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Research Article

Knowledge and Management Practices of Women about Breast Cancer in Kaduna State

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SUMMARY
Objective: The general aim of this study was to evaluate the awareness of breast cancer (BC) and BC management among women in two local government areas (LGAs) of Kaduna state and document responses after training as cancer-related deaths are preventable through lifestyle changes and early detection using screening procedures that do not require expensive equipment but can help identify more cases earlier
Methods: The study was conducted at Zaria and Sabongari LGAs, Kaduna state. A cross sectional study design to collect information via questionnaire from 120 adult women, was used, followed by a training on breast self-examination with documentation of outcome.
Results: Most of the respondents were aged 21 to 30 and married. Mean age was 30.68 years (+/- 10.0 years) and 32.54 years (+/-10.8 years). The result shows that knowledge and management ratings for BC were average-to-poor (>50%). Forty-four and 100% respondents in Zaria and Sabongari respectively had poor screening practices but 80% of the respondents had positive outcomes after training.
Conclusion: This study revealed average-to-poor knowledge and management among respondents regarding breast cancer with improvement in breast cancer screening practices after training. It can be concluded from this study that improved knowledge will lead to improved awareness of breast cancer and its management and strategies for this should be deployed by healthcare providers and the government.

INTRODUCTION

Cancer has now become an emerging public health problem in developing countries like Nigeria.[1-3] Cancers are major contributors of morbidity and mortality in Nigeria and are closely linked to tobacco use, excessive consumption of alcohol, unhealthy diet, obesity, physical inactivity, chronic infections, exposure to radiation, chemical agents and family history. The prevalence of cancer is on the increase. About 100,000 incident cases of cancers are currently reported annually and this is estimated to increase to 500,000 in 2010.[4,5] The World Health Organization in 2008 estimated that the incidence of cancer in Nigerian men and women by 2020 will be 90.7/100,000 and 100.9/100,000 and death rate would be 72.7/100,000 and 76,000/100,000, respectively.[6] Breast cancer ranks as one of the leading cancer types in the number of new cases diagnosed.[7] Breast cancer is also one of the most commonly encountered cancers among Nigerian women.[4] A review in Jos, Nigeria shows that breast cancer accounted for about 57% of all cancer cases diagnosed from 1995-2002.[8]Another review of Zaria and Ibadan Oncology Centers in Nigeria reveals that breast cancer accounts for 20.5% and 35.5% of all cancer cases respectively in 19991/1992.[4] It is important to note that men also develop breast cancer and approximately 390 of the estimated deaths due to breast cancer in 2010 in the United States occurred in men,[7] while in Nigeria, it is reported that breast cancer in men represents 3.7 -8.6% of all breast cancers.[9] Literature shows that breast cancer presentation in Nigerian women occurs about 10-15 years earlier than observed in Caucasian women [2]; occurring between the ages of 35-45 years, and also about 70% of Nigerian women present with the advanced stage of the disease with a 5-year survival rate of between 5 - 15% compared to over 70% in Western Europe and North America.[2,8] This alone suggests that cancer should be seen as a major health problem that requires urgent attention in Nigeria.[10] Many reasons have been attributed for this and include lack of awareness of proper screening procedures, preference for traditional medicines and religious healers, lack of functional cancer treatment centers and cost of treatment.[11]

Awareness is the first step in the battle against cancer. In developing countries, many women diagnosed with breast cancer do not survive because their cancer is detected too late.[2,8,12,13] Early detection does not necessarily require expensive diagnostic equipment. In countries in which access to mammography for mass screening is poor, routine clinical examinations by well-trained health care practitioners can help diagnose more cases earlier.[14] Lack of awareness of screening procedures for breast cancer is one of the major reasons for late presentation of breast cancers in the developing world including Nigeria.[15-19] The underlying premise for breast cancer screening is that it allows for the early detection of breast cancers before they become palpable. As breast cancer is a progressive disease, early

detection of small tumors found at these early stages have better prognosis and are more successfully treated.[18,20] Therefore this work is concerned with the evaluation of breast cancer knowledge (which is defined in this study as the knowledge of risk factors and treatment) and screening awareness (defined as knowledge of screening procedures and practice) among women in two local government areas of Kaduna state (Zaria and Sabongari Local Government).

MATERIALS AND METHODS

The study was conducted at Zaria and Sabongari Local Government Areas of Kaduna State, Northeast Nigeria. A cross sectional study design approach which adapted a previously validated questionnaire (Stager's comprehensive Breast Cancer Knowledge Test[21] was used to access the awareness of breast cancer and breast cancer screening among women aged 18 years and above. Verbal informed consent was obtained from the 120 respondents per LGA used with assurances of confidentiality of responses given. This was followed by an informal training on correct procedure for breast self-examination and documentation of feedback after training. After-training feedback was either Positive (those that recalled the information properly and agree that they will begin to carry it out), Negative (those that are unable to recall and are not willing to carry it out), Intermediate (those that either recalled but are not willing to carry it out or they could not recall but are willing to carry out the examination).

Administered copies of the questionnaire were edited and coded with the aid of a coding guide. Coded data were entered into a computer for analysis using the Statistical Package for Social Sciences (SPSS) version 17.0.[22] In assessing knowledge and management scores of the respondents, correct responses were scored 1 and wrong responses were scored zero. These scores were pooled together to get a four-part range of responses into poor level of knowledge/management (0-25%), those with average knowledge/management (26-50%), those with good knowledge/management (51-75%) and those with excellent knowledge/management of breast cancer. The results were analyzed using descriptive and inferential methods and presented as tables and charts.

RESULTS

Most of the respondents in both Zaria and Sabongari LGAs were in the 21 to 30 age bracket and married (62% and 69% respectively). The mean age of respondent for Zaria and Sabongari was 30.68 years (+/- 10.008 years) and 32.54 years (+/- 10.814 years), respectively. In Zaria, most of the women were students (37%) and had their highest level of education as Secondary school (42%) while in Sabongari, most of the respondents were Civil Servants (38%) with tertiary schooling (52%) as their highest educational attainment (Table 1).

Most of the respondents are Hausa/Fulani women (72% and 52%) of the Islamic faith (75% and 72%) in Zaria and Sabongari respectively. About a fifth of the women are yet to give birth to any children (Table 2).

Knowledge and management ratings for breast cancer by the respondents and shows that most of women have average to poor knowledge and management practices. Good to Excellent knowledge in Zaria and Sabongari respectively are 18.3% and 42% while equivalent values for management practices are 54.2% and 46%. The differences between knowledge and management between Zaria and Sabongari are statistically significant at $p \leq 0.05$ (Figure 1).

Proportion for knowledge of Breast Cancer screening procedures possessed by the women. Less than 50% of the Zaria respondents have poor knowledge of breast cancer screening procedures while all the respondents in Sabongari have poor Breast Cancer screening practices. The difference in the results is statistically significant at $p \leq 0.05$ (Table 3).

Responses of the respondents after training and demonstration on breast cancer screening practices shows that a high proportion (75% and 86%) of the respondents have positive response i.e. those that recalled the information for BSE properly and agree that they will begin to carry it out. The difference in the result in the two locations is, however, not statistically significant.

Table 1: Demographic Data of Respondents

Items	Zaria (n=120) Freq. (%)	Sabongari (n=100) Freq (%)	Total Freq (%)
AGE GROUP (YEARS)			
<20	12 (10.0)	10 (10.0)	22 (10.0)
21 – 30	64 (53.3)	46 (46.0)	110 (50.0)
31 - 40	22 (13.3)	18 (18.0)	40 (18.2)
41 - 50	16 (13.3)	20 (20.0)	36 (16.4)
>50	6 (5.0)	6 (6.0)	12 (5.5)
MARITAL STATUS			
Married	74 (61.7)	68 (68.0)	142 (64.5)
Single	46 (38.3)	24 (24.0)	70 (31.8)
Widowed	0 (0.0)	4 (4.0)	4 (1.8)
Divorced	0 (0.0)	2 (2.0)	2 (0.9)
Blank	0 (0.0)	2 (2.0)	2 (0.9)
OCCUPATION			
Civil Servant	26 (21.7)	38 (38.0)	64 (29.1)
Student	44 (36.7)	10 (10.0)	54 (24.5)
Housewife	16 (13.3)	16 (16.0)	32 (14.5)
Business woman	4 (3.3)	2 (2.0)	6 (2.7)
Others	30 (25.0)	34 (34.0)	64 (29.1)
HIGHEST EDUC.			
None	4 (3.3)	4 (4.0)	8 (3.6)
Primary	2 (1.7)	2 (2.0)	4 (1.8)
Secondary	50 (41.7)	24 (24.0)	74 (33.6)
Tertiary	34 (28.3)	52 (52.0)	86 (39.1)
Others	30 (25.0)	18 (18.0)	48 (21.8)

Table 2: Demographic Data of Respondents

Items	Zaria (n=120) Freq. (%)	Sabongari (n=100) Freq (%)	Total Freq (%)
RELIGION			
Islam	90 (75.0)	72 (72.0)	162 (73.6)
Christianity	30 (25.0)	28 (28.0)	58 (26.4)
ETHNIC GROUP			
Hausa/Fulani	72 (60.0)	52 (52.0)	124 (56.4)
Igbo	2 (1.7)	4 (4.0)	6 (2.7)
TIV	0 (0.0)	8 (8.0)	8 (3.6)
Edo/Delta	6 (5.0)	6 (6.0)	12 (5.5)
Yoruba	18 (15.0)	4 (4.0)	22 (10.0)
Others	22 (18.3)	26 (26.0)	48 (21.8)
NO. OF CHILDREN			
None	22 (18.3)	26 (26.0)	48 (21.8)
1 - 4	40 (33.3)	42 (42.0)	82 (37.3)
>4	58 (48.3)	32 (32.0)	90 (40.9)

Table 3: Rating of Knowledge of Breast Cancer Screening Procedures

Screening Knowledge	Zaria (%) (n=120)	Sabongari (%) (n=100)	Total (%) (n=220)
Excellent	4 (3.3)	0 (0.0)	4 (1.8)
Good	20 (16.7)	0 (0.0)	20 (9.1)
Average	43 (35.8)	0 (0.0)	43 (19.5)
Poor	53 (44.2)	100 (100.0)	153 (69.5)

Table 4: Response after Training

Knowledge Rating	Zaria (%) (n=120)	Sabongari (%) (n=100)	Total (%) (n=100)
Positive	90 (75.0)	86 (86.0)	176 (80.0)
Intermediate	13 (10.8)	6 (6.0)	19 (8.6)
Negative	10 (8.3)	4 (4.0)	14 (6.4)
Not trained	7 (5.8)	4 (4.0)	11 (5.0)

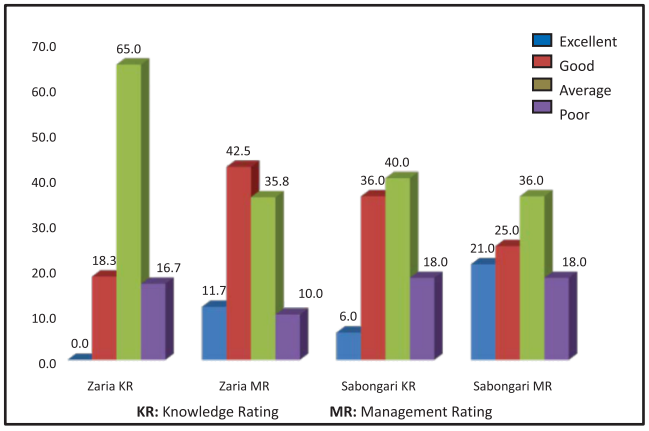

Figure 1: Percent Rating Scales for Knowledge & Management of Breast Cancer by Respondents

DISCUSSION

The ages of the respondents in this study qualify them for Breast Cancer screening. The American Cancer Society (ACS) recommendations for Breast Cancer screening procedures state that Breast Self-Examination (BSE) should be performed monthly by women in their early 20's and also Clinical Breast Examination (CBE) should be started by women in their 20's and -early 30's, mammogram at age 40 years and above.[23] The age of the respondents in this study had a significant relationship with their knowledge of breast cancer, screening practices, knowledge of screening procedure and breast cancer management screening practices ($p<0.05$).

Literature shows that cancer-related death is preventable through awareness/lifestyle changes, early detection and access to first class treatment.[24] This has been demonstrated in the findings conducted between 1990/1991 to 2009 in the United States where the overall death rates for cancer has decreased by 24% in men, 16% in women, and 20% overall.[25] Also, death rates have decreased by more than 40% for prostate cancer, and by more than 30% for colon cancer, breast cancer in women, and lung cancer in men. The large drop in lung cancer deaths is attributed to smoking cessation programs while the drop achieved in deaths due to prostate, colon, and breast cancer is attributed to improvements in early detection and treatment.[25,26] The United States National Cancer Institute estimates that approximately 2.6 million US women with a history of breast cancer were alive in January 2008, more than half of whom were diagnosed less than 10 years earlier.[27] The result obtained in this study, however, shows poor awareness of respondents to breast screening practices and shows overall poor knowledge about breast cancer screening procedures in both LGAs.

The overall knowledge of breast cancer was found to be poor in Zaria (18.3% of respondents scored above average) and fair in Sabongari, (42% of their respondent scored above average). This might be related to the differences in their occupations and educational levels which gave a statistically significant association with knowledge of breast cancer in Sabongari. A statistically significant association between educational level in Sabongari with knowledge of breast cancer was observed and this can be related to the findings of Lakmini *et al*.,[28] whereall risk factors for breast cancer except null parity had a significant association with the education ($p < 0.05$) and findings from Kanaga *et al*,[29] which showed a significant positive relationship between education and awareness ($p> 0.05$). Also age and marital status in Sabongari; religion and ethnic group in Zaria Local Government areas were found to have a statistically significant association with knowledge of breast cancer in this study. Knowledge items considered include causes (e.g. hard blow to the breast can cause cancer later and breast cancer is contagious[30,31] and risk factors (e.g. use of oral contraceptives, breastfeeding, family history and presence of breast lumps[31-34] for breast cancer.

Assessment of breast cancer management knowledge showed somewhat better responses than knowledge of breast cancer itself with an overall average rating for all respondents. Over 60% believe breast cancer can be successfully treated without breast removal though about a third believe that mastectomy is the best treatment option for breast cancer. This is probably because mastectomy predominates as treatment modality for breast cancer in Nigeria.[15,35] Other treatment options were less well known by respondents and this is similar to the findings by Lakmini *et al*.[28]

The overall knowledge of breast cancer screening

procedures was found to be poor in Zaria (only 20% of respondents scored above average) and very poor in Sabongari, (all respondents scored poor). About half of the respondents knew of breast self-examination (BSE) as a screening tool for breast cancer while less than a quarter know of mammography as a screening tool. This is in line with the findings of Olowokere *et al*.[36]

From a study conducted by Jacob *et al*.,[37] language can act as hindrance to breast cancer screening by impeding adequate health communication. Overcoming communication barriers in order to deliver drug information and advice using good counseling/communication skills is an important role for healthcare providers. This was however, not an issue in this study and respondents were able to communicate freely with the researcher to have all their questions resolved.

Over 75% of the respondent had a positive response (i.e. those that recalled the information properly and agree that they will begin to carry it out) after training on the BSE. This is consistent with the findings of Amosu *et al*, where 65% of the respondents [8] when asked if they had any intentions of going for breast cancer screening in the nearest future, indicated that they would like to be screened.

CONCLUSION

This study has revealed low knowledge among respondents regarding breast cancer, its management and screening procedures with a fair screening practice in both local government areas. Respondents, however, had a positive response after training. Therefore, there is an urgent need for intensive breast cancer awareness programmes to significantly improve the awareness of women to breast thereby enhancing early detection and treatment.

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Conflict of Interest

The authors declare no competing interests.

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