



KNOWLEDGE, ATTITUDE AND PRACTICES TOWARDS BREAST CANCER SCREENING AMONG WOMEN OF REPRODUCTIVE AGE (15 – 49 YEARS) IN ABIA STATE, NIGERIA

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ABSTRACT: Introduction: Breast cancer is the commonest cancer in women characterised by regional variation and late clinical presentation in low and middle-income countries including Nigeria. The present study was designed as a community-based cross-sectional study aimed at assessing knowledge, attitude and practices towards breast cancer screening among women of reproductive age (15 – 49 years) in Abia State. **Methodology:** Multi-stage sampling technique was used to sample the study participants. Eighteen communities were randomly selected from the three Senatorial Zones of Abia State and a total of 1176 women were studied, comprising 391 from Abia South, 393 from Abia Central and 391 from Abia North. A validated questionnaire was used to obtain information from the respondents who consented to the study. Data analysis was performed using descriptive technique and a Chi-square test was used to test for association in the data. **Results:** Only about half of the women (614: 52.2%) are aware of any breast cancer screening services. Only 26.7% showed good knowledge of signs and symptoms of breast cancer and 23.6% showed good Knowledge of Availability and Accessibility. Attitude is also a significant associating factor of uptake in this study ($\chi^2=10.50$, $p=0.005$) and those who showed a strong positive attitude were more likely to go for breast cancer screening uptake than any other group. On the other hand, 82.4% - 96.8% of the women that showed good knowledge of signs and symptoms of breast cancer and for availability or accessibility of the screening services had the uptake compared to only 4.3% obtained among the poor knowledge group. Though many were willing to be screened for breast cancer, those that expressed their readiness to be constantly going for breast cancer screening services were just 24.5%. **Conclusion:** Breast cancer screening is quite low among the study group possibly due to a low level of knowledge, poor attitude, and other associating factors. There is a need to adequately tackle these factors in order to achieve greater health free from breast cancer among women of reproductive age.

KEYWORDS: Cancer, Knowledge, Attitude, Screening, Reproductive Age, Awareness



INTRODUCTION

Breast cancer is the most commonly occurring cancer in women and the second most common cancer globally in developed and developing countries (International Agency for Research on Cancer (IARC, 2018). The level of knowledge on breast cancer is lacking in Nigeria, particularly in Abia State (Saludeen, Akande & Musa, 2009). These findings have been buttressed in other studies by Azubuike and Okwuokei (2013), which found poor knowledge of breast cancer and breast cancer screening services uptake among women in Benin City, Nigeria. Concerning what can be done to address the rising scourge of breast cancer, Odusanya (2013) recommended that early detection through appropriate uptake of breast cancer screening is key to its prevention and survivability. However, breast cancer screening practices remains poor in developing countries, including Nigeria (Obaji, Elom, Agwu, Nwaigwe, Ezeonu & Umeoro, 2013).

A study on knowledge of risk factors for breast cancer by Pace (2016) showed that older women had a better understanding of breast cancer risk factors than younger women and therefore recommended breast cancer screening to include both young and older women. American Cancer Society (2015) suggests that women from the age of forty should do mammogram every year. Women from forty years and above should do clinical breast examination every three years, while women from twenty years old should do breast self-examination monthly. However, mammography has been the best screening method for detecting breast cancer early (Islam & Aziz, 2012). Its use is limited in Nigeria due to cost (Onwere, Chigbu, Aluka, Kamanu & Onwere, 2009; Egwuonwu, Anyanwu, Nwofor, 2012). Therefore, breast self-examination has been suggested as an alternative method for breast cancer detection (Ofonime, 2019). Global Statistics shows that breast cancer's annual incidence is increasing, especially in developing countries, including Nigeria (Wilson, Tobin & Young, 2012).

Cancer awareness is low in most African countries. A UICC survey showed that 25% of Africans surveyed believed that cancer had no cure, and only 36% thought cancer was a significant health issue. Many women delay seeking medical attention until their tumours are quite advanced. In Ghana and Nigeria, a mean delay of about ten months between the onset of symptom and presentation. Women initially seek care from traditional healers. Cameroon study showed that 55% of the women went to the traditional healers before presenting for medical consultation. Cancer is often viewed as a disease of the spirit (Pace, Lydia, Shulman & Lawrence, 2016).

In the Northwestern geopolitical zone of Nigeria, cancer of the breast was second to cancer of the cervix, while at University College Hospital (UCH) Ibadan situated in the Southwestern geopolitical zone of Nigeria, it was the leading malignancy among women (Afolayan, 2008, Ogunbiyi, 2010). In the North-central geopolitical zone, breast cancer constituted 22.41% of new cancer cases registered in 5 years and accounted for 35.41% of all cancers in women (Afolayan, 2012). In developing or low-income countries, breast cancer was characterised by late clinical presentation and in the advanced stage of the disease, when only chemotherapy and palliative care could be offered and, therefore, associated with high mortality (Adisa, Gukas, Lawal & Adesunkanmi, 2010).

Unfortunately, there is paucity of data and sparse literature on breast cancer trends in Nigeria due to a few existing cancer registries (Afolayan, 2012). Most of which are either hospital-based or pathology-based instead of the preferred population-based cancer registries. However,



in low resource countries, a hospital-based cancer registry has been serving as a fundamental source of cancer information. Ilorin cancer registry, hospital-based, began active registration of cancer in 1997. Over a period of ten years (1999 – 2008), 568 new cases of breast cancers rising from 7 men and 541 women. However, this study is based on female breast cancer. Histology and cytology verification was 93.8%, while unequivocal clinical diagnosis accounted for 6.4%. Infiltrating ductal cell carcinoma was the predominant histological type and accounted for 82.6% of the cases (Adebamowo, 2010).

Several studies have emphasised that early detection through appropriate uptake of breast cancer screening intervention remains key to its prevention and cure (Ofonime, 2019). But it is disheartening to note that screening practices remain poor in developing countries, including Nigeria (Odunsanya & Tayo, 2013; Sani & Naab, 2014). Based on the aforementioned early breast cancer detection through appropriate screening services such as breast self-examination (BSE), clinical breast examination (CBE), and mammography remains a critical step in reducing breast cancer-related morbidity and mortality (Birhane, Alemayehu, Anaiwte, Gebremariam, Daniel & Addis, 2017). To address this growing public health challenge, the American Cancer Society recommends mammography and clinical breast examination every year for women aged 40 years, while monthly breast self-examination is an option for women aged 20 – 40 years (American Cancer Society, 2015). This step remains an efficient approach to detecting pre-cancerous breast lesion at earlier stages for a better prognostic outcome (Anderson, Yip & Smith, 2008).

The knowledge and health-seeking behaviour for breast cancer screening remain low in Africa (Strobele, Kantelhardt, Traoremiliogo, Sarigda, Wacker & Grosse, 2018). Such that majority of the affected patients present late to the hospital when little or nothing can be done in terms of treatment. Martei, Pace, Brook and Shulman (2018) also stated that most patients with breast cancer in developing countries present for the first time at advanced stages III and IV. This is possibly due to the lack of early detection of the disease. The diagnosis of breast cancer during the early stage has been linked to a reduction in morbidity and mortality and the cost of managing the disease (Segni, Tadesse, Amdemichael & Demissie, 2016).

Breast cancer awareness and attitude have been described as a common denominator to several factors, determining the stage at which patients with breast cancer present to the hospital, Agboola, Deji-Agboola, Oritogun, Musa, Oyebadejo and Ayode (2009). This study is therefore aimed at assessing the knowledge, attitude and practices towards breast cancer screening among women of reproductive age (15 – 49 years) in Abia State, Nigeria.

METHODOLOGY

Study Design

This study is a community-based cross-sectional descriptive survey designed to assess knowledge, attitude and practices towards breast cancer screening among women of reproductive age (15 – 49 years) in Abia State, Nigeria, using a structured questionnaire. This design was considered suitable for the study because it helped to obtain diverse information about the women's knowledge, attitude and practice towards breast cancer screening services.

Study Area

The study was undertaken from six (6) selected Local Government Areas of the three (3) senatorial zones (Abia South, Abia Central and Abia North) of Abia State, namely: Aba South, Obingwa, Isiala Ngwa North, Ikwuano, Isuikwuato and Ohafia Local Government Areas. Abia State is one of the states in the South East region of Nigeria. Abia State lies within approximately latitude 4° 40' and 14° North and longitude 7° 10' and 8 East. The State covers about 5,237 square kilometres, which is approximately 5.8 per cent of Nigeria's total land area with capital at Umuahia. Abia State comprises seventeen (17) local government areas; six local government areas named above were selected. Abia State has a total population of 3,938,006, both males and females (National Population Commission, Abia State Census, 2006). Abia State shares common boundaries; to the North is Ebonyi State, to the South and Southwest is Rivers State and to the East and Southeast are Cross River and Akwa Ibom States, respectively. To the West, Abia State is bounded with Imo State, and to the Northwest, it is Anambra State.

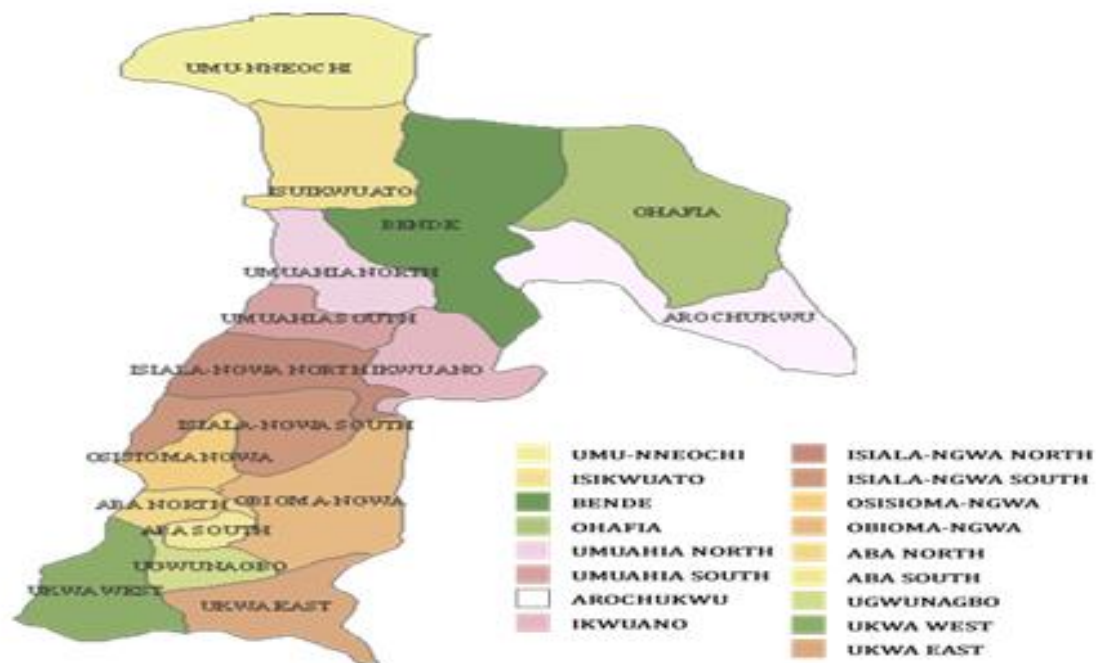


Figure 3.1: Map of Abia State

Study Population

The target population of the study included a cross section of women of reproductive age (15 – 49 years) from the six selected local government areas (Aba South, Obingwa, Isiala Ngwa North, Ikwuano, Isuikwuato and Ohafia) that were randomly selected from the three senatorial zones (Abia South, Abia Central and Abia North) of Abia State. Whether married or single, multiparous or nulliparous, habiting or cohabiting, whether literate or illiterate.



Sample Size

The total sample size for the study was 1176 respondents obtained from summation of the sample of women of reproductive age in the six local government areas studied using the formula:

$$n = Z^2 \frac{p(1-p)}{d^2}$$

Where:

Z = Standard normal deviation of 1.96 when the critical limit is at 95 confidence interval, usually expressed as 1.96.

P = Prevalence 15% incidence of breast cancer. Ejemot (2009) states that if “P” and “q” are not known or not available from previous studies, 15% should be used for both “P” and “q”, as these are the values that will give the largest sample size.

D = Degree of accuracy desired or minimum allowable margin of error set at 95% (0.05).

- The prevalence of breast cancer is not yet known in Abia State, the sample size was calculated using the Power Analysis method, which states thus:

$$\text{Minimum Sample Size} = n/1+(n/\text{population})$$

Sampling Technique

A multi-stage sampling technique was adopted in this study, hence at the first stage of the sampling, Abia state was classified into three based on the existing three senatorial zones in the state, followed by random selection of two LGAs from each zone by balloting. Hence the names of all, all on pieces of paper, folded and mixed up in a box, before the selection was performed.

Instrument for Data Collection

The instrument for data collection was a questionnaire made up of closed and open-ended questions in line with the study’s objectives. The questionnaire had four sections: sociodemographic data, knowledge and attitude, breast cancer screening practice and result of breast examination, which was used to elicit the breast cancer risk rate based on observable signs and symptoms among women of reproductive age Abia State. The questionnaires were administered. This ensured consistency in the responses since both literate and illiterate women were included in the study. The questionnaire was constructed in English language.

Validity of the Instrument

The instrument was constructed by the researcher and given to the supervisors to examine the face and content validity. The corrections and changes made were affected. Also, inputs were obtained from two experts in cancer medicine. The importance of all these is to ensure that the instrument measured what it was supposed to measure.



Reliability of the Instrument

To ascertain the reliability of the instrument, a pilot study was done. Thirty copies of the questionnaires were administered to 30 women in Umuchichi community in Osisioma Ngwa Local Government Area of Abia State, which was not part of the study area. After the pilot study, the questions were fine-tuned by removing the ambiguous ones. The result of the pretest was used to improve the quality of the questionnaire. The questionnaire's reliability was thus assessed using Chronbach alpha test and a reliability coefficient of 0.77 was obtained.

Method of Data Collection

In communities, the women were assembled in their town halls. Objectives of the study were explained to them. The questionnaires were administered. This was to ensure consistency in the responses since both literate and illiterate women were included in the study. The questionnaire was written in English language but was translated into the local language for the illiterate participants. Some communities' data was obtained from Primary Health Care Centres during Routine immunisation and Antenatal Clinic (ANC) days.

Data Analysis Method

The data collected were analysed in IBM SPSS Statistics version 23 (IBM Co., Armonk, NY, USA), while Microsoft Excel (Ms Excel 2010) was used for chart drawings. Preliminary data analysis includes using descriptive technique for the construction of frequency distribution tables which were expressed as a percentage of the distribution. Graphical charts such as Pie chart and bar chart were also used to represent some of the distributions. Mean scores were calculated on scaled data.

The knowledge was classified as good knowledge and poor knowledge based on answering the questions correctly. The summary of the knowledge was obtained as an average to the knowledge scores.

In terms of attitude, a five-point likert scale (strongly disagree, disagree, indifferent, agree and strongly agree) was used to obtain information, of which points were assigned ranging from 1 for strongly disagree to 5 for strongly agree. The points were used to multiply by the frequency obtained in each item, and the mean scored were computed. Further classifications were made for a strong positive attitude, reasonably positive attitude and poor positive attitude. Mean scores up to 3.75 and above were classified as strong positive attitude, 2.5 to 3.49 were classified as fairly positive attitude, while less than 2.5 were classified as a poor positive attitude.

Ethical Consideration/Consent

Permission to carry out the study was sought from the Research and Ethical committee of Abia State University Teaching Hospital (ABSUTH), Aba (ABSUTH/MAC/117/VOL.58). Objectives of the study were adequately explained to the respondents and verbal informed consent was obtained from all before allowed to take part in the study.



RESULTS / FINDINGS

Knowledge of Signs and Symptoms of Breast Cancer

The level of knowledge for signs and symptoms of breast cancer was generally low among the women of child bearing age studied (Table 1). In summary, the total good knowledge level on signs and symptoms of breast cancer was found as 26.7% in all, with 38.3% in Abia South, 15.3% in Abia central and 26.6% in Abia North. Only 343 (29.2%) in all comprising of 156 (39.8%) in Abia South, 64 (16.3%) in Abia Central and 123 (31.5%) in Abia North showed good knowledge of lump in the breast as possible symptoms of breast cancer. Similarly, only 333 (28.3%) in total (Abia South = 154: 39.3%, Abia Central = 61:15.5%, Abia North= 118: 30.2%) have good knowledge that discharge from the breast is one of the possible signs and symptoms of breast cancer.

It can also be observed that only about a quarter in all showed good knowledge about inversion of the nipple (25.1%), swelling in the armpit (25.5%) and swelling in the breast (25.7%). The results across the zones for inversion of the nipple were 37.5% in Abia South, 14.8% in Abia Central and 24.3% in Abia North. Similarly, the good knowledge level for the zones was the same (37.5%) in Abia South, swelling in the armpit and swelling in the breast, and following the same level in Abia central (14.8%) for swelling in the armpit and swelling in the breast. In Abia North, swelling in the armpit and swelling in the breast recorded 23.3% and 24.6% level for good knowledge.

The good knowledge shown for discolouration of the breast in recognition for breast cancer signs and symptoms was 26.3% overall, 38.8% in Abia South, 14.8% in Abia Central and 25.3% in Abia North.

Table 1: Knowledge of Signs and Symptoms of Breast Cancer

Signs and Symptoms Knowledge	Abia South		Abia Central		Abia North		Total	
	N	%	n	%	n	%	n	%
Lump in the breast								
Good Knowledge	156	39.8	64	16.3	123	31.5	343	29.2
Poor Knowledge	236	60.2	329	83.7	268	68.5	833	70.8
Total	392	100	393	100	391	100	1176	100
Discharge from the breast								
Good Knowledge	154	39.3	61	15.5	118	30.2	333	28.3
Poor Knowledge	238	60.7	332	84.5	273	69.8	843	71.7
Total	392	100	393	100	391	100	1176	100
Inversion of the nipple								
Good Knowledge	145	37.0	58	14.8	92	23.5	295	25.1
Poor Knowledge	247	63.0	335	85.2	299	76.5	881	74.9
Total	392	100	393	100	391	100	1176	100
Swelling in the Armpit								



Good Knowledge	147	37.5	58	14.8	95	24.3	300	25.5
Poor Knowledge	245	62.5	335	85.2	296	75.7	876	74.5
Total	392	100.0	393	100	391	100	1176	100
Swelling in the Breast								
Good Knowledge	148	37.8	58	14.8	96	24.6	302	25.7
Poor Knowledge	244	62.2	335	85.2	295	75.4	874	74.3
Total	392	100	393	100	391	100	1176	100
Discolouration of the breast								
Good Knowledge	152	38.8	58	14.8	99	25.3	309	26.3
Poor Knowledge	240	61.2	335	85.2	292	74.7	867	73.7
Total	392	100	393	100	391	100	1176	100
Summary Total								
Good Knowledge	150	38.3	60	15.3	104	26.6	314	26.7
Poor Knowledge	242	61.7	333	84.7	287	73.4	862	73.3
Total	392	100	393	100	391	100	1176	100

Knowledge of Availability and Accessibility for Breast Cancer Screening and Treatment Services

Table 2 shows that in all, a total of 277 (23.6%) showed good knowledge compared to 899 (76.4%) that showed poor knowledge. It was 33.2% in Abia South, 14.2% in Abia central and 23.3% in Abia North. Those who showed good knowledge of any available breast cancer screening services were 23.6% (Abia South = 33.4%, Abia central = 14.2% Abia North = 23.3%).

Similar results were obtained for good knowledge across other items such as having knowledge of any accessible breast cancer screening services (Overall = 23.6% Abia South = 33.2%, Abia central = 14.2% Abia North = 23.3%), having knowledge of any available breast cancer treatment services (Overall = 23.6% Abia South = 33.4%, Abia central = 14.2% Abia North = 23.3%) and (Overall = 23.6% Abia South = 32.9%, Abia central = 14.2% Abia North = 23.5%).

Table 2: Knowledge on Availability and Accessibility for Breast Cancer Screening and Treatment Services

	Abia South		Abia Central		Abia North		Total	
	n	%	N	%	n	%	n	%
knowledge of any available breast cancer screening services								
Good Knowledge	131	33.4	56	14.2	91	23.3	278	23.6
Poor Knowledge	261	66.6	337	85.8	300	76.7	898	76.4
Total	392	100.0	393	100.0	391	100.0	1176	100.0



Having knowledge of any accessible breast cancer screening services								
Good Knowledge	130	33.2	56	14.2	91	23.3	277	23.6
Poor Knowledge	262	66.8	337	85.8	300	76.7	899	76.4
Total	392	100.0	393	100.0	391	100.0	1176	100.0
Having knowledge of any available breast cancer treatment services								
Good Knowledge	131	33.4	56	14.2	91	23.3	278	23.6
Poor Knowledge	261	66.6	337	85.8	300	76.7	898	76.4
Total	392	100.0	393	100.0	391	100.0	1176	100.0
Having knowledge of any accessible breast cancer treatment services								
Good Knowledge	129	32.9	56	14.2	92	23.5	277	23.6
Poor Knowledge	263	67.1	337	85.8	299	76.5	899	76.4
Total	392	100.0	393	100.0	391	100.0	1176	100.0
Summary Total								
Good knowledge	130	33.2	56	14.2	91	23.3	277	23.6
Poor knowledge	262	66.8	337	85.8	300	76.7	899	76.4
Total	392	100	393	100	391	100	1176	100

Attitude towards getting screened for Breast Cancer

The attitude of the studied group towards getting screened for breast cancer is presented on Table 3. In Abia South, the average (mean score) for the attitude above 3 points (on a 5-point scale) in all the items assessed, indicating positive attitude. Still, none of them was of the mean value of 3.5 (strong positive attitude). In Abia Central and Abia North, the attitude mean scores were below 3 points on assessments concerning whether women should start doing breast self-examination from the age of 15 – 20 years (Mean: Abia central =2.55; Abia North =2.76), “a woman should perform breast self-examination once every month” (Mean: Abia central =2.44; Abia North =2.79) and on whether breast self-examination should be performed during a woman’s period/ menses when lump are most easily detected (Mean: Abia central =2.63; Abia North =2.84).

The attitude was also lower in the overall score on the opinion at doing breast self-examination from the age of 15 – 20 years (Mean = 2.83), “a woman should perform breast self-examination once every month” (Mean =2.86) and on whether breast self-examination should be performed during a woman’s menstrual period (Mean =2.89). The overall strongest positive attitude was obtained on the absence of stigmatised fear for breast cancer screening (“Doing clinical breast examination will not be embarrassing”) with 35% agreed, and 24.9% strongly agreed, and a mean score of 3.56 points.

**Table 3: Attitude towards getting screened for Breast Cancer**

Attitude Towards Breast cancer screening	SD	D	ID	A	SA	Mean	St. dev
Abia South							
• Women should start doing breast self-examination from the age of 15 – 20 years	43 (11.0)	67 (17.1)	130 (33.2)	83 (21.2)	69 (17.6)	3.17	0.39
• A woman should perform breast self-examination once every month	36 (9.2)	65 (16.6)	139 (35.5)	87 (22.2)	65 (16.6)	3.20	0.41
• Breast self-examination should be performed during a woman's period/ menses when the lump is most easily detected	41 (10.5)	62 (15.8)	136 (34.7)	81 (20.7)	72 (18.4)	3.21	0.41
• I have not had a clinical breast examination because the cost is too much	51 (13.0)	52 (13.3)	49 (12.5)	134 (34.2)	106 (27.0)	3.49	0.61
• I have not gone for clinical breast examination because I do not know anything about it	54 (13.8)	83 (21.3)	36 (9.2)	122 (31.3)	95 (24.4)	3.29	0.53
• Doing clinical breast examination will not be embarrassing to me	50 (12.8)	66 (16.8)	51 (13.0)	112 (28.6)	113 (28.8)	3.44	0.57
Abia Central							
• Women should start doing breast self-examination from the age of 15 – 20 years	71 (18.1)	121 (30.8)	141 (35.9)	34 (8.7)	26 (6.6)	2.55	0.35
• A woman should perform breast self-examination once every month	72 (18.3)	103 (26.6)	39 (35.5)	33 (8.4)	26 (6.6)	2.44	0.34
• Breast self-examination should be performed during a woman's period/ menses when the lump is most easily detected	72 (18.3)	94 (23.9)	160 (40.7)	40 (10.2)	27 (6.9)	2.63	0.40
• I have not had clinical breast examination because the cost is too much	27 (6.9)	43 (10.9)	105 (26.7)	136 (34.6)	82 (20.9)	3.52	0.55
• I have not gone for clinical breast examination because I do not know anything about it	25 (6.4)	30 (7.6)	66 (16.8)	141 (35.9)	131 (33.3)	3.82	0.74
• Doing clinical breast examination will not be embarrassing to me	26 (6.6)	27 (6.9)	65 (16.5)	158 (40.2)	117 (29.8)	3.80	0.74

SD: strongly disagree, D: disagree, ID: indifference, A: agree and SA: strongly agree

**Table 3 Contd**

Attitude towards Breast Cancer Screening	SD	D	ID	A	SA	Mean	St. dev
Abia North							
• Women should start doing breast self-examination from the age of 15 – 20 years	37 (9.5)	122 (31.2)	149 (38.1)	62 (15.9)	21 (5.4)	2.76	0.40
• A woman should perform breast self-examination once every month	37 (9.5)	113 (28.9)	156 (39.9)	65 (16.6)	20 (5.1)	2.79	0.43
• Breast self-examination should be performed during a woman's period/ menses when the lump is most easily detected	41 (10.5)	97 (24.8)	161 (41.2)	67 (17.1)	25 (6.4)	2.84	0.43
• I have not had clinical breast examination because the cost is too much	19 (4.9)	39 (10.0)	130 (33.2)	127 (32.5)	76 (19.4)	3.52	0.55
• I have not gone for clinical breast examination because I do not know anything about it	16 (4.1)	43 (11.0)	99 (25.3)	145 (37.1)	88 (22.5)	3.63	0.60
• Doing clinical breast examination will not be embarrassing to me	23 (5.9)	53 (13.6)	110 (28.1)	142 (36.3)	63 (16.1)	3.43	0.55
Abia Total							
• Women should start doing breast self-examination from the age of 15 – 20 years	151 (12.8)	310 (26.4)	420 (35.7)	179 (15.2)	116 (9.9)	2.83	0.34
• A woman should perform breast self examination once every month	145 (12.3)	281 (23.9)	454 (38.5)	185 (15.7)	111 (9.4)	2.86	0.38
• Breast self-examination should be performed during a woman's period/ menses when lump is mostly easily detected	154 (13.1)	253 (21.5)	457 (38.9)	188 (16.0)	124 (10.5)	2.89	0.38
• I have not had clinical breast examination because the cost is too much	97 (8.2)	134 (11.4)	284 (24.1)	397 (33.8)	264 (22.4)	3.51	0.55
• I have not gone for clinical breast examination because I do not know anything about it	95 (8.1)	156 (13.3)	201 (17.1)	408 (34.8)	314 (26.7)	3.58	0.61
• Doing clinical breast examination will not be embarrassing to me	99 (8.4)	146 (12.4)	226 (19.2)	412 (35.0)	293 (24.9)	3.56	0.59

SD: strongly disagree, D: disagree, ID: indifference, A: agree and SA: strongly agree



SUMMARY OF ATTITUDE TOWARDS BREAST CANCER SCREENING

The summary of the attitude of the respondents' breast cancer screening (Table 4) showed that in total, 107 (9.1%) showed a strong positive attitude, 1033 (87.8%) showed a fairly positive attitude, while 3.1% were of a poor positive attitude. Those who showed a strong positive attitude were 16.8% in Abia South, 5.1% in Abia Central, and 5.4% in Abia North, while those who showed a fairly positive attitude were 79.3% in Abia South, 92.4% in Abia Central and 91.8% in Abia North.

Table 4: Summary of attitude towards breast cancer screening

	Abia South		Abia Central		Abia North		Total	
	n	%	N	%	N	%	n	%
Strong Positive Attitude	66	16.8	20	5.1	21	5.4	107	9.1
Fair Positive	311	79.3	363	92.4	359	91.8	1033	87.8
Poor positive Attitude	15	3.8	10	2.5	11	2.8	36	3.1
Total	392	100.0	393	100.0	391	100.0	1176	100.0

Influence of knowledge of Signs and Symptoms of breast cancer on the uptake of breast cancer screening among women of reproductive age in Abia State

In Table 5, the overall knowledge of signs and symptoms of breast cancer showed significant association with uptake to breast cancer screening services ($\chi^2=746.31$, $p=0.0001$). A total of 258 (82.4%) of the women who showed good knowledge had the uptake compared to only 4.3% from the poor knowledge group. Across the zones, those with good knowledge of signs and symptoms that had the uptake were 80.8% in Abia South, 88.3% in Abia Central and 80.8% in Abia North.

Separately, each Sign and symptom showed a significant association with uptake for breast cancer screening services ($p < 0.0001$). Up to 77.3% of those with good knowledge that lump in the breast is a possible symptom of breast cancer had an uptake compared to only 22.7% in the poor knowledge group. The overall uptake was quite high among those with good knowledge for discharge from the breast, inversion of the nipple and swelling of the armpit at, 79.6%, 86.4%, and 95% respectively. Similar results obtained for the good knowledge group on swelling of the breast and discoloration of the breast with 83.8% and 83.5% respectively against 4.8% and 4.3% respectively, among the group that showed poor knowledge.

**Table 5: Knowledge of Signs and Symptoms of Breast Cancer and uptake of breast cancer screening services**

Signs and symptoms	Knowledge Level	Abia South (n=392)				Abia Central(n=393)				Abia North (n=391)				Total (n =1176)			
		Uptake	%	None	%	Uptake	%	None	%	Uptake	%	None	%	Uptake	%	None	%
Lumpin the breast	Good Knowledge	123	78.8	33	21.2	53	82.8	11	17.2	89	72.4	34	27.6	265	77.3	78	22.7
	Poor Knowledge	13	5.5	223	94.5	3	0.9	326	99.1	14	5.2	254	94.8	30	3.6	803	96.4
	Total	136	34.7	256	65.3	56	14.2	337	85.8	103	26.3	288	73.7	295	25.1	881	74.9
	Statistical Test	$\chi^2=222.95, p=0.0001$				$\chi^2=294.12, p=0.0001$				$\chi^2=195.83, p=0.0001$				$\chi^2=701.44, p=0.0001$			
Discharge from the breast	Good Knowledge	125	81.2	29	18.8	53	86.9	8	13.1	87	73.7	31	26.3	265	79.6	68	20.4
	Poor Knowledge	11	4.6	227	95.4	3	0.9	329	99.1	16	5.9	257	94.1	30	3.6	813	96.4
	Total	136	34.7	256	65.3	56	14.2	337	85.8	103	26.3	288	73.7	295	25.1	881	74.9
	Statistical Test	$\chi^2=241.80, p=0.0001$				$\chi^2=311.78, p=0.0001$				$\chi^2=195.58, p=0.0001$				$\chi^2=734.09, p=0.0001$			
Inversion of the nipple	Good Knowledge	123	84.8	22	15.2	53	91.4	5	8.6	79	85.9	13	14.1	255	86.4	40	13.6
	Poor Knowledge	13	5.3	234	94.7	3	0.9	332	99.1	24	8.0	275	92.0	40	4.5	841	95.5
	Total	136	34.7	256	65.3	56	14.2	337	85.8	103	26.3	288	73.7	295	25.1	881	74.9
	Statistical Test	$\chi^2=255.28, p=0.0001$				$\chi^2=331.28, p=0.0001$				$\chi^2=219.71, p=0.0001$				$\chi^2=788.82, p=0.0001$			
Swelling of the armpit	Good Knowledge	121	82.3	26	17.7	53	91.4	5	8.6	81	85.3	14	14.7	255	85.0	45	15.0
	Poor Knowledge	15	6.1	230	93.9	3	0.9	332	99.1	22	7.4	274	92.6	40	4.6	836	95.4
	Total	136	34.7	256	65.3	56	14.2	337	85.8	103	26.3	288	73.7	295	25.1	881	74.9
	Statistical Test	$\chi^2=235.39, p=0.0001$				$\chi^2=331.28, p=0.0001$				$\chi^2=224.53, p=0.0001$				$\chi^2=769.33, p=0.0001$			



Swelling of the breast	Good Knowledge	118	79.7	30	20.3	53	91.4	5	8.6	82	85.4	14	14.6	253	83.8	49	16.2
	Poor Knowledge	18	7.4	226	92.6	3	0.9	332	99.1	21	7.1	274	92.9	42	4.8	832	95.2
	Total	136	34.7	256	65.3	56	14.2	337	85.8	103	26.3	288	73.7	295	25.1	881	74.9
	Statistical Test	$\chi^2=212.85, p=0.0001$				$\chi^2=331.28, p=0.0001$				$\chi^2=228.85, p=0.0001$				$\chi^2=744.81, p=0.0001$			
Discoloration of the breast	Good Knowledge	121	79.6	31	20.4	53	91.4	5	8.6	84	84.8	15	15.2	258	83.5	51	16.5
	Poor Knowledge	15	6.3	225	93.8	3	0.9	332	99.1	19	6.5	273	93.5	37	4.3	830	95.7
	Total	136	34.7	256	65.3	56	14.2	337	85.8	103	26.3	288	73.7	295	25.1	881	74.9
	Statistical Test	$\chi^2=221.06, p=0.0001$				$\chi^2=331.28, p=0.0001$				$\chi^2=233.86, p=0.0001$				$\chi^2=760.92, p=0.0001$			
Overall Summary	Good Knowledge	122	80.8	29	19.2	53	88.3	7	11.7	84	80.8	20	19.2	258	82.4	55	17.6
	Poor Knowledge	14	5.8	227	94.2	3	0.9	330	99.1	19	6.6	268	93.4	37	4.3	826	95.7
	Total	136	34.7	256	65.3	56	14.2	337	85.8	103	26.3	288	73.7	295	25.1	881	74.9
	Statistical Test	$\chi^2=230.39, p=0.0001$				$\chi^2=318.06, p=0.0001$				$\chi^2=216.31, p=0.0001$				$\chi^2=746.31, p=0.0001$			



Relationship between Knowledge on Availability and Accessibility for Breast Cancer Screening and Treatment Services

Summarily the knowledge of signs and symptoms of breast cancer were significantly associated with breast cancer screening services uptake (overall: $\chi^2=995.31$, $p=0.0001$; Abia South: $\chi^2=312.21$, $p=0.0001$; Abia Central: $\chi^2=3083.24$, $p=0.0001$; Abia North: $\chi^2=312.13$, $p=0.0001$). Uptake was 96.8% among the women that showed good knowledge, compared to 2.9% on poor knowledge (Table 6).

A Significant association was obtained between uptake for breast cancer screening services and knowledge of available breast cancer screening services ($\chi^2=995.31$, $p=0.0001$), knowledge of accessible breast cancer screening services ($\chi^2=1000.31$, $p=0.0001$), knowledge of available breast cancer treatment services ($\chi^2=985.31$, $p=0.0001$) and knowledge of accessible breast cancer treatment services ($\chi^2=1000.31$, $p=0.0001$). Those who showed good knowledge of available breast cancer screening services recorded 96.8% uptake than 2.9% among those with poor knowledge. Similarly, 97.1% and 96.4% of the women with good knowledge of accessible breast cancer screening services as well as 96.4% among them with good knowledge of available breast cancer screening services had breast cancer screening services against 2.9% and 3% recorded in poor knowledge respectively for each of the two items. The breast cancer screening services uptake in relation to the knowledge of accessible breast cancer treatment services was such that 269 (97.1%) of the participants with good knowledge had the uptake compared to only 26 (2.9%) in the poor knowledge group.

**Table 6: Availability and Accessibility Knowledge on Breast Cancer Screening and Treatment Services with Uptake of Breast Cancer Services**

Signs and symptoms	Abia South (n=392)				Abia Central (n=393)				Abia North (n=391)				Total (n =1176)			
	Uptake	%	None	%	Uptake	%	None	%	Uptake	%	None	%	Uptake	%	None	%
Knowledge of available breast cancer screening services																
Good Knowledge	124	94.7	7	5.3	56	100	0	0.0	89	97.8	2	2.2	269	96.8	9	3.2
Poor Knowledge	12	4.6	249	95.4	0	0.0	337	100	14	4.7	286	95.3	26	2.9	872	97.1
Total	136	34.7	256	65.3	56	14.2	337	85.8	103	26.3	288	73.7	295	25.1	881	74.9
Statistical Test	$\chi^2=312.23$, p=0.0001				$\chi^2=393.28$, p=0.0001				$\chi^2=312.13$, p=0.0001				$\chi^2=995.31$, p=0.0001			
Knowledge of accessible breast cancer screening services																
Good Knowledge	124	94.7	6	4.6	56	100	0	0.0	89	97.8	2	2.2	269	97.1	8	2.9
Poor Knowledge	12	4.6	250	95.4	0	0.0	337	100	14	4.7	286	95.3	26	2.9	873	97.1
Total	136	34.7	256	65.3	56	14.2	337	85.8	103	26.3	288	73.7	295	25.1	881	74.9
Statistical Test	$\chi^2=316.20$, p=0.0001				$\chi^2=393.00$, p=0.0001				$\chi^2=312.13$, p=0.0001				$\chi^2=1000.31$, p=0.0001			
Knowledge of available breast cancer treatment services																
Good Knowledge	123	93.9	8	6.1	56	100	0	0.0	89	97.8	2	2.2	268	96.4	10	3.6
Poor Knowledge	13	5.0	248	95.0	0	0.0	337	100	14	4.7	286	95.3	27	3.0	871	97.0
Total	136	34.7	256	65.3	56	14.2	337	85.8	103	26.3	288	73.7	295	25.1	881	74.9
Statistical Test	$\chi^2=304.33$, p=0.0001				$\chi^2=393.00$, p=0.0001				$\chi^2=312.13$, p=0.0001				$\chi^2=985.31$, p=0.0001			
knowledge of accessible breast cancer treatment services																
Good Knowledge	123	95.3	6	4.7	56	100	0	0.0	90	97.8	2	2.2	269	97.1	8	2.9
Poor Knowledge	13	4.9	250	95.1	0	0.0	337	100	13	4.3	286	95.7	26	2.9	873	97.1
Total	136	34.7	256	65.3	56	14.2	337	85.8	103	26.3	288	73.7	295	25.1	881	74.9
Statistical Test	$\chi^2=312.21$, p=0.0001				$\chi^2=393.00$, p=0.0001				$\chi^2=316.83$, p=0.0001				$\chi^2=1000.31$, p=0.0001			
Summary																
Good Knowledge	123	94.6	7	5.7	56		0		89	97.8	2	2.2	269	96.8	9	3.2
Poor Knowledge	13	5.0	249	95.0	0		337		14	4.7	286	95.3	26	2.9	872	97.1
Total																
Statistical Test	$\chi^2=312.21$, p=0.0001				$\chi^2=3083.24$, p=0.0001				$\chi^2=312.13$, p=0.0001				$\chi^2=995.31$, p=0.0001			



DISCUSSION

The present study assessed the knowledge, attitude and practices towards breast cancer screening among women of reproductive age (15 – 49 years) in Abia State, Nigeria.

The overall knowledge of signs and symptoms of breast cancer was relatively poor among the studied group. This is not a surprising find, considering that most of the respondents has only a secondary level education. Another Nigerian Kwara State study found that breast cancer disease's knowledge and understanding was very low among the study group (Salaudeen *et al.*, 2010). In Yakubu *et al.* (2014), 65% of the women studied showed poor knowledge of the symptoms that may indicate breast cancer. In the index study, clear majority of the women that showed good knowledge of signs and symptoms of breast cancer had more uptakes compared to the poor knowledge group, and similar result was obtained for availability or accessibility of the screening services.

The majority showed a fairly positive attitude but only a few proportions showed strong attitude to breast cancer screening services. Attitude is a significant associating factor of uptake in ta his study and those who showed a strong positive attitude were more likely to go for breast cancer screening uptake than any other group. Agboola *et al.* (2009), their study on attitude to breast self-examination, showed that 91.4% nurses, 65.2% laboratory scientists, and 90.9%. In Kayode *et al.* (2005), only 7% of them had a negative attitude to breast examination compared to 3% obtained in the present study, but a positive attitude was much better in that study.

While the participants may be willing for uptake of breast cancer screening services, clear majority of the group could not express their readiness to go for cancer screening services constantly. This is unlike the findings in Pace *et al.* (2016), with up to 84.3% of the respondents indicated their readiness for breast cancer uptake as a result of encouragement they received. This finding is not a surprise finding considering that both knowledge and attitude to breast cancer screening were low in the study area.

CONCLUSION

A breast self-examination is a personal check-up carried out by a woman to look for changes or problems in the breast tissue. Some women though aware of breast self-examination and its usefulness never practice it. Those who care to practice it are ignorant of how to correctly do it. Reasons for not performing breast self-examination include ignorance of the technique, lack of awareness, low level of knowledge, not having a family history of breast cancer, forgetfulness, fear of finding a lump, not considering it necessary, feeling of discomfort at touching the breasts and others felt they were violating their bodies by palpating their breast.

There was a low level of awareness of breast cancer and its clinical features. These findings show that a lot of work still needs to be done in the area of breast cancer awareness and more especially the screening techniques, screening schedules and the eligibility for each diagnostic or screening method.



RECOMMENDATIONS

There is a need to create and strengthen breast cancer awareness campaigns through all available media platforms, health facilities, and schools. This should not only be for improved breast cancer screening practices but very importantly, to improve knowledge on its presentation, risk factors and benefits of early detection and treatment for a better outcome.

Information Education and Communication (IEC) materials like posters, handbills, flipcharts, etc., can be used in the communities to enhance learning and sustainability.

Increased public health education and promotional campaign regarding the effectiveness of breast cancer screening for early detection are needed to increase participation in breast cancer screening programmes.

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