

KNOWLEDGE, ATTITUDE AND PREVENTIVE PRACTICES OF FEMALE ADULTS TOWARDS BREAST CANCER IN ENUGU STATE, SOUTH EAST, NIGERIA

¹Ezema C.I., ¹Onwuka C.A., ²Eloka C.C.V., ³Amarachukwu C.N., ⁴Okoli C, ¹Orji, E.

¹Department of Medical Rehabilitation, Faculty of Health Sciences and Technology, College of Medicine, University of Nigeria, Enugu Campus; ²Rapha plus Medical Diagnostic Laboratory Abakpa Nike Enugu; ³Department of Physiotherapy, University of Nigeria Teaching Hospital, Ituku Ozalla, Enugu State; ⁴Department of Health Administration and Management, Faculty of Health Sciences and Technology, College of Medicine, University of Nigeria, Enugu Campus.
Correspondence: charles.ezema@yahoo.com

ABSTRACT

Breast cancer is now an epidemic, posing a serious threat to the health of women of all races. This study evaluates the knowledge, attitude and preventive practices of female adults towards breast cancer in Enugu State. A total of 400 respondents were involved in the study. The study was a cross-sectional survey and the multistage sampling technique was adopted, while a self-administered questionnaire was used to collect data from the respondents. All the respondents have heard of breast cancer. Family history of breast cancer (n=185; 46.3%) and painless lump (n=222; 55.5%) were the most known breast cancer risk factor and symptom respectively. Breast self-examination was the most known preventive practice of breast cancer (n=310; 77.5%) and it was also the most practiced (n=213; 53.3%). News media was the commonest source of information (n=201; 50.3%). There was a significant relationship between the knowledge and attitude of the respondents towards breast cancer ($p < 0.05$) and between their knowledge and the preventive practices ($p < 0.05$). Though their attitude towards breast cancer was positive, their knowledge and preventive practices on breast cancer was poor. There is need for educative awareness of breast cancer disease condition on female and promotion of the preventive practices.

Keywords: knowledge, attitude, preventive practice, female adults, breast cancer

INTRODUCTION

Many of the risk factors linked to the leading causes of morbidity and mortality in present day Nigeria are clearly associated with health behaviour and lifestyle choices. Chronic health diseases remain a leading public health concern in Nigeria and have been for decades. Particularly, cancer, heart disease, stroke, and diabetes are among the most common, expensive, and avertable of all health problems (CDC, 2008); Because of its significance in terms of both incidence and mortality, a specific chronic disease that warrants scrupulous reflection is cancer. Among females, breast cancer has the highest mortality rate when compared with other types of cancer (MOH, 2012). It is a malignant tumor

that starts in the cells of the breast and commonly spreads to the regional lymph nodes.

Breast cancer is largely viewed as a disease predominantly influenced by risk factors related to lifestyle, family history, genetic influences, hazardous effects of hormonal exposure, early age at menarche, late age at menopause, small number of children and nulliparity, late age at first birth, and no breast feeding (CDC, 2016). It is now an epidemic, posing a serious threat to the health of women of all races, and the most common cancer among women in both the developed and the developing world (Ahmed *et al.*, 2006).

Globally, there are over 1.2 million cases of breast cancer with 411,000 deaths annually (Akpo *et al.*, 2010).



In developing or low income countries for which Nigeria is among, breast cancer is characterized by late clinical presentation and in advance stage of the disease, when only chemotherapy and palliative care could be offered, and therefore associated with high mortality (Khanjani *et al.*, 2012). Despite the development of advanced technology in the detection of breast cancer, the mortality rate remains high. Breast cancer is the main cause of cancer mortality in women aged 40-44 years old (Alwan *et al.*, 2012; Khanjani *et al.*, 2012). It is estimated that in every 100,000 Nigerian women, 116 of them have breast cancer and that more than half of the number have a very high generic risk status and as such are vulnerable to the disease (Parkins and Fernandez, 2006 and American Cancer Society, 2009). Even Omotara *et al.* (2012) had acknowledged that women within in any age range are at risk of breast cancer and the risks increases with advancement in age.

Nevertheless, several studies have shown a decrease in cancer mortality through early detection and advances made in its treatment (Jatoi, 2011; Tabor *et al.*, 2011; CDC, 2011). The peak age of breast cancer in Nigeria is about ten years earlier than the experience of many western women (Anyanwu, 2000., Ihekweba, 1992 and Osime). Meanwhile, Akpo *et al.*, (2010), report that a recent oncological review of cases in Nigeria revealed that, breast cancer survival rate is less than 50 percent in Nigeria in contrast to 90 percent in developed countries. This could be attributed to increasing adoption of western life style and diet compounded by poor knowledge and attitude related to cancer issues. These led to the purpose of this study, to ascertain the knowledge, attitude and preventive practices as well as the relationships between the knowledge and attitude of female adults towards breast cancer in Enugu State, Nigeria.

MATERIAL AND METHODS

Study Setting: This descriptive cross-sectional survey study conducted across six (6) Local Government Areas (LGA) in Enugu State, Nigeria.

Study Design: The target population was women living in Enugu State from 18 years and above that are not

health care workers and those undergoing academic training in medical related disciplines. This study utilized a self-administered questionnaire modified from questionnaire developed and used by Nasiru and Olumuyiwa (2009) to study the knowledge of risk factors, beliefs and practices of female healthcare professionals towards breast cancer in a tertiary institution in Lagos, Nigeria. The questionnaire comprised of thirty-five (35) items that were divided into four (4) sections. Section one contains socio-demographic information of the respondents while section two contains information on the knowledge of women on breast cancer in relation to the risk factors, symptoms and preventive practices, section three contains information on the respondents' attitude towards breast cancer, while section four sort information on the respondents' preventive practices. The questionnaire was tested for validity and reliability by experts in the field and all corrections were made before final stage.

Sample Size: The sample size was four hundred (400) and multistage sampling technique was adopted in this study.

Ethical Consideration: Ethical approval was obtained from the Research Committee of University of Nigeria Teaching Hospital, Enugu and informed consent was obtained from each respondent and they were assured of the confidentiality and anonymity of the information provided.

Data Collection: Data for the study was collected using self-administered questionnaire. It contained questions that were used to collect data that met the objectives of the study. The questionnaires were distributed to all respondents and all questionnaires were retrieved from the respondents. The specific locations for the study were markets, offices, hostels, churches, roads side shops, parks, lodges, beauty shops, business centers, etc all located in Enugu State.

Data Analysis: The results were analyzed using Statistical Package for Social Sciences (SPSS) version 22 windows. The results were tabulated in frequencies and percentages which is a descriptive statistics and



relationships were tested using Chi-square test. The alpha level of significance was set at 0.05.

RESULTS

Four hundred (400) respondents were involved in this study. The respondents' demographic characteristics were summarized in table 1 below. Their age ranged from 18 years and above with mean and standard deviation of 34.38 ± 13.079 and modal age group of 18-24 years, the maximum age was 75 years. Most of them were single 194 (48.5%) and married 167 (41.8%). Greater number of the participants were still menstruating 303 (75.8%). 208 (52.0%) of the participants had no children. Educational status was predominated by those with tertiary education 230 (57.5%) while employment status was predominated by those who were traders 122 (30.5%).

The knowledge of female adults in Enugu State on breast cancer is shown in the table 2A and 2B below. The knowledge score for each respondent is the total correct knowledge in items for the respondents; poor=0-39, fair=40=59 and excellent=60 and above. It shows the respondents' knowledge of breast cancer. Although all the participants have heard of breast cancer 400 (100%). Their general Knowledge of breast cancer was poor 268 (67.0%); the most known on knowledge of risk factors were: family history of breast cancer 185 (46%), oral contraceptives 122 (28.8%), smoking 115 (28.8%) and alcohol 92 (23.0%) while the least known were having no children/had 1st child after thirty years 30 (7.5%), early menarche 33 (8.3%) and aging 37 (9.3%).

In relation to breast cancer symptoms; the most known were: pain in the breast 233 (58.3), painless lump 222 (55.5%) and breast sores 207 (51.8%) while the least known were: skin irritation or dimpling 120 (30.0%) and nipple retraction 124 (31.0%).The most known

preventive practices based on lifestyle were: quitting smoking 146 (36.5) and quitting excessive alcohol intake 147 (36.3%),the least known was avoidance of excess weight gain 85 (21.3%). Out of the 310 (77.5%) participants that knew self-breast examination as a preventive practice of breast cancer, 149 (48.1%) knew how often it is performed. 214 (53.5%) had knowledge of clinical breast examination whereas 34 (12.8%) out of them knew how often it can be done. In mammogram, 14 (12.8%) out of 109 (27.3%) that had the knowledge of mammogram, knew how often it can be done.

Table 3A and 3B below show the respondents' attitude towards breast cancer. 283 (70.8%) of the participants strongly disagreed that breast cancer is a curse so cannot be treated in the hospital whereas only 9 (2.3%) agreed. 147 (36.8%) disagreed that herbal healers can cure breast cancer whereas 67 (16.8%) agreed. Majority of the participants 246 (61.5%) agreed that prayers and faith can cure breast cancer. 211 (52.8%) disagreed that death is inevitable when breast cancer is present whereas 78 (19.5%) were indifferent. 111 (27.8%) agreed that a person can get breast cancer through witchcraft attack but 110 (27.5%) also disagreed. 117 (29.3%) disagreed that breast cancer can be caused by evil spirit, on the other side 107 (26.8%) strongly agreed. A good number of the respondents 214 (54%) strongly disagreed that breast cancer is contagious. More than half of the participants 349 (87.3%) strongly agreed that consulting a doctor would be their treatment option for breast cancer. 160 (40.0%) disagreed on seeing a herbalist as treatment option for breast cancer whereas 70 (17.5%) were indifferent. 150 (43.5%) agreed on prayer houses being a treatment option for breast cancer but 89 (22.3%) also disagreed. One hundred and seventy-five (43.5%) disagreed on self-medication as breast cancer treatment option. In general, the attitude of female adults in Enugu state towards breast cancer was positive.



Table 1: Demographic characteristics of the respondents (n=400)

Variables	Frequency	Percentage
Age range		
18-24	114	28.5
25-34	123	30.7
35-44	67	16.7
45-54	53	13.3
55 -64	38	9.5
65 and above	5	1.3
Marital status		
Single	194	48.5
Married	167	41.7
Divorce	5	1.3
Widowed	32	8.0
Separated	2	.5
No of children		
None	208	52.0
1-2children	73	18.3
3-4 children	67	16.7
5 and above	52	13.0
Level of education		
No formal education	7	1.8
Primary school	35	8.7
Secondary school	128	32.0
Tertiary education	230	57.5
Menopausal status		
Still menstruating	303	75.7
No longer menstruating	97	24.3
Occupation		
Student	100	25.0
Trader	122	30.5
Civil servant	46	11.5
Self employed	90	22.5
Public servant	30	7.5
Others	12	3.0



Table 2A: Knowledge of female adults in Enugu State on breast cancer (I)

Variables	Yes n (%)	No n (%)
Heard about breast cancer	400(100)	0(0)
Knowledge of risk factors	Correct	Incorrect
Family history of breast cancer	185 (46.3)	215(53.7)
Obesity	49 (12.3)	351(87.7)
Early menarche	33 (8.3)	367(91.7)
Oral contraceptives	122 (28.0)	278(72)
Excessive alcohol	92(23.0)	308(77)
Aging	37 (9.3)	363(90.7)
Gender	61 (15.3)	339(84.7)
Dense breast tissue	63 (15.7)	337(84.3)
Having no children/had 1 st child after age 30	30 (7.5)	370(92.5)
Hormone therapy	55(13.8)	345(86.2)
Smoking	115 (28.8)	285(71.2)
Knowledge of symptoms		
A painless lump	222 (55.5)	178 (44.5)
Breast sores	207 (51.8)	193 (48.2)
Pain in the breast	233 (58.3)	167 (41.7)
Nipple discharge (other than breast milk)	173 (43.3)	227 (56.7)
Swelling of all or part of a breast (even if no distinct lump is felt)	164 (41.0)	236 (59)
Skin irritation or dimpling	120 (30.0)	280(70)
Nipple retraction (turning inward)	124 (31.0)	276(69)
Redness, scaliness or thickening of the nipple or breast skin	147 (36.8)	253(63.2)
Knowledge of preventive practice based on lifestyle		
Limiting of dose and duration of hormone therapy	96 (24.0)	304(76.0)
Being physically active	127 (31.8)	273(68.2)
Quitting smoking	146 (36.5)	256(63.5)
Quitting excessive alcohol consumption	145 (36.3)	255(63.7)
Avoidance of excess weight gain	85 (21.3)	315(78.7)
Breastfeeding	94 (23.5)	306(76.5)
Exercise	107 (26.8)	297(73.2)
Avoidance of over exposure to radiation and environmental pollution	127 (31.8)	273(68.2)
Knowledge of preventive practice based on screening practices		
Heard about breast self-examination	310 (77.5)	90 (22.5)
If yes, how often can breast self-examination be done	* 149(48.1)	161 (51.9)
Heard of clinical breast examination	214 (53.5)	186 (46.5)
If yes, how often can clinical breast examination be done	* 34 (15.9)	180 (84.1)
Heard of mammogram	109 (27.3)	291 (72.7)
If yes how often can mammogram be done	* 14 (12.8)	95 (87.2)

*=number of the respondents that are knowledgeable about the practice and frequency of practice.



Table 2B: Knowledge of female adults in Enugu State on breast cancer (II)

General knowledge	Frequency	Percentage
Poor knowledge	268	67.0
Fair knowledge	116	29.0
Excellent knowledge	16	4.0

Table 3A: Attitude of female adults towards breast cancer in Enugu state (I)

Variables	Strongly agree n (%)	Agree n (%)	Indifferent n (%)	Disagree n (%)	Strongly disagree n (%)
Breast cancer is a curse so cannot be treated in the hospital.	9 (2.3)	11 (2.7)	17 (4.3)	80 (20.0)	283(70.7)
Herbal healers can cure breast cancer	57 (14.3)	67 (16.7)	59 (14.8)	147 (36.7)	70 (17.5)
Prayers and faith can cure breast cancer	246 (61.5)	97 (24.2)	25 (6.3)	17 (4.3)	15 (3.7)
Death is inevitable when breast cancer is present	23 (5.8)	36 (9.0)	78 (19.5)	211(52.7)	52 (13.0)
A person can get breast cancer through witchcraft attack	111 (27.7)	43 (10.8)	64 (16.0)	110(27.5)	72 (18.0)
Breast cancer can be caused by evil spirit	107 (26.7)	41 (10.3)	55 (13.7)	117(29.3)	80 (20.0)
Breast cancer is contagious	15 (3.7)	3.8 (3.3)	27 (6.7)	129(32.3)	216(54.0)
If you have breast cancer, what will be your treatment option?					
Consult a doctor	349 (87.3)	35 (8.7)	4 (1.0)	2 (0.5)	10 (2.5)
See a herbalist	50 (12.5)	37 (9.3)	70 (17.5)	160(40.0)	83 (20.7)
Prayer houses	150 (37.5)	62 (15.5)	15.5 (14.0)	89 (22.3)	43 (10.7)
Self-medication	12 (3.0)	14 (3.5)	52 (13.0)	175(43.7)	147(36.8)

Table 3B: Attitude of female adults towards breast cancer in Enugu state (II)

General attitude	Frequency	Percentage
Negative	141	35.3
Positive	259	64.7



Table 4A and 4B shows the preventive practices of female adults towards breast cancer in Enugu state. 61 (20.3%) out of the 213 (53.3%) of the participants that have performed breast self-examination perform it at correct frequency. 159 (73.6%) out of the 213 (53.3%) of the respondents that have performed breast self-examination, correctly demonstrated how it is

performed. 36 (9.0%) of the participants have performed clinical breast examination, out of this number, only 4 (11.1%) carry it out at correct frequency. 4 (1.01%) of the respondents have performed mammogram but none of them carry it out at correct frequency. Generally, the preventive practice of female adults towards breast cancer was poor 255 (63.8%).

Table 4A: Preventive practices of female adults towards breast cancer in Enugu State (I)

Variables	Correct n (%)	Incorrect n (%)
Performed breast self-examination (BSE) before?	213 (53.3)	187 (46.7)
If yes, how often?	* 65 (30.5)	148 (69.5)
Demonstrate how you perform it	159 (73.6)	57 (26.4)
Done clinical breast examination before?	36 (9.0)	364 (91.0)
If yes, how often?	* 4 (11.1)	32 (88.9)
Done mammogram before	4 (1.0)	396 (99.0)
If yes, how often?	* 0 (0)	1 (0.25)

*=number of respondents that carry out the practice and at correct frequency

Table 4B: Preventive practices of female adults towards breast cancer in Enugu State (II)

General practice	Frequency	Percentage
Poor practice	255	63.7
Fair practice	128	32.0
Excellent practice	17	4.3

Table 5 showed the sources of information on the knowledge of breast cancer by the female adults in Enugu state. News media 201 (50.3%) was the highest source of information, followed by family, friends,

neighbor and colleagues 59 (14.8%).The least was religious leaders 6 (1.5%) apart from others 1 (3%).



Table 5: Sources of information

Variable	Frequency	Percentage
News media	201	50.2
Brochures , posters and other printed material	45	11.3
Teachers	38	9.5
Family , friends, neighbor and colleagues	59	14.7
Religious leaders	6	1.5
Health worker	50	12.5
Others	1	1.3

Table 6: Chi- square test on relationship between the knowledge and attitude of female adults towards breast cancer.

Knowledge	Attitude	Negative	Positive	Total	Chi square	df	p- value
					10.851 ^a	2	.004
Poor knowledge		109	159	268			
Fair knowledge		27	89	116			
Excellent knowledge		5	11	16			
Total		141	259	400			

*= significant

Table 7: Chi- square test on relationship between the knowledge and practice of female adults towards breast cancer.

Knowledge	Practice	Poor practice	Fair practice	Excellent practice	Total	Chi square	df	p- value
						51.395 ^a	4	.001 [*]
Poor knowledge		201	59	8	268			
Fair knowledge		50	60	6	116			
Excellent knowledge		4	9	3	16			
Total		255	128	17	400			

*= significant

Table 6 showed the relationship between the knowledge and attitude of female adults towards breast cancer. Chi-square test revealed a significant relationship

between the knowledge and attitude of female adults towards breast cancer. $p = 0.004$. Table 7 shows the relationship between the knowledge and practice of



female adults towards breast cancer. Chi square test revealed a significant relationship between them. $p = 0.001$.

DISCUSSION

Findings from the results on knowledge of female adults on breast cancer showed that all the respondents had knowledge of the existence of breast cancer but the knowledge on breast cancer risk factors, symptoms and preventive practices was poor which corresponds with findings of Okobia *et al.* (2006). This finding is in disagreement with reports from the western world. In a study of women's knowledge and belief about breast cancer among British women, Grunfeld *et al.* (2002) noted they had excellent knowledge, this might be attributed to effective awareness of breast cancer in western countries. Family history of the disease was the most identified risk factor likewise painless breast lump as a symptom of breast cancer and this finding is in agreement with research by Sambanje and Mafuvadze, (2012) and El-Shinawi *et al.*,(2013) respectively. Majority of the participants recognized breast self-examination as a protective factor against breast cancer, this corresponds with the finding of Sarfo *et al.*, (2013) and Basse *et al.* (2011):

Findings from the result on the attitude of female adults towards breast cancer showed that the respondents had positive attitude because majority of them disagreed with the negative attitude questions which is in contrast with the findings of Azuzu *et al.*,(2007) where they stated that most of the attitudinal responses in Nigerian study were rated poor to very poor. However, majority of the respondents chose to consult a doctor as breast cancer treatment option and this is in line with the findings of Dorah *et al.*,(2015). Most of the respondents agreed that prayers and faith can cure breast cancer which corresponds with the findings of Ibrahim and Olumuyiwa, (2009). This might be attributed to high religious beliefs especially among Africans in seeking solution to disease cure. A good number of the respondents agreed that witchcraft and evil spirit can cause breast cancer which agrees with the literature that many women in Nigeria still associate breast cancer with spiritual causes (Okobia *et al.*, 2006).

Findings from the result on the preventive practice of female adults towards breast cancer showed that majority had poor practice whereas only few of them had excellent practice which is in agreement with the findings of Adelekan and Edoni, (2012), Azubuike and Celestina, (2013). This could be attributed to ignorance to importance of breast cancer preventive practices and poor awareness of the preventive practices among female adults of child bearing age. It could also be the reason for late hospital presentation of patients at advanced stages when little or no benefit can be derived from any form of therapy especially in Nigeria.

Findings on the sources of information on the knowledge of breast cancer showed that news media was the most common source of information which is similar to the findings of an Iranian study by Montazeri *et al.*, (2008) but contradicts the findings of Sara *et al.* (2010) where the main source of participant information were relatives, friends, and neighbors. Health care providers as source of information in this study were comparatively less which suggests that hospitals and clinics are not doing enough to make information readily accessible to public and, as such, women rely on media such as radio and television which might not address health issues elaborately.

There was a significant relationship between the knowledge and attitude of female adults towards breast cancer from the findings of this study which is in agreement with the findings of Kwesi (2010). This suggests that attitude might be dependent on knowledge because the few that had excellent knowledge had positive attitude too. Thus, the null hypothesis which stated that there would be no significant relationship between knowledge and attitude was rejected.

There was a significant relationship between the knowledge and practice of female adults towards breast cancer from the findings of this study which is in agreement with the findings of Azubuike and Okwuokei (2015). Their poor knowledge on breast cancer might be the reason for the poor preventive practices towards breast cancer. The null hypothesis which stated that there would be no significant relationship between knowledge and practice was rejected.



Limitations

The study was solely based on the information supplied by the respondents. Some of the female adults were reluctant in providing information in the course of the study because of their belief that the cancer is a bad ailment and supposed not to be mentioned or discussed. The study involved only six Local Government Areas (LGA) in Enugu State.

Conclusion

The results of this study revealed a poor knowledge of breast cancer and poor preventive practices irrespective their positive attitude towards the disease condition. A significant proportion of participants in this study believed in the role of prayer in the cure of cancer and consulting a doctor as a treatment option for the diseases. News media remained the common source of information in both breast cancer even more than health care providers who supposed to play a vital role in dissemination of the information. Importantly, there is need for creation of awareness on breast cancer and breast cancer preventive practices. Efforts to reduce cervical cancer mortality should focus on reaching out to all female adults and provide health education, barrier-specific counseling as well as community-based interventions. Efforts to promote preventive practices among women should focus on informing women of their susceptibility to these disease conditions and encouraging right attitude towards the disease conditions. Women should be encouraged to take responsibility for their own health and be active participants in screening programmes. Since mass media was the major source of information from the findings of this study, its function should be optimized.

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AUTHORS CONTRIBUTIONS

All authors (Ezema Charles Ikechukwu, Onwuka Chiamaka Anthonia, Eloka Chidiebere Cyprian Vitus, Amarachukwu Charity Ndidiamaka, Okoli Chijioke, Ebubechukwu Orji) actively took part in this study and in the presentation of this article

