Knowledge of Breast Cancer and Need for its Screening Among Female Healthcare Workers in Oshimili South Local Government Council Area of Delta State, Nigeria

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ABSTRACT

Background: *Breast cancer is the most commonly diagnosed cancer among women worldwide and the most common among African women. The WHO, recent global cancer statistics indicate a rising global incidence of breast cancer in populations of the developing countries that previously enjoyed a low incidence of the disease. Early detection through mammogram, clinical breast examination (CBE), and breast self examination (BSE) is critical to reducing breast cancer related morbidity and mortality.*

Objectives: *To assess the knowledge, awareness, perception and behavior of female healthcare workers in Oshimili South LGA of Delta State towards breast cancer and its screening.*

Methods: *A cross-sectional descriptive study done from January to March 2014. Multistage sampling technique was used in the selection of the LGA and study participants. Data was collected using a semi-structured questionnaire and were analyzed using SPSS version 17.*

Results: *A total of 424 female healthcare workers were interviewed. The mean age was 35.4 years and ranged from 21 to 58 years. A total of 406 respondents (97.1%) were aware of breast cancer; 340(81.3%) practice breast self examination (BSE); 117(41.9%) knew about breast mammography. The commonest source of information about breast cancer was from fellow healthcare workers (45.3%), followed by school (16.5%), and newspaper (14.8%).*

Conclusion: *The study shows a high level of awareness of breast cancer and BSE but a low level of awareness of breast mammography. The level of awareness of breast cancer, the practice of BSE and awareness of breast mammography were all found to increase with increase in age of respondents. The married respondents were more aware of breast cancer and also of breast mammography. Higher educational level was not found to increase awareness of breast cancer, practice of BSE and knowledge of breast mammography.*

Key words: Breast cancer, knowledge, screening

INTRODUCTION

Breast cancer is the most commonly diagnosed cancer among women worldwide.[1] It is the most common cancer among African women.[2] Breast cancer risk is greater in women who have a paternal or a maternal family history of the disease; however, about 70–80% of women with breast cancer have no family history of the disease.[1] White women have a slightly higher risk of breast cancer than black women, whereas African American women have a higher risk than Asian, Hispanic, and American Indian women of dying from the disease. American Indian women have the least risk of developing breast cancer.[1]

According to the International Association of Research on Cancer (IARC) of the World Health Organization, recent global cancer statistics indicate a rising global incidence of breast cancer.[3] and the increase is occurring at a faster rate in populations of the developing countries that previously enjoyed a low incidence of the disease[4,5,6]. In addition to the fact that the incidence of the disease appears to be on the increase, late presentation with poor outcomes of treatment is the hallmark of breast cancer in most developing countries[7], including Nigeria. Early breast cancer detection through mammogram, clinical breast examination (CBE), and breast self examination (BSE) is critical to reducing breast cancer related morbidity and mortality.[1]The American Cancer Society recommends mammograms and CBE every year for women aged 40years and above for early breast cancer detection. Monthly BSE is now recommended for women aged 20-40 years, although the efficacy of BSE as a breast cancer screening method is controversial.[2]

A few studies on Knowledge, attitude and practices towards breast cancer has been conducted in South-South, Nigeria. Each of these studies has recorded low knowledge and attitude among the participants.[8] The need for new studies has become necessary to ascertain levels of improvement.

Early detection of breast cancer is vital to its effective management and outcome. It has been reported that when women are educated and are aware of screening tests like breast self examination, clinical breast examination and mammography, they demonstrate high level of commitment, knowledge and confidence and tend to put them into practice more than those who have not received such information.[9] BSE and CBE have

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been recommended as Early Detection Measures (EDM) for developing countries.[9] Prevention remains the cornerstone of the fight against breast cancer worldwide. Although some prevention methods have been proposed, many remain inaccessible to women in developing countries who, ironically, given the limited diagnostic and curative facilities available to them, need prevention the most.[10]

A cross-sectional study on knowledge, attitudes, beliefs, behaviors and breast cancer screening practices in Ghana reported poor knowledge of breast cancer and screening methods. Also reported was low breast cancer screening practices.[7] A similar cross-sectional study in Osogbo, Nigeria among nurses in a tertiary teaching hospital and women in non health professions reported good knowledge but poor screening rates.[2] Similar to the study in Ghana[7], several studies have reported poor knowledge of breast cancer and its screening methods[8,11,12]. A study among African American women also reported poor knowledge of breast cancer, low rates of adherence to recommended breast cancer screening guidelines and low rates of breast self examination.[13]

A similar study amongst nursing students in LUTH, Nigeria reported that respondent's knowledge of breast cancer and BSE was high (97.3%); 85.6% knew how to carry out BSE correctly. Majority, 58.6% obtained their information from the media. The attitude of respondents to BSE was good, most of the respondents, 98.5% thought BSE was necessary and 84.3% claimed to have carried out BSE.[14] A study in Riyadh, Saudi Arabia reported that Knowledge of BSE was high; 82%, while 61% knew about mammography, but only 41.2% had performed BSE and 18.2% had had mammography screening. Knowledge of breast cancer, risk factors and protective factors for breast cancer was moderate.[15]

METHODOLOGY

The study was carried out in Oshimili-South Local Government Area (LGA) of Delta State; it is a semi-urban area with headquarters in Asaba. It has an area of 603 square kilometers and a population of 149, 603 in the 2006 census.[16] It consists of ten communities namely; Asaba, Oko, Cable point, Central core area, Isieke, Ezenei, Umuagu, Umueze, Umuonaje and Zappa. There are eleven (11) public health facilities in the LGA. Amongst which are nine primary healthcare centers (PHCs), one general hospital at Oko and one tertiary healthcare facility (Federal Medical Centre, Asaba). The Federal Medical Centre (FMC) has a total of eight hundred and fifty (855) healthcare staff amongst which the female healthcare staff comprises of 463. The general hospital has a total of 120 healthcare staff, amongst which, the females comprised 47 of this healthcare staffs. The nine PHCs have a total of 248 healthcare staffs with 162 females.

This is a cross-sectional descriptive study done among female healthcare workers in Oshimili-South LGA of Delta State, Nigeria from January to March 2014. Multistage sampling technique was used in the selection of the LGA and the participants in this study. Data was collected using a semi-structured self administered questionnaire with sections on the socio-demographic characteristics of respondents, knowledge of breast cancer, BSE, CBE and breast mammography. Data collected were analyzed using SPSS version 17.

Consent to participate in this study was sought from the respondents after detailed explanations to them about what the study entails, as well as assuring them of confidentiality of information to be given.

RESULTS

A total of four hundred and twenty four (424) female healthcare workers were interviewed. The predominant age group was 30-39 years (42.3%). Majority (81.4%) of the respondents were married. Most (90.6%) had a polytechnic or university education. Majority (97.2%) of the respondents were Christians. Majority (65.3%) of the respondents were of the Igbo ethnicity.

The socio-demographic characteristics of respondents are shown in table I.

A total of 406 respondents (97.1%) were aware of breast cancer. The age group 30-39 years was most aware of breast cancer (42.4%). Age was found to significantly influence awareness of breast cancer ($p<0.05$). Majority of the respondents with polytechnic/University education (89.2%) were aware while only 8.0% of those with secondary education and none of those with primary education were aware of breast cancer. Educational level was not found to influence awareness of breast cancer ($p>0.05$). Most of the married (78.5%) respondents were aware of breast cancer, while the singles (14.8%), the divorced (2.6%) and the widowed (1.2%) were less aware of breast cancer. There is no significant difference in awareness of breast cancer among the different marital status ($p>0.05$). The respondents' awareness of breast cancer is shown above in table II.

The commonest source of knowledge about breast cancer (see table III) was from fellow healthcare workers

(45.3%),followed by school (16.5%), and newspaper (14.8%).

A total of 340 respondents (81.3%) BSE (see table IV). Thirty five point two percent (35.2%) of age group 30-39 years practice BSE; followed by age group 20-29 years (23.4%) and 40-49 years (17.2%). Age group 50-59 years was found to be the least (5.5%) that practice BSE. Age was found to significantly affect the practice of BSE (< 0.05). Practice of BSE was highest among those with polytechnic/University education (75.2%), followed with those with secondary school education (5.0%). Educational level was found to affect the practice of BSE significantly ($p<0.05$).

A total of 117 respondents (41.9%) knew about breast mammography (table V below). Age group 50-59 had the lowest awareness of 8.0%. Age was found to significantly affect knowledge of breast mammography ($p<0.05$). Knowledge of breast mammography was highest among those with polytechnic/University education (38.0%). Educational level was not found to affect the knowledge of breast mammography significantly ($p>0.05$). Marital status was also found to be significantly associated with knowledge of breast mammography ($p<0.05$).

Table I: Socio-Demographic Characteristics

	Frequency	**Percentage %**
Age		
20 - 29	116	27.8
30 - 39	177	42.3
40 - 49	78	18.7
50 - 59	47	11.2
Marital Status		
Single	63	14.9
Married	345	81.4
Divorced	11	2.6
Widowed	5	1.2
Educational Level		
Primary	6	1.4
Secondary	34	8.0
Polytechnic/ University	384	90.6
Religion		
Christian	412	97.2
Muslim	12	2.8
Denomination of the Christians		
Catholic	153	37.1
Anglican	70	17.0
Pentecostal	189	45.9
Ethnicity		
Igbo	277	65.3
Hausa	6	1.4
Yoruba	36	8.5
Urhobo	68	16.0
Ijaw	31	7.3
Others	6	1.4

Table II: Awareness of Breast Cancer

	Yes	%	No	%	Test/p-value
Age distribution					
20 - 29	110	26.3	6	1.4	X^2=15.337
30 - 39	177	42.4	0	0	df = 3
40 - 49	72	17.2	6	1.4	p< 0.05
50 -59	47	11.2	0	0	
Educational level					
Primary	0	0	6	1.4	X^2=2.092
Secondary	34	8.0	0	0	df = 2
Polytechnic/University	378	89.2	6	1.4	p > 0.05
Marital Status					
Single	63	14.8	0	0	X^2=2.828
Married	333	78.5	12	2.8	df=3
Divorced	11	2.6	0	0	p > 0.05
Widowed	5	1.2	0	0	

Table III: Sources of Knowledge of Breast Cancer

Sources	Frequency	%
Radio	45	11.1
Television	41	10.1
Newspaper	60	14.8
Health workers	184	45.3
School	67	16.5
Internet	9	2.2

Table IV: Practice of Breast Self Examination (BSE)

	Yes		No		Test/p-value
	Frequency	%	Frequency	%	
Age group of respondents					
20 -29	98	23.4	18	4.3	X^2=39.792
30 - 39	147	35.2	30	7.2	df = 3
40 - 49	72	17.2	6	1.4	P <0.05
50 - 59	23	5.5	24	5.7	
Educational level					
Primary	0	0	6	1.4	X^2=33.561
Secondary	21	5.0	13	3.1	df = 2
Polytechnic/University	319	75.2	65	15.3	p < 0.05

Table V: knowledge of Breast Mammography

	Yes		No		Test/p-value
	Frequency	%	Frequency	%	
Age group					
20 - 29	48	11.6	68	16.5	X^2=23.115
30 - 39	55	13.3	116	28.2	df = 3
40 - 49	37	9.0	41	10.0	p < 0.05
50 - 59	33	8.0	14	3.4	
Education level					
Primary	0	0	6	1.4	X^2=4.309
Secondary	14	3.3	20	4.8	df = 2
Polytechnic/University	159	38.0	219	52.4	P > 0.05
Marital Status					
Single	51	12.2	12	2.9	X^2=62.106
Married	117	28.0	222	53.1	df = 3
Divorced	0	0	11	2.6	P < 0.05
Widowed	5	1.2	0	0	

DISCUSSION

Most (97.1%) of the respondents were aware of breast cancer. This shows a similar level of awareness to the study done in LUTH, Lagos, Nigeria[14] among nurses where awareness was 97.3%. This is not in keeping with the studies in Osogbo[2], Ghana[7] and Benin[8], that reported lower levels of awareness of breast cancer. The high level of breast cancer awareness in this study and in the LUTH study could be due to the fact that the study participants were healthcare workers. This knowledge is high across all the age groups. All respondents in age 30-39 years and age group 50-59 years are all aware of breast cancer. Age was found to influence awareness of breast cancer (p < 0.05).

Knowledge of breast cancer was not significantly higher among respondents with Polytechnic or University education than those with secondary and primary education (P>0.05). This is in keeping with the study in Ghana[7] that reported weak correlation between knowledge of breast cancer and level of education of respondents. This may be due to the fact that the respondents are all healthcare workers in hospital settings and irrespective of their level of education may have heard of breast cancer one way or the other during their years of practice. Not in keeping with this study, is the study in Benin[8] that reported a positive influence of education on knowledge of breast cancer. This may be due to the fact that study participants in this study were not healthcare workers. Awareness of breast cancer was not significantly higher among the married respondents as compared to the singles (P>0.05).

The main source of health information about breast cancer was from fellow healthcare workers (45.3%). This is not in keeping with the studies in Osogbo[2] and Ghana[7] where the main source of information about breast cancer was the mass media. This may due to the fact that the study participants in this study were healthcare workers while the participants in the Ghana[7] study were women generally and that in the Osogbo[2] study were both nurses and women generally.

Most (81.3%) of the respondents practice breast self examination (BSE). This shows a higher level of practice of BSE than the study done in Osogbo[2], Ghana[7], Benin[8] and Riyadh[15]. The level of practice of BSE is similar to the study in LUTH[14] (85.6%). This may also be due to the fact that the study participants in this and the LUTH study were healthcare workers while the participants in the Riyadh[15], Benin[8] and Ghana[7] studies were women generally and that in the Osogbo[2] study were both nurses and women generally. The practice of BSE is highest in the age group 30-39 years. Age was found to significantly affect the practice of BSE. Practice of BSE was significantly higher among respondents with Polytechnic or University education (75.2%) than those with secondary (5.0%) (P<0.05). This is in keeping with the study in Osogbo.[2]

Only 41.9% of the respondents were aware of breast mammography as a form of screening test for breast cancer. This shows a similar level of awareness to the study done in Osogbo[2], Ghana[7] and that in Riyadh.[15] Age was found to significantly affect knowledge of breast mammography (p<0.05). Knowledge of breast mammography was not significantly higher among respondents with Polytechnic or University education than those with secondary (P>0.05). This is in keeping with the study in Osogbo.[2] Marital status was found to be significantly associated with knowledge of breast mammography in this study (P<0.05).

CONCLUSION

The study shows a high level of awareness of breast cancer and breast self examination but a low level of awareness of breast mammography as a screening tool for breast cancer. More efforts should be put into awareness campaign on breast cancer and its screening by the government and non-governmental organizations. They should provide more screening sites with breast mammography and create avenues for educating people about breast cancer risk factors.

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