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Research Article

Practice of breast self-examination among rural women in Umuowa, Orlu government area, Imo state, Nigeria

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ABSTRACT

Background: Regular practice of breast self- examination is the corner stone of the fight against breast cancer. Increasing breast health awareness would potentially allow for early detection of any anomalies and consequently result in early prognosis. This will in turn lead to increase in survival rate of breast cancer. This study was designed to assess practice of breast self- examination (BSE) among rural women.
Methods: Descriptive survey design with the aid of a questionnaire which served as an interview schedule was conducted among 349 women in Umuowa Orlu L.G.A. The main outcome measures were the level of awareness and practice of BSE.
Results: From a total of 349 women, a little above half (50%) of the respondents understood the meaning of BSE. Few of the respondents knew that BSE increases survival rate of breast cancer by early detection of abnormalities. Majority of the respondents did not know the abnormalities to check during BSE. Only a few of the respondents knew that BSE should be performed by every woman. Generally, the practice of BSE was inadequate for majority of the participants. There was a positive relationship between the respondents' awareness of breast cancer and their practice of BSE (P-value = 0.000<0.05).
Conclusions: The importance of BSE as a key factor in the early detection of breast cancer should be stressed with special emphasis on regular practice of BSE. The proper procedure of BSE should be taught to women in order to ensure accuracy of performance.

Keywords: Awareness, Breast self- examination, Breast cancer

INTRODUCTION

Breast cancer is now the most commonfemale malignancy and commonly associated with high levels of morbidity and mortality.[1] Breast cancer is a public health problem that is increasing throughout the world especially in developing countries.[2] It affects both sexes resulting in high number of people being affected with the disease. Although, breast cancer is 100 times more common in women than in men, men tend to have poorer outcomes due to delay in diagnosis.[3]

Breast cancer is the second leading cause of cancer deaths in North- East Nigeria while it predominates in the South-Western part of the country.[4] A review of breast biopsies in the Lagos University Teaching Hospital showed 34 percent of all breast biopsies done over a 10 years period to be malignant.[5] It was also noted that a

report from Zaria described the mean age of presentation of breast cancer as 42 years with 30 percent occurring in women less than 25 years of age.[5]

Furthermore, at University college Hospital, Ibadan, 74 percent of breast cancer patients were premenopausal.[6] A ten year review of a breast cancer in Eastern Nigeria revealed that patient with breast cancer constituted 30 percent of all patients with breast disease and that 69 percent of these patients were pre-menopausal. More so, majority of women present with advanced stages of the disease with multiple nodal involvement and poor prognostic outcomes. Records in Nigeria shows that breast cancer is truly an epidemic among women as it was estimated that 211,000 new cases of invasive breast cancer was diagnosed in 2007 and 43,300 patients died of this disease in Nigeria.[7]

For women to present early, they need to be "breast aware" and must be able to recognize symptoms of breast cancer through routine practice. Late presentation of patients at advanced stages in thus the cause of breast cancer death in Nigerian women, as so percent of breast cancer patients in Nigeria are said to die because of late detection.[7] Breast cancer patients generally have low rates of survival due to being diagnosed at advanced stages of the disease.[8]

In an environment where late presentation is predominant, there is urgent need for awareness of breast cancer and its early detection measures. Lack of awareness of early detection measures and screening for breast cancer is common in developing countries. Recommended preventive techniques to reduce breast cancer mortality and morbidity include BSE, clinical breast examination and mammography.[9] BSE makes women more "breast aware" which in turn may lead to earlier diagnosis of breast cancer.[8] Early diagnosis has positive effect on the prognosis as well as limits the development of complications and disability.[10] The situation in rural areas is compounded with poor access to health facilities, low socio- economic status and illiteracy.[11]

An increased awareness among women in general on BSE as means of detecting breast cancer would most likely result in a high number of women practicing it, thereby improving the capacity of women to understand themselves and seek medical attention early enough. Awareness can be created by health workers such as nurses and doctors. Women given information on and instruction about BSE and breast cancer by healthcare professionals demonstrated higher knowledge and confidence and tend to practice BSE more than those who receive information from other sources.[12]

Regular practice of BSE is the corner stone of the fight against breast cancer worldwide, especially for black women because clinical breast examination and mammography might not be accessible to them for economic or other reasons.[13] Though screening mammography is widely practiced in developed countries, it is hardly recommended for those under 30 years because of their dense tissue which makes interpretation of the films difficult.[14]

Furthermore, many studies have shown that most breast tumours are self- discovered and that the majority of the early self-discoveries were by women who regularly practice BSE. BSE is still recommended as a general approach to increasing breast health awareness and thus potentially allow for early detection of any anomalies.[15] Therefore, BSE become particularly important and appropriate. Reaching out to the rural women at the grassroots levels will help in early detection of breast changes. Hence it is against this background that it was decided to assess the practice of BSE among rural women in Umuowa, Orlu in Imo State in order to fill these gaps.

Objectives

The main objective of this researcher work was to assess the awareness and practice of BSE among women in Umuowa, Orlu in Imo State.

METHODS

Descriptive survey design was used for the study. This study was conducted at Umuowa, which is a rural community in Orlu Local Government Area, Imo State. Ten villages make up the community. The target population of study was women aged 20-70 years which was 3,820. A sample size of 349 women from the rural community of Umuowa in Orlu L.G.A. Imo State was used for the study. This was calculated using Krejcie and Morgan in 1970 as adapted by Nahid et al in 2012 power analysis method formula for known population.[16] Instrument for data collection was a questionnaire which served as an interview schedule developed by the researcher. It was constructed from literature based on the objectives of the study. The interview schedule consisted of two sections that is, section A and section B. Section A consisted of six questions which dealt with the demographic characteristics of the respondents. In section B, questions 7 to 12 dealt with breast self- examination, question 13 dealt with sources of information on breast self- examination while questions 14 to 22 dealt with practice of BSE. The questions were both in English and Igbo Languages for easy and objective collection of data. The responses to the questions on BSE awareness were scored and rated as follows: scores ≤7 as low awareness, scores from 8 to 15 as moderate awareness while scores from 16 to 24 as high awareness. Also, respondents' responses on practice of BSE were scored over 19 and rated as follows: scores ≤6 as inadequate practices, scores from 7 to 12 as moderately adequate practice while scores from 13 to 19 as highly adequate practice. Household sampling technique was used to reach the subjects in each village. Following systematic sampling technique, every 11th household was used for the study,

starting with the 5th household that was randomly chosen. Every woman in the 11th household who met the inclusion criteria was interviewed using the interview schedule. This continued until the sample size of 349 was reached. Data collection was done on daily bases, usually in the evening hours, in order not to disturb their business and farming activities. The interview was conducted on one to one basis, that is, individually. The researcher used four weeks for collection of data by dedicating three days to each village. The researcher and one assistant covered three villages each while the other two assistants covered two villages each, making it a total of ten villages. This was to ensure that the women were interviewed properly and calmly. Total of 349 copies of interview guide which was the sample size for the study were distributed and the same were retrieved giving a return rate of 100%.All analysis was done with the aid of statistical package for social sciences SPSS version 18

RESULTS

As presented in table 1 below, 105 (30.1%) respondents were aged 20 to 30 years old, 67 (19.2%) respondents were aged 31 to 40 years old, 55 (15.8%) respondents were aged 41 to 50 years old and 84 (24.1%) respondents were aged 61 years and above. 88 (25.2%) respondents were single, 183 (52.4%) respondents were married, 16 (4.6%) respondents were divorced, 51 (14.6%) respondents were widowed and 11 (3.2%) respondents were separated. They were predominantly Christians (98.3%). 129 (37%) respondents had tertiary education and only 4.3%) respondents had no formal education. 27.5% were civil servants while 14.9%, 13.2% and 11.2% were farmers, traders and business women respectively.

On assessment of the participants level of awareness on the meaning of BSE, 21 (6%) respondents thought BSE was looking at the shape of the breast only, 39 (11.2%) respondents understood BSE to mean feeling (palpating) the breast only, while 206 (59%) respondents understood BSE to mean looking at the shape of the breasts and feeling (palpation) them to detect any changes or abnormalities by oneself.

Concerning the participants awareness on how often BSE should be performed, 103 (29.5%) respondents said that women should perform BSE once a month, 12 (3.4%) noted that women should perform BSE once in two months, 11 (3.2%) respondents said women should perform BSE once in three months, while 135 (38.7%) respondents noted women should perform BSE anytime that is convenient.

On the participants' level of awareness on the abnormalities to be checked for during BSE the results on table 5 showed that 217 (62.2%) respondents noted that breast lump should be checked for during BSE, 214 (61.3%) respondents said that swelling should be checked for during BSE, 163 (46.7%) respondents indicated that soreness should be checked for during BSE, 160 (45.8%) respondents said that redness should be checked for during BSE, 150 (43%) respondents said that discharge should be checked for during BSE, 102 (29.2%) respondents indicated that dimpling should be checked for during BSE, while 171 (49%) respondents said that unusual pain should be checked for during BSE.

Table 1: Demographic characteristics of respondents n= 349.

		Frequency	Percent (%)
Age	20-30	105	30.1
	31-40	67	19.2
	41- 50	55	15.8
	51-60	38	10.9
	61and above	84	24.1
	Total	349	100.0
Marital Status	Single	88	25.2
	Married	183	52.4
	Divorced	16	4.6
	Widowed	51	14.6
	Separated	11	3.2
	Total	349	100.0
Educational Qualification	No formal education	15	4.3
	Primary education	79	22.6
	Secondary education	121	34.7
	Tertiary education	129	37.0
	Others	5	1.4
	Total	349	100.0
Parity	None	102	29.2
	1 Only	53	15.2
	2 – 3	108	30.9
	4 – 5	52	14.9
	6 and above	34	9.7
	Total	349	100.0
Occupation	Civil servant	96	27.5
	Farmer	52	14.9
	Trader	46	13.2
	Business	39	11.2
	woman	27	7.7
	Full	19	5.4
	housewife	70	20.1
	Seamstress	349	100.0
Religion	Christianity	343	98.3
	Islam	1	0.3
	Traditional religion	3	0.9
	Others	2	0.6
	Total	349	100.0

Table 2: Awareness of BSE among women in Umuowa, Orlu LGA.

Question	Options	Yes (%)	No (%)	Don't Know (%)
What do you understand by breast self -examination?	Looking at the shape of the breast only Feeling (palpation) the breast only Looking at the shape of the breasts and feelings (palpation) them to detect any changes or abnormalities by yourself	21 (6.0) 39 (11.2) 206 (59.0)	133 (38.1) 122 (35.0) 11 (3.2)	195 (55.9) 188 (53.9) 132 (37.8)
How often should women perform BSE?	Once a month Once in two months Once in three months Anytime that is convenient	103 (29.5) 12 (3.4) 11 (3.2) 135 (38.7)	39 (11.2) 68 (19.5) 67 (19.2) 32 (9.2)	207 (59.3) 269 (77.1) 271 (77.7) 182 (52.1)
Which of these abnormalities do you think one should check for during breast self-examination?	Breast lump Swelling Soreness Redness Discharge Dimpling Unusual pain	217 (62.2) 214 (61.3) 163 (46.7) 160 (45.8) 150 (43.0) 102 (29.2) 171 (49.0)	7 (2.0) 5 (1.4) 22 (6.3) 19 (5.4) 14 (4.0) 29 (8.3) 13 (3.7)	125 (35.8) 130 (37.2) 164 (47.0) 170 (48.7) 185 (53.0) 218 (62.5) 165 (47.3)
What do you consider are the reasons for breast self- examination?	To detect abnormalities To prevent breast cancer To know what is happening in your body To increase survival rate by early detection of abnormalities	156 (44.7) 93 (26.6) 128 (36.7) 137 (39.3)	17 (4.9) 63 (18.1) 28 (8.0) 14 (4.0)	176 (50.4) 193 (55.3) 193 (55.3) 198 (56.7)
Who do you think should carry out breast self-examination?	Women who have passed child bearing Pregnant and breast feeding women Those with family history of breast cancer Women that are still menstruating Women that consider it necessary Every woman	42 (12.0) 52 (14.9) 84 (24.1) 50 (14.3) 43 (12.3) 195 (55.9)	87 (24.9) 80 (22.9) 63 (18.1) 87 (24.9) 87 (24.9) 13 (3.7)	220 (63.0) 217 (62.2) 202 (57.9) 212 (60.7) 219 (62.8) 141 (40.4)

Table 3: Frequency of practice of BSE n=181.

Question	Options	Frequency (%)
Have you ever performed breast self- examination?	Yes No	181 (51.9) 168(48.1)
If yes, how often do you perform it? *(n = 181)*	Once a month Once in two months Once in three months Anytime is convenient Don't know how often	32(17.7) 27(16.0) 19 (10.0) 94 (51.9) 9 (17.7)
At what time do you perform breast self- examination? *(n = 181)*	2nd - 3rd day after menses 2nd - 3rd day before menses during menses during ovulation no specific time	24 (13.3) 53 (27.3) 0 (0.0) 10 (5.5) 94 (51.9)
If you don't, what are your reasons for not doing it? *(n = 168)*	Not confident on how to do it Not sure of ability to detect breast changes Find it difficult to remember Find it embarrassing Has no time Has no family history of breast cancer and do not see the need for it	8 (4.8) 105 (62.4) 5 (3.0) 0 (0.0) 40 (23.8) 10(6.0)

Table 4: Procedures observed in practicing BSE.

Question	Options	Yes	No
When you examine the breast, what do you usually do? (n = 181)	A- Stand in front of a mirror with breast and chest (top) exposed	36 (19.9)	145 (80.1)
	B- Look for dimpling, swelling, soreness, in all parts of the breast in the mirror	35 (19.3)	146 (80.7)
	C- Change position to look at the different parts of the breast	45 (24.9)	136 (75.1)
	D- Repeat no. B above with arm raised	65 (35.9)	116 (64.1)
	E- While still standing, palpate your breast with your fingers filing for lumps	46 (25.4)	135 (74.6)
	F- After feeling with your fingers, use a larger area of your fingers to palpate	51 (28.2)	130 (71.8)
	G- Carryout numbers E and F without lifting your fingers as they move across the breast	54 (29.8)	127 (70.2)
	H- Examine the entire breast including the nipples and towards the armpit	35 (19.3)	146 (80.7)
	I- Palpate with light pressure, then moderate pressure and finally with firm pressure	47 (26.0)	134 (74.0)
	J-Gently squeeze each nipple to check for any discharge	34 (18.8)	147 (81.2)
	K- Repeat the palpation with one hand behind your head	47 (26.0)	134 (74.0)
	L- Examine the two breasts one after the other	35 (19.3)	146 (80.7)
	M- Repeat palpation while lying down	36 (19.9)	145 (80.1)
Do you follow any pattern while examining your breast?	Yes No	53 (29.3) 128 (70.7)	
If yes, which of these patterns do you follow? (n = 53)	A- Moving the finger up and down over the breast	35 (66.0)	
	B- Starting at the nipple and moving outwards	12 (22.6)	
	C- Moving the finger in a circular pattern from the nipple outward	6 (11.4)	

On the respondents' awareness on the reasons for BSE, 156 (44.7%) respondents noted that BSE was performed to detect of abnormalities, 93 (26.6%) respondents noted that BSE was performed to prevent breast cancer, 128 (36.7%) respondents said BSE was done to know what was happening in the body, while 137(39.3%) respondents said that BSE was done to increase survival rate by early detection of abnormalities. Assessment on who should perform BSE revealed that 42 (12%) respondents noted that women who had passed child bearing should carry out BSE, 52 (14.9%) respondents noted that pregnant and breast feeding women should perform BSE, 84 (24.1%) respondents said that those with family history of breast cancer should perform BSE, 50 (14.3%) respondents said that women that were still menstruating should perform BSE, 43 (12.3%) respondents said that women that considered it necessary should perform BSE.

Assessment on performance of BSE: 181 (51.9%) respondents said they had performed BSE while 168 (48.1%) respondents said that they have not performed BSE. Out of the 181 respondents that had performed BSE, 32 (17.7%) said they performed it once a month, 27 (16.0%) respondents said they performed it once in two months, 19 (10.4%) respondents said they performed it once in three months, 94 (51.9%) respondents performed BSE anytime that was convenient while 9 (5.0%) respondents said they do not know how often they performed BSE.

Concerning the respondents' timing on the performance of BSE, 24 (13.3%) respondents said they performed BSE 2nd to 3rd day after menses. 53 (27.3%) said they performed it 2nd to 3rd day before menses, 10 (5.5%) respondents said they performed it during ovulation while 94 (51.9%) respondents noted they do not have any specific time for performing BSE. Out of all the 168 respondents that have not performed BSE, 8 (4.4%) respondents gave their reason as lack of confidence on how to do it,105 (62.4%) the respondents said it was because they were not sure of their ability to detect breast

changes. 5 (3.0%) respondents said it was because they found BSE difficult to remember, noneof respondents found BSE embarrassing, 40 (23.8%) respondents had no time while 10 (6.0%) respondents said it was because they had no family history of breast cancer and do not see the need for BSE.

Assessment of the steps that the participants' follow when performing BSE showed that 36 (19.9%) respondents examined the breasts in front of a mirror with breast and chest (top) exposed, 35(19.3%) respondents noted that they checked for dimpling, swelling, soreness, in all parts of the breast in front of the mirror, 45 (24.9%) respondents changed position to look at the different parts of the breast, 65 (35.9%) respondents said they looked for dimpling, swelling, soreness in all parts of the breast in the mirror with arm raised while 116 (64.1%) respondents deferred on this. 46 (25.4%) respondents said that while still standing, they palpated the breast with fingers filling for lumps while 135 (74.6%) respondents did not. 51 (28.2%) respondents said that after feeling with fingers, they used a larger area of the fingers to palpate and 130 (71.8%) respondents did not. While still standing, 54 (29.8%) respondents palpated the breast with their fingers feeling for lumps and after feeling with fingers, they used a larger area of fingers to palpate, without lifting the fingers as they moved across the breast, 35 (19.3%) respondents indicated that the entire breasts including nipples and towards the armpit were examined, 47 (26.0%) respondents started palpating the breasts with light pressure, then moderate pressure and finally with firm pressure. 34 (18.8%) respondents indicated that each nipple was gently squeezed to check for any discharge. 47 (26.0%) respondents palpated also with one hand behind the head. 35 (19.3%) respondents examined the two breasts one after the other. 36 (19.9%) respondents repeated the palpation while lying down.

DISCUSSION

This study revealed that majority of the respondents had low awareness of breast self- examination. Although a little above half of the respondents understood the meaning of BSE, this did not extend to their knowledge of the frequency of performance of BSE. A little above half of the respondents noted that they did not know if women should perform BSE once a month or at their own convenient time. Only a few of respondents knew the correct frequency of BSE. According to Mercola in 2011, BSE is recommended as a way for women to know how their breasts normally feel in order to notice changes as soon as possible. Regular performance of BSE promotes self- discovery.[15] This finding is expected as their occupation may have made it difficult for them to seek more information on BSE as it is easier to gain awareness but not knowledge, which requires one to be taught or systematically look for information. The finding of this study corroborates similar Iranian study in which an insignificant number of women noted regular performance.[17]

Further assessment on the respondents' level on the reasons for performing BSE revealed that only a few knew that BSE increases survival rate by early detection of abnormalities. This is however, contrary to the findings of a study carried out among female secondary students in Abuja who reported that a high proportion of the students knew that BSE increases survival rate.[2] The difference in findings may be due to the different area of study. While Isara and Ojeddokun used an urban community, the present study was carried out in a rural community.[2] This most likely influenced their exposure to information on BSE.

Assessment on the respondents' awareness level on what to check during BSE indicated, that majority of the respondents do not know the abnormalities to check for during BSE. The only abnormalities they acknowledged most were breast lump and swelling. They do not know that dimpling, discharge and redness are abnormalities that should be watched out for during BSE. It is apparent from this finding that practice of BSE is not done or done wrongly by many of the women because of knowledge gap on what to do. Although many of the respondents were aware of the meaning of BSE, the necessary information on BSE is lacking. This discovery is in line with the finding of Rao et al in India where majority of the participants who had heard of BSE knew that breast lump should be checked with less than half not knowing that changes in nipple, colour and sizes of the breast should be checked for abnormalities.[17] This is expected as the study population is the same with the current study. The gaps in knowledge of BSE culminated in poor knowledge of clinical manifestations of breast cancer. This inadequate knowledge could also explain the reason why majority of the women did not know how often BSE should be performed. This concurred with the finding of Aniebue and Aniebue where respondents' knowledge of symptoms of breast cancer revealed pain in the breast as the commonest followed by a painless lump.[18]

Further findings of the study indicated that although majority of the respondents (59%) understood the meaning of BSE, the meaning did not extend to their knowledge of who should perform BSE. Only a few of the respondents knew that it should be performed by every woman. Majority of the respondent do not know if it should be performed by women who have passed child bearing age. Inadequate information may be possible in such a rural area as the one studied. This poor knowledge of BSE implies that though the main source of information is the healthcare providers, the information given may have been forgotten or that the information was not adequately communicated to them with due consideration of their circumstances.

Findings of the study revealed that a significant proportion of the women claimed that their major sources

of information on BSE were healthcare providers. The above observation is not unexpected considering the fact that Umuowa has health facilities that are being patronized by the community. With the presence of health facilities, a handful of women do come in contact with health workers in the community. Thus, they are expected to benefit by acquiring information concerning their health especially, on breast cancer and BSE. What is surprising is that in spite of healthcare providers being the major source of information the women had low knowledge of BSE. This could be due to personal issues or poor method of communication by the healthcare providers. But since the second major source of information is friends/relations, it could also imply that the women paid more attention to their friends/relation than to the healthcare providers. This may explain the reason for some of the misconceptions on BSE as identified in the study.

The findings of this study revealed that among the respondents, a little more than half claimed they have performed BSE but they had inadequate practice in various aspects of BSE practice. The above results correlate with a similar study done in Abakaliki, Ebonyi Statewhere majority of the market women that have examined their breasts only one person knew the correct frequency and also did it regularly.[1] The poor awareness on BSE could be anticipated in such a market area and in a rural area such as the one being studied.

Assessment on the frequency of performance of BSE revealed that a significant number of women in Umuowa performed BSE, though their practice of BSE was still not adequate. A significant proportion of the respondents performed BSE at the 2^{nd}-3^{rd} day before menses. This could be attributed to their low awareness on BSE. However, half of the respondents reported that they have no specific time when performing BSE. This could also be used to show regularity in performing BSE as it is expected that one should be examining the breasts at least once a month. This agreed with Mercola that BSE on the same day each month or as frequently as possible, using any particular pattern.[15] Many experts have recommended breast awareness which means one should regularly check the breasts for changes, but should do so in a way that feels natural for her. The respondents' timing may have been an outcome of chance as their occupation may probably have made it difficult for them to keep to specific plans\schedule for BSE. Moreover, National Breast Cancer Foundation (2012) asserted that women can take responsibility for their own health by taking convenient opportunities such as bathing or dressing to become familiar with their breasts at different times of the month, which the respondents' in this study claimed to be doing.[13]

One could also attribute the outcome of using convenient opportunities by these women to the presence of health facilities in Umuowa. They must have been exposed to such information directed at increasing their breast awareness by the health workers. This is also expected as the study population is literate enough to utilize any information concerning their breast health either through the health workers or any other source. This finding is inconsistent with the observation made by Haji-Mahmoodet al, where a good number of female health workers in Iran who claimed to know how to examine their breasts, only an insignificant number performed BSE monthly or at their convenient time.[19] This is surprising as the health workers are expected to be regular in performing BSE.

Further finding of the study showed that a significant proportion of the women do not follow any pattern while performing BSE. Those that acknowledged following any pattern noted that they perform BSE starting at the nipple and moving outwards. This could also be attributed to the fact that healthcare providers did not teach the women to use the circular motion to check for breast abnormalities as stated in the steps for appropriate performance of BSE. Further explanation could be that the women did not know that BSE requires appropriate degrees of pressure and circular motions to ensure even distributions of the breast tissues or their occupation that not give them the opportunity to follow the required pattern. They probably have adopted any method that would not be time consuming.

Some respondents reported that they do not practice BSE. The reasons for not practicing BSE among the respondents of the study could probably be due to their low perception of the risk factors or benefits of BSE. Thus, as health belief model explains that the likelihood of a person taking recommended preventive health action like performing BSE in order to detect breast cancer early depends on the perceived susceptibility to the disease, perceived benefits of the action minus the perceived barriers to the actions. This implied that, they may not have perceived their susceptibility to the disease and without knowledge of the benefit, they may not be motivated to practice or perform the BSE and as at when due.

Furthermore, according to the health belief models, perceived barrier to action results from an individual's assessment of barriers that may influence her adoption of performing BSE. Barriers that may influence adopting or practicing BSE may include inconveniences, lifestyle changes, and anxiety, finding it difficult to differentiate between normal changes and worrisome findings or not knowing how to do it. A few of the respondents also noted lack of confidence on how to do it. This implies that the women may be ignorant of the procedure for performing BSE or lack the confidence on how to perform it.

This development could also be related to earlier observation that majority of the women who practiced BSE do not know the correct procedure. For instance, a high percentage of the respondents do not palpate the

breasts with their fingers while still standing. Majority do not palpate using varying degrees of pressure (with light pressure, then moderate pressure and finally with firm pressure). This observation is in agreement with the report in another study among undergraduates in Ahmadu Bello University Zaria which less than half of the participants correctly described how to perform BSE.[10]

The study has shown that there was a positive relationship between the respondents' awareness of breast cancer and their practice of BSE. This showed that the practice of BSE was associated with the awareness of breast cancer. Thus, with the Pearson Chi-square (P-value) of 0.000<0.05, the relationship between breast cancer awareness and practice of BSE among the women was established. According to Oluwatosin knowledge improves practice as women given information on breast cancer and BSE demonstrated higher knowledge and tend to practice BSE.[11] Where there is awareness, there is an expected relatively high influence on the corresponding related behavior and vice versa. Therefore, since the women did not have good knowledge of breast cancer and BSE, that is, how to do it, when to do it and who should do it, it is expected that practice will be low.

Both the low awareness and the inadequate practice of BSE could be attributed to their occupational status and their lack of exposure to information on breast cancer and BSE. Due to the fact that the women were mainly traders and farmers, they were not opportune to acquire information on breast cancer and must have relied on community myths. This invariably affected their practice of BSE. This result implies that a lot of information needs to be disseminated in the rural areas on breast cancer and BSE and its practice.

CONCLUSION

The findings of the study have shown that despite the fact that a greater number of women have performed BSE, the practice of BSE was inadequate. Healthcare providers in the communities should therefore ensure that the proper steps on the performance of BSE are taught to women at the grassroots level.

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REFERENCES

1. Obaji I, Elom H, Agwu U, Nwigwe G, Ezeonu P and Umeora O. Awareness and Practice of Breast Self Examination among Market Women in Abakaliki Southeast Nigeria. Annual Med. Health Sci. Research. 2013;3(1):7-12.
2. Isara A, Ojedokun C. Knowledge of breast cancer and practice of breast self-examination among in Abuja. Nig. J Prev Med Hyg. 2011;52 (4):186-90.
3. Pindiga H, Babayo U, Omatara O. Pattern of cancer in Maiduguri, Nigeria: Tumours in Adults. High Land Medical Research Journal. 2004;2:45-50.
4. Salaudeen A, Akanda T, Musa O. Knowledge and attitude to breast cancer and breast self examination among female undergraduates in a state in Nigeria. European Journal of social sciences.2009;7(3):157-65.
5. Oluwatosin O. Assessment of Women's Risk Factors for Breast Cancer and Predictors of the Practice of BSE in Two Rural Areas in Ibadan, Nigeria. Cancer Epidemiology. 2010;34:425-8.
6. Otunne C. Breast Cancer: Causes and Therapies; Rex Press, CKC. Aba. 2008.
7. Iheanacho P, Ndu A, Emenike A. Awareness of breast cancer risk factors and practice of BSE among Female Undergraduates in University of Nigeria Enugu Campus. Open Journal of Nursing. 2013;3:147-52.
8. Doshi D, Reddy B, Kulkarn S, Karunakar P. Breast self examination: knowledge, Attitude and Practice among Students in India. Indian Journal of Palliative Care. 2010;(1):66-7.
9. Gwarzo U, Sabitu K, Idris S. Knowledge and practice of BSE among female undergraduate students of Ahmadu Bello University Zaria, North Western Nigeria. Annals of African Medicine. 2009;8(1):55-5.
10. Omotara B, Yahya S, Amodu M, Bimba J. Awareness, Attitude and Practice of Rural Women Regarding Breast Cancer in Northeast Nigeria. J Community Med. Health Edu. 2012;2:148.
11. Oluwatosin O. Primary healthcare nurses' knowledge, practice and clients teaching of early detection measures of breast cancer in Ibadan. BMC Nursing. 2012;11:1-8.
12. Atanga B, Atashili J, Fuh E, and Eta V. Breast self examination and breast cancer awareness in women in developing countries: A survey of women in bueaCameroon. 2012. Available on: www.ncbi.nim.nih.gov/pubmed/23140094. [Retrieved 14/04/2013].
13. National Breast Cancer Foundation, (2012). Available on:www.nationalbreastcancer.org/ aboutbreastcancer/breast self-exam. [Retrieved 06/08/13].
14. Ginsberg M, Lauer J, Zelle S, Bacten S, Baltussen R. Cost effectiveness of strategies to combat breast, cervical and colorectal cancer in Sub-caharan African and South East Asia: Mathematical Modeling Study. BMJ. 2012;344:614.
15. Mercola J. Still getting mammograms?Available on: articles.mercola.com/sites/articles. [Retrieved 14/4/13].
16. Nahid N, Masound S, Mohamood H, Mohamood E. A Survey of Breast Cancer Knowledge and Attitude in Iranian Women Cancer Research Center.Journal of Cancer Research and Therapeutics. 2012;8(1):46-9.

17. Rao RS, Nair NS, Kamath VG. Acceptability and Effectiveness of a breast health awareness programme for rural women in India. Indian Journal Med Sci. 2009;5(9):398-420.
18. Aniebue P, Aniebue U. Awareness of breast cancer and breast self-examination among female secondary school teachers in Enugu metropolis, South Eastern Nigeria. Journal of College of Medicine. 2008;13(2):105-10.
19. Haji-Mahmood M, Montazeri A, Jarvandi S, Ebrahimi M, Haghighati S, Harirchi I. Breast self-examination: knowledge, attitude and practices among female healthcare workers in Tehran, Iran. The Breast Journal. 2002;8(4):232-5.

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