE. This is similar to findings in studies where respondents were found to have good attitude towards BSE.[19,20] Another study done in Ethiopian study participants, showed a favourable attitude towards BSE.[21] Also, 85.6% of the respondents agreed they would consult a doctor or nurse when they identify abnormality in the breast. This finding is encouraging because, one of the significant reasons for BSE is finding breast abnormalities early and seeking medical care. This study further shows that 77.3% of the respondents know a relative who had been treated for breast cancer; while 59% had a relative who died from breast cancer. This may be able to explain the good attitude of respondents towards BSE.

CONCLUSION

Most of the respondents in this study, were aware of Breast Self-Examination (BSE) and practice it. However, very few practice BSE frequently. The sole practical and logical strategy for early identification of breast cancer, particularly in third-world nations, has been acknowledged as

breast self-examination. Major limitations to frequency of practice include; forgetfulness, followed by procrastination and fear of discovering a lump. Therefore, it is advised that BSE awareness initiatives continue with emphasis on regularity of practice; Furthermore, Health education and awareness campaigns should be systematized to inform the population about the causes, risk factors, and ways to prevent breast cancer, in order to bridge the vast knowledge in frequency of practice.

Ethical Approval and Consent

Informed consent was obtained from all participants and ethical clearance from the Ethical review committee of the Abia State University teaching hospital.

Table 1.0 SOCIO-DEMOGRAPHIC DATA OF RESPONDENTS

Variable	**Frequency** (N=609)	**Percentage (%)**
Age Group		
18 - 22 years	**391**	**64.2%**
23 - 27 years	198	32.5%
28-32 years	16	2.6%
33 and above	4	0.7%
Marital Status		
Single	**546**	**89.7%**
Married	47	7.7%
Divorced	0	0.0%
Others	16	2.6%
Father's Education		
Primary	27	4.4%
Secondary	154	25.3%
Tertiary	**309**	**50.7%**

Others	119	19.5%
Father's Occupation		
Unemployed	12	2.0%
Business/Trade	**276**	**45.3%**
Civil Servant	164	26.9%
Professional	99	16.3%
Others	58	9.5%
Mother's Education		
Primary	29	4.8%
Secondary	141	23.2%
Tertiary	**326**	**53.5%**
Others	113	18.6%
Mother's Occupation		
Unemployed	9	1.5%
Business/Trade	**255**	**41.9%**
Civil Servant	227	37.3%
Professional	94	15.4%
Others	24	3.9%
Year of Study		
100 Level	66	10.8%
200 Level	131	21.5%
300 Level	124	20.4%
400 Level	**191**	**31.4%**
500 Level	88	14.4%
600 Level	9	1.5%

Table 2.0 KNOWLEDGE OF BSE

Variable	Frequency (N=609)	Percentage (%)
Have heard of Breast Self-Examination		
Yes	**541**	**88.8%**
No	68	11.2%
Source of information on BSE		
Home	49	9.1%
TV / Radio	41	7.6%
Newspaper	19	3.5%
Social Media	**204**	**37.7%**
Peer Group/School	38	7.0%
Health Worker	144	26.6%
Others	46	8.5%
Age to start BSE		
Less than 20 years old	**305**	**50.2%**
From 20 years old	154	25.3%
From 30 years old	21	3.5%
No Idea	128	21.1%
BSE as a useful tool for early detection of Breast Cancer		
Yes	**526**	**86.4%**
No	23	3.8%
Not Sure	60	9.9%
Knowledge of the steps involved in Breast Self-Examination		
Yes	**443**	**72.7%**
No	166	27.3%

Frequency of BSE		
Daily	98	16.1%
Weekly	136	22.3%
Monthly	**223**	**36.6%**
Annually	27	4.4%
Randomly	125	20.5%

Table 3.0 PRACTICE OF BSE

Variable	**Frequency** (N=609)	**Percentage (%)**
Have Practiced BSE before		
Yes	**467**	**76.7%**
No	142	23.3%
Age to start BSE (n= 467)		
15 - 20 years	**347**	**74.3%**
21 - 25 years	113	24.2%
26 - 30 years	6	1.3%
> 30 years	1	0.2%
Frequency of practice		
Daily	56	12.0%
Weekly	82	17.6%
Monthly	155	33.2%
Annually	17	3.6%
Randomly	**157**	**33.6%**
When was the last time you performed BSE?		

Less than a week ago	143	30.6%
Less than a month ago	**158**	**33.8%**
About 2 - 6 months ago	55	11.8%
Less than 1 year ago	111	23.8%
What are the factors that hinder the frequency of your practice?		
Time	94	20.1%
Procrastination	97	20.8%
Forgetfulness	**180**	**38.5%**
Fear of discovering a lump	48	10.3%
Poor Knowledge of the examination technique	39	8.4%
Religious Belief	5	1.1%
Breast Feeding	4	0.9%

Table 4.0 Test of association between socio-demographics of respondents and Knowledge of BSE

VARIABLES	Have you heard of Breast Self-Examination			
	Yes	**No**	χ^2	***p-value***
	N= 541	**N= 68**		
	(%)	**(%)**		
Age				
18 - 22 years	343 (87.7)	48 (12.3)	1.877	0.598
23 - 27 years	180 (90.9)	18 (9.1)		
28-32 years	14 (87.5)	2 (12.5)		
33 and above	4 (100)	0 (0)		
Marital Status				
Single	486 (89)	60 (11)	0.958	0.619
Married	42 (89.4)	5 (10.6)		
Divorced	0 (0)	0 (0)		
Others	13 (81.3)	3 (18.8)		
Father's Education				
Primary	20 (74.1)	7 (25.9)	7.761	0.051
Secondary	134 (87)	20 (13)		
Tertiary	278 (90)	31 (10)		
Others	109 (91.6)	10 (8.4)		
Father's Occupation				
Unemployed	8 (66.7)	4 (33.3)	10.197	***0.037****
Business/Trade	239 (86.6)	37 (13.4)		
Civil Servant	150 (91.5)	14 (8.5)		
Professional	92 (92.9)	7 (7.1)		

Others	52 (89.7)	6 (10.3)		
Mother's Education				
Primary	24 (82.8)	5 (17.2)	2.115	0.549
Secondary	123 (87.2)	18 (12.8)		
Tertiary	291 (89.3)	35 (10.7)		
Others	103 (91.2)	10 (8.8)		
Mother's Occupation				
Unemployed	6 (66.7)	3 (33.3)	7.120	0.130
Business/Trade	222 (87.1)	33 (12.9)		
Civil Servant	205 (90.3)	22 (9.7)		
Professional	87 (92.6)	7 (7.4)		
Others	21 (87.5)	3 (12.5)		
Year of Study				
100 Level	49 (74.2)	17 (25.8)	28.252	***0.000****
200 Level	108 (82.4)	23 (17.6)		
300 Level	117 (94.4)	7 (5.6)		
400 Level	177 (92.7)	14 (7.3)		
500 Level	81 (92)	7 (8)		
600 Level	9 (100)	0 (0)		

***** (significant at p<0.05)***

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