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STATISTICAL STUDY ON KNOWLEDGE & AWARENESS OF BREAST CANCER AMONG WOMEN WITHIN REPRODUCTIVE AGE, A REFERENCE TO FAGGE L.G.A. OF KANO STATE

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Abstract

Breast cancer in women is a major health burden both in developed and developing countries. To evaluate the knowledge and awareness about breast cancer among women of child bearing ages (15-49 years), this study was conducted. Data were collected from 176 female respondents by a pre-structured questionnaire in different locations of Fagge Local Government Area of Nigeria. The data were coded, entered, and analyzed using the SPSS 22. The data were analyzed by descriptive studies and expressed as percentage. Breast cancer was known to 81.8% women (n=144). In our study 56.3% respondents were married. Knowledge about sign, symptoms, diagnosis and treatment was good among the target population. Results showed that 52.3% women had knowledge about performing breast self-exam and 21% had heard about CBE. Overall, to controlling the morbidity and mortality rate of breast cancer we should increase the level of knowledge and we should take some steps to spread the knowledge and awareness about breast cancer especially among the women within the child bearing age.

Keywords: Women, Breath Cancer, Knowledge

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Introduction

Breast Cancer constitutes a major public health issue globally, with over 1 million new cases diagnosed annually; resulting in over 400,000 annual deaths and about 4.4 million women living with the disease. It also affects one in eight women during their lives. It is the commonest site-specific malignancy affecting women and the most common cause of cancer mortality in women worldwide (Tobin E, Okeowo P., 2014).Breast cancer is a malignant (cancerous) growth that begins in the tissues of the breast. Cancer is a disease in which abnormal cells grow in an uncontrolled way. It is the most common cancer in women, but it can also appear in men. Breast cancer is now an epidemic, posing a serious threat to the health of women of all races globally (Yakubu AG, A. Sheshe, 2014).In Nigeria, cervical cancer was the commonest cause of cancer-related deaths among women for several decades but breast cancer is now the leading cause of cancer related deaths among Nigerian women. This is not due to a reduction in cervical cancer but an increase in the incidence of breast cancer. Breast cancer is commonly seen in four stages that represents its progression. In stage I, the disease is confined entirely to the breast. The cancer usually starts as a very tiny growth that cannot yet be felt but can be detected with imaging tests such as mammography and ultrasound. At this first stage, treatment is usually curative and more than 95% of those so detected will survive the disease beyond 5 years. Stage II is a cancer that has involved lymph nodes in the armpit of the same side of the breast, while stage III disease is one that has involved the muscles under the breast. Stages II and III therefore require very aggressive treatment using different modalities to contain the spread of the disease. It is however difficult to cure a patient in stage IV because the disease has spread and may have involved other organs in the body such as the lungs, liver, bones, the brain or the spine. The five-year survival rate for breast cancer patients in the United States exceeds 85%, in Nigeria it is a dismal 10%. Breast cancer is responsible for about 16% of all cancer related deaths in Nigeria (Ahmed S.A et al., 2009).

Material and Method

The study is a survey-based study, data was collected using a self-administered questionnaire which consisted of four sections namely socio-demographic status, knowledge of breast cancer, knowledge and practice of Breast Self-Examination (BSE), knowledge and practice of Clinical Breast Examination and risk factors associated with breast cancer. Socio-demographic included questions on age, level of education, marital status, and occupation. The second section included questions about breast cancer knowledge, signs and symptoms. Awareness of BSE, CBE and Risk factors was assessed by a section each.

To determine the number of participants to participate in this study, we use the formula below:

$$n = \frac{Z_{\frac{\alpha}{2}}^2 \, p(1-p)}{m^2}$$

$$m = 0.05$$

$$Z_{\frac{\alpha}{2}} = 1.96$$

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p = 0.87*(From the previous study* Ahmed S.A et al., 2009*)*

$$q = 1 - p$$

$$= 1 - 0.87$$

$$= 0.13$$

$$n = \frac{1.96 * 1.96(0.13)}{0.05^2}$$

$$n = 173.8$$

$$n + 10\%$$

$$n = 174 + 17$$

$$n = 181$$

Therefore, total number of questionnaires administered = 181.

Total number of respondents = 176

INCLUSION CRITERIA OF PATIENTS

- Only female population within Child bearing age includes from 15 to 49 years

EXCLUSION CRITERIA

- Male person
- Female aged below 15 years and above 49 years
- Unwilling to participate or unable to comply with protocol requirements

Result and Discussion

Analysis was performed using Social Package of Social Sciences (SPSS) software, version 22. Scores of knowledge items were summed to obtain the mean total knowledge score on breast cancer. Descriptive statistics were obtained for all the variables in the study. Pearson Chi-Square test and simple logistic regression were used to test for the association between breast cancer awareness, BSE awareness, CBE awareness and other categorical variables. The accepted level of significance was set below 0.05 ($p<0.05$).

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Table 1:

DEMOGRAPHIC INFORMATION OF RESPONDENTS

S/N	Variable		Frequency	Percentage (%)
1	Age	15 – 26	43	24.4
		27 – 38	44	25.0
		39 – 49	89	50.6
2	Occupation	Self-employed	76	43.2
		Professional	45	25.6
		House-Wife	43	24.4
		Others	12	6.8
3	Marital Status	Single	54	30.7
		Marries	99	56.3
		Separated/Divorced	23	13.1
4	Educational Level	Primary School	46	27.8
		Secondary School	61	34.7
		Tertiary Education	42	23.9
		Others	24	13.6

Result: Socio-demographic characteristics

The majority were aged 39 to 49 years (50.6%), followed by 27 to 38 years (25%). Only 24.4% aged 15 to 26 years. Most of them are married (56.3%), 30.7% are single while the divorced are just 13.6%. The majority are O'Level and primary school graduates (34.7% and 27.8% respectively). Tertiary school graduates constitute only 23.9% while others constitute the remaining. Regarding occupation, the majority were self-employed (43.2%) followed by full housewife (unemployed) (24.4%), then by Professionals or office staffs (25.6%) while others are 6.8%.

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Table 2:

KNOWLEDGE ABOUT BREAST CANCER, BSE AND CBE

S/N		Yes		No	
		Frequency	Percentage (%)	Frequency	Percentage (%)
1	Have you heard of breast Cancer	144	81.8	32	18.2
2	Do you have a family diagnosed with Breast Cancer	52	29.5	124	70.5
3	Is Breast Cancer Contagious	47	26.7	129	73.3
4	Heard of BSE	93	52.3	83	47.2
5	Do you regularly carry out BSE	45	25.6	131	74.4
6	Have you been thought how to do BSE?	28	15.9	148	84.1
7	Heard of CBE	37	21	139	79
8	Have you ever carried out a CBE?	12	6.8	164	93.2

Breast Cancer Awareness and Sources of Information

One hundred forty-four (81.8%) of the respondents had heard about breast cancer while 18.2 had not heard of breast cancer.

Knowledge about Breast Self-Examination

While 52.3% have heard about BSE and confirmed BSE as a useful tool for early detection of Breast Cancer, only about 15.9% of the 50.7% had been thought of how to carry out a Breast Self-Examination. 47.2% had not heard of BSE, and so could not tell if it is a useful tool for early detection of Breast Cancer as well as do not know how to carry out a BSE.

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Knowledge about Clinical Breast Examination

It is observed that 21% of our respondents have actually heard of CBE and are aware that it is a useful tool for detecting Breast Cancer. While 79% have not heard of CBE and likewise as BSE, cannot tell if it useful as a tool for detection of breast cancer. Also, when asked if they've ever carried out a CBE before now, 93.2% attests to 'no'. While 6.8% attest to 'yes'.

Table 3:
SOURCE OF INFORMATION

Source of Information	Books	Media	Hospital	Friends	None
Frequency	26	34	39	52	22
Percentage	16.5	19.3	22.2	29.5	12.5

Most of our respondents (29.5%) stated friends as their main source of information about breast cancer. Hospital was the second source (22.2%) followed by media (19.3%). The last source of information was books (16.5%).

Table 4:
SYMPTOMS OF BC

	Lump or thickening in the breast	Nipple Changes	Rashes on or around the breast	Pain or discomfort in the breast	Not aware of any (%)
Frequency	86	27	8	26	29
Percentage	48.9	15.3	4.5	14.8	16.5

Knowledge of symptoms and signs of breast cancer

The majority recognized the followings as signs and symptoms of breast cancer; lump or thickening in the breast (48.9%), nipple changes (15.3%). However, the minority recognized the following as signs and symptoms of breast cancer; rashes on or around the nipple (4.5%), pain or discomfort in the breast (14.8%).

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Table 5:
Importance of Breast Cancer Screening

	Very Important	Less Important	Don't Know
Frequency	92	11	73
Percentage	52.3	6.3	41.5

On the question of how important breast cancer screening is, 52.3% confirms it to be very important, 6.3% less important while 41.5% attest that they don't know.

Table 6:
Benefits of BSE

	Familiar with the breast texture/ Don't know	Early detection of breast cancer/abnormal changes
Frequency	85	91
Percentage	48.3	51.7

On the question of the benefit of BSE, 48.3% confirms it to be familiar with the breast texture or likely, they don't know. While only 51.7 are aware that BSE is done for early detection of breast cancer that is, abnormal changes in the breast.

Table 7:
CBE IS DONE USING:

	Mammography	Don't Know
Frequency	37	139
Percentage (%)	21	79

When asked how CBE is done, 21% is aware that CBE is done by mammography while 79% have no idea as to how CBE is done.

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Table 8:
RISK FACTORS ASSOCIATED WITH BREAST CANCER

S/N		Yes		No	
		Frequency	Percentage (%)	Frequency	Percentage (%)
1	Is Advancing in age a Risk Factor of BC?	112	63.6	64	36.4
2	Is Breast Feeding a risk factor of Breast Cancer?	60	34.1	116	65.9

Table 9:

KNOWLEDGE ABOUT RISK FACTORS OF BREAST CANCER

Which do you consider a Risk Factor of BC	Painless breast lump	Smoking	Poor Hygiene	Lack of Exercise
Frequency	59	16	78	23
Percentage	33.5	9.1	44.3	13.1

63.6% of respondents attest that advancing in age is a major risk factor of Breast Cancer while 36.4% disagree. Likewise, 34.1% agrees that Breast Feeding is a risk factor to be considered associated with Breast Cancer, while 65.9 disagrees.

When asked which among a given option is considered as risk factors associated with Breast Cancer, the following is gotten:

- Painless breast lump (33.5%),
- Smoking (9.1%),
- Poor hygiene (44.3%), and
- Lack of exercise (13.1%).

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Table 10:
X^2-TEST BETWEEN EDUCATIONAL LEVEL AND SOURCE OF INFORMATION

	Value	DF	P-Value
Pearson Chi-Square	74.536	12	0.000
Number of valid Case		176	

P-value < 0.05, therefore we can conclude that there is significant association between the Educational level and source of information.

DISCUSSION

In this study, most of the respondents (50.6%) had heard about breast cancer. This rate of awareness was lower in comparison to that found in the general population in Iran (64.0%) (McPherson CPet al., 1997) and similar to that found in Ireland (Mbanaso AUet al., 2005).

This study found that friends were the most common source of information on breast cancer followed by hospital personnel. This finding was not consistent with previous studies that showed that TV was the most common source of information (Tobin E, Okeowo P, 2014). This finding indicated that either our sample was not interested in watching TV or that TV programs did not provide ample health education for women regarding the cancer status in Nigeria. It has been found that health education through media can successfully promote knowledge and recognition of screening tests for breast cancers (Ekanem IOet al., 2016). In this study, the role of health professionals as providers of knowledge on breast cancer was not very satisfying because only 22.2% of respondents considered them a source of information. This finding was consistent with a previous study in Singapore in which only 14% of respondents reported their family physician as source of information (Tobin E, Okeowo P.2014). Previous studies have suggested that raising the awareness and knowledge on breast cancer through health education by doctors and nurses may be more effective resources for women (Mohammed AZet al., 2008).

Our results revealed a poor understanding of the risk factors and signs andsymptoms. In this study knowledge on risk factor of breast cancer was unsatisfying as most of the respondents did not know that the following are risk factors of breast cancer: obesity, diet, exercise, alcohol, etc. Inadequate knowledge about risk factors of breast cancer was also reported by previous researches, not only among the general population (Ahmed S.A et al., 2009).

In this study, knowledge about signs and symptoms of breast cancer was investigated. The majority of respondents knew about few signs and symptoms of breast cancer such as lump or thickening in the breast, nipple changes (bloody discharge from the nipple), rashes on or around the breast, and enlargement of neighboring lymph nodes. However, other signs and symptoms like itchiness and discoloration of nipple, breast skin retraction, asymmetrical breasts, nipple retraction and discoloration of breast were not recognized by the majority of respondents. A previous study in Malaysia also showed similar finding of high knowledge about blood discharge as a symptom of breast cancer and low knowledge about nipple retraction (Philip J et al., 1984).

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A recent study in Singapore found that the most frequent symptoms recognized by respondents were palpable breast lump and nipple discharge (Tobin E, Okeowo P, 2014). Another study in Iran showed that nipple retraction and bloody discharge have been recognized as symptoms of breast cancer by only 5.0% and 6.0% of respondents respectively (McPherson CPet al., 1997). The case was not different in Egypt in which only 10.6% of academic women had satisfactory knowledge about breast cancer (Salaudeen A et al., 2009).

With regard to mammography awareness, this study found that just a few (21%) of the respondents had heard about mammography. This figure is similar in comparison to that reported in Saudi Arabia (30.0%) (Sambo II, S. Dahiru, 2013) and Iran (9.0%) (McPherson CPet al., 1997) but is lower than that in Turkey (72.1%) (Curado et al., 2008). Mammography, breast self-examination and clinical breast examination are considered as screening methods for early detection ofbreast cancer (Jedy-Agba EEet al., 2008), and screening behavior was found to be influenced by level of knowledge and perceived risk factor among women (Yakubu AG, A. Sheshe, 2014).

CONCLUSION

In conclusion, this study found high awareness but unsatisfactory knowledge on breast cancer among Nigerian women. There was limited information on the risk factors and symptoms of breast cancer; some were well known while some other risk factors were not. Knowledge on breast cancer was low among young and less educated women. This study found a low awareness of Breast Self-Examination and Clinical Breast Examination among women. Knowledge on breast cancer was not a predictor of awareness of BSE and CBE. Since only few women in this study had adequate knowledge about risk factors and symptoms of breast cancer, there is a need to introduce breast cancer education on risk factors, early signs, and methods of diagnosis of breast cancer in focus on younger and less educated women. Primary health care workers should be involved in such education program and they should be encouraged to participate in health education by providing information on breast cancer to their patients. The role of mass media, particularly television, should be stressed as it was found to play a key role in imparting health education and belief changes. Since this study is limited by its small sample size and a non-probability sampling, studies with larger and representative samples are recommended to confirm the findings of the present study which will help to expand the knowledge base for healthcare providers and decision makers in Kano and Nigeria as a whole to take the appropriate action.

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