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Knowledge, Attitude and Practice of Mammographic Screening among Females in a Tertiary Institution

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Abstract: The main purpose for mammography screening is to check for breast cancer. Breast cancer is the most common cause of cancer death in women especially in low and middle income countries including Nigeria. The aim of this study was to assess the knowledge, attitude and practice of mammography screening among females in a tertiary institution. This was a prospective cross sectional study. One hundred and fifty females participated in this study and their age ranged from 20 to 54 years. A pilot study was conducted on 20 participants to ensure that the questions were understandable and can be used for data collection. Data were analyzed using SPSS version 20.0 and were presented in frequency tables and percentages. Chi-square was used to test significance and significance was placed at $P < 0.05$. Majority (32.7%) of the respondents were aged between 25 to 29 years. Their highest educational qualification is first degree (52.7%). One hundred and fourteen (76.0%) participants stated that they have heard about mammography screening. 34.0% stated that they will go for screening only on the recommendation of their doctors. Majority (89.3%) have never gone for mammography screening. All the respondents (100%) have heard about breast cancer and the associated risks. The respondents have a very good knowledge of mammography screening. Their attitude is good but their practice of screening is poor.

Key words: Knowledge · Attitude · Practice · Mammography · Screening

INTRODUCTION

The main reason for mammography screening is to check for breast cancer. Breast cancer is the most prominent cause of cancer death among women in low and middle income countries and responsible for 269,000 deaths, (12.7% of all cancer deaths) in 2008 [1, 2]. In developing or low income countries, breast cancer is often characterised by late clinical presentations of advanced stages of the diseases, when only chemotherapy and palliative care can be offered with resulting high mortality [3]. There is variation of breast cancer worldwide in which Africa is not excluded [4]. The actual incidence of breast cancer is not known [5] however an increasing incidence of the disease in many parts of Africa was indicated by several publications [6]. Breast cancer affects women in any age range but the risk increases with advanced age [7].

The American cancer society guidelines for early detection of breast cancer recommend yearly mammogram starting at the age of forty, clinical breast examination (CBE) about every three years for women in their twenties and thirties and every women at the age of forty and over and also breast self -examination (BSE) for women starting their twenties[8]. Screening mammography has been regarded as the most effective screening method in the early detection of breast cancer [9], but the practice is low in Nigeria and developing countries due to cost [10].

Early diagnosis of breast cancer is known to be vital not just in the treatment of the disease but also in determining prognosis [11]. Late diagnosis in breast cancer has been shown to impact differently on survival

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between affluent groups and those from socio-economically deprived background [12].

Ensuring availability of early diagnostic and screening services and taking immediate steps have been regarded as the two main strategies for warranting improvement in the prognostic outcome [13-15]. Mammography is the cheapest and most available diagnostic technique for both screening and diagnostic purposes. A recent study had reported poor knowledge of mammographic screening among civil servants in Benin city, Nigeria [16]. Ultrasonography is a cheaper method for imaging the breast but it is not adequate for the purpose of screening. Literature reveals that majority of the studies on breast cancer in Nigeria were done on the awareness of the disease and its clinical presentation. The aim of this study was therefore to ascertain the knowledge, attitude and practice of mammography among this Nigerian population.

MATERIALS AND METHODS

The study was a cross sectional study conducted in Nnamdi Azikiwe University, Nnewi Campus. This involved females in two faculties of the university in the campus. These were; faculty of Health Sciences & Technology and faculty of Basic medical sciences. The target population was women aged between 20 and 54years. The American Cancer Society [17] recommended that mammography screening should be carried out within the age group of 35 and 65 years but the researchers chose a lower age range because breast cancer have also been seen in many young women. A total of 150 women who met the inclusion criteria were included in this study. Ethical approval to conduct the study was obtained from the ethical committee of the Faculty of Health Sciences and Technology, Nnamdi Azikiwe university Nnewi campus and informed consent was obtained from the participants. The questionnaire was developed by the researcher. The questions were divided into five sections; A, B, C, D and E. Section A revealed information on the bio data, B looked at the knowledge of mammographic screening, C assessed the attitude of participants towards mammography, D dealt on the practice of mammographic screening and E knowledge of risk factors of breast cancer. A pilot study was conducted on 20 subjects to assess whether the questions were understandable and could be used for data collection. In order to obtain cooperation, sincerity and objectivity respondents were guaranteed anonymity and confidentiality of their response.

Data were arranged and analyzed using statistical package for social sciences (SPSS) version 20. The data were presented in frequency tables and percentages. Chi-square analysis was used to test statistical significance and a probability value $p < 0.05$ was considered statistically significant.

RESULTS

The demographic aspect of the result presented in table 1 showed that majority of the respondents were aged between 25 to 29 years constituting 32.7% (49) while the least were between 50 to 54 years (4.0%). One hundred and eleven (74.0%) were married while 39 (26.0%) of them were single. None of the participants stated that she is divorced. Out of the 150 participants, 79 (52.7%) had first degree certificate as their highest educational qualification hence constituting the largest in this group. Those who obtained First School Leaving Certificate were the least participants in this group (1.3%).

Table 2 depicts the respondents' knowledge on mammographic screening. One hundred and fourteen (76.0%) of the respondents had heard about mammographic screening. Majority of them (40.3%) are of the opinion that mammographic screening should start at the age of 40 years while 7.3% stated that MS should start between 40-49 years. 11 (7.3%) of the respondents opined that MS should start from 50 years and above whilst 37 (24.7%) stated that they do not know the age that screening should start. Majority of the participants (72.0%) stated that mammographic screening is for women who have breast symptoms while 28.0% responded that mammographic screening is for healthy women.

The attitude of the respondents is represented in table 3. Fifty one (34.0%) respondents were of the opinion that they will go for mammographic screening only on the recommendation of the doctor. Another 51 (34.0%) were of the opinion that they will go for screening when they observe a lump. Majority (66.0%) of the respondents think that mammographic screening detects early breast cancer. Majority 114 (76%) of the respondents stated that they will prefer a female radiographer to perform screening on them but despite this, majority 125 (83%) indicated that they will not stop going for mammographic screening if only male radiographers are available.

Table 4 shows that the majority 134 (89.3%) of the respondents have never gone for mammographic screening. Very few have gone for mammographic screening either once or twice. 32 (21.3%) of the

respondents gave either fear of pain or unavailability of screening centres as the reason for not going for mammographic screening. A minority of the respondents (1.3%) stated that they will not go for mammographic screening because of their religious belief.

The knowledge of breast cancer and associated risk factors are shown are in table 5. All the respondents 150 (100%) stated that they have heard about breast cancer and its risk factors but only 13 (8.7%) of them know more than one risk factor for this condition.

Table 1: Demographic characteristics of the respondents

Characteristic	Frequency
Age (years)	
20-24	40(26.7%)
25-29	49(32.7%)
30-34	15(10.0%)
35-39	20(13.3%)
40-44	10(6.7%)
45-49	10(6.7%)
50-54	6(4.0%)
Marital Status	
Married	111(74.0%)
Single	39(26.0%)
Divorced	0(0%)
Educational Status	
No Formal Education	7(4.7%)
First school leaving certificate	2(1.3%)
SSC	14(9.3%)
NCE	16(10.7%)
BSC	79(52.7%)
Postgraduate Certificate	32(21.3%)

SSCE: Senior school certificate, NCE: National certificate of education, BSC: Bachelor's degree

Table 2: Respondents' knowledge of mammographic screening

Parameter	Frequency
Have you heard of mammographic screening 114(76.4%)Mammographic screening should start at 40 years	61(40.3%)
Mammographic screening should start from 40-49yrs	11(7.3%)
Mammographic screening should start from 50yrs and above	11(7.3%)
Mammographic screening is for healthy asymptomatic women	42(28.0%)
Mammographic screening is for women who have breast symptom	108(72.0%)
Do not know who mammographic screening is for	37(24.7%)

Table 3: Responses on attitude towards mammographic screening

Parameter	Frequency
Will go for MS on doctor's recommendation	51(34.0%)
Will go for MS upon nipple discharge	42(28.0%)
Will go for MS upon lump on the breast	51(34)
Will go for MS upon dimples on the nipple	6(4.0%)
None of the above will make me go for MS	10(6.7%)
I think that MS can detect early breast cancer	99(66.0%)
I will prefer to be examined by a female radiographer	114(76.0%)
I will prefer to be examined by a male radiographer	36(24.0%)
I will continue to go for MS if only male radiographers are available	125(83.0%)
Any of the radiographers can examine me	75(50.0)

Table 4: Mammographic Screening Practice among the Respondents

Practice of mammographic screening	Frequency (%)
Have not gone for mammographic screening	134(89.3%)
Have once gone for mammographic screening	14(9.3%)
Have gone for mammographic screening more than once	6(4.0%)
Have not gone for MS for fear of pain	32(21.3%)
Have not gone for fear of radiation	32 (21.3%)
I do not feel like doing it	22(14.7%)
I have not gone for MS because of the cost	14(9.3%)
Have not gone for MS because of religious reasons	2(1.3%)
I have not gone for MS because of unavailability of screening centres	32(21.3%)
I have gone for MS because I do not know about it.	15(10.0%)

Table 5: Response of the knowledge of breast cancer and associated risk factors.

Parameters	Frequency
I have heard about breast cancer	150 (100%)
I know that breast cancer is hereditary	47 (31.3%)
I do not know any risk factor of breast cancer	52 (34.7%)
I know at least one risk factor of breast cancer	26 (17.3%)
I know more than one risk factor of breast cancer	13 (8.7%)

DISCUSSIONS

The relevance of mammographic screening in the early detection of breast cancer cannot be overemphasised. Early detection of cancer avails the patient the opportunity of a successful treatment. Out of the 180 questionnaires distributed, 150 were returned providing an appreciable response rate of 83.3%. This high response rate recorded may be because of the accessibility of the staff who works in the same environment with the researchers. A response rate above 50% is an important part of a survey because it enables findings to be generalised [18]. The age of the respondents ranged from 20 to 54 years. This may be attributed to the fact that the faculties studied are young and this may have affected the age of the employees. The American Cancer Society [17] recommended that mammography screening should be carried out within the age group of 35 and 65 years. This study showed that most of the respondents were within the age range of 25-29 years. Majority 79 (52.7%) of the respondents obtained a first degree certificate. This may be because this research was conducted in an academic environment. Majority 114 (74.0%) of the participants were married and none of them was divorced.

The result of this study showed that the participants have a good knowledge about mammographic screening. One hundred and fourteen (76%) of the respondents stated that they have heard about MS. This study was conducted among the elite group and may have contributed to this high level of knowledge among the participants. This finding is contrary to that of Margearet [19] who observed that most Hong Kong women have never heard about mammography screening. Majority (40.7%) of the respondents were of the opinion that MS should start at the age of 40 years. This is in line with the guideline for breast cancer screening recommendation by the American cancer society [17]. However, despite this recommendation some mammography screening studies had also been done on patients who were 20 years [20]. It should also be noted that breast cancer can affect women in any age range even though the risk increases with advanced age [7]. Women should have the opportunity to begin annual screening between the ages of 40 and 45 years [21]. Screening mammography in women aged between 40 and 67 years is associated with a reduction in breast cancer deaths across a range of study designs and inferential evidence supports breast cancer screening for women 70 years and older who are in good health [21].

The attitude of the respondents to mammographic screening showed that majority (34%) stated that they will go for screening only on the request of their doctors. This observation is in tandem with that of Trigoni *et al* [22] despite conducting their study in a rural area. In places where individuals are conscious of their health they usually prefer taking instructions from their doctors concerning any health issue and mammographic

screening may not be exceptional. Consequently, the doctors should play a major role in this programme by encouraging their patients to go for mammography screening when the need arises. Most (66%) of the respondents were aware that MS can detect breast cancer early. This level of awareness may be because of the environment where this study was conducted. Our finding agrees with that of Alan and Lauren [23]. Majority 114 (76%) of the respondents stated that they will prefer a female radiographer to carry out the examination on them. However the gender of the radiographer handling the patient may not be a hindrance to undergoing this investigation since 125 (83%) indicated that they will go for mammographic screening if only male radiographers are available. This attitude to attend MS if only male radiographers are available may be because the study was done in a population dominated by Christians where religion does not really affect the choice of who attends to a patient in the hospital.

Our study showed a poor practice of mammographic screening among the respondents despite having a good knowledge of the subject. Majority 134 (89.3%) of the respondents stated that they have never gone for mammographic screening. This poor practice was also noted in the studies conducted by Pinar [24] and Kiguli-Malwade *et al*.[25].Thirty two (21.3%) of the respondents stated that they did not go for mammographic screening because of fear of pain or unavailability of screening centres. Various individuals have different opinion about going for an x-ray examination and one of such reasons is that it causes pain and this explains why some of them responded thus. Present study is in agreement with those of other researchers [22, 26]. There is only one screening centre in this locality and many people may not even be aware of its existence. Religion is not a barrier to screening as only 2 (1.3%) of the respondents stated that they will not go for mammographic screening because of religious reasons.

All the respondents 150 (100%) have heard about breast cancer. However, 52 (34.7%) of the respondents do not know any risk factor associated with breast cancer. 47 (31.3%) know that breast cancer is hereditary. Peacey *et al* [27] had earlier demonstrated a poor awareness of risk factors associated with breast cancer and this their finding is in tandem with the present study. A chi-square analysis with p-value of 0.414 ($p > 0.05$) indicated that the level of education had no significance on the knowledge of breast cancer and its associated risks. This is in agreement with the findings of Odusanya [28] among nurses.

CONCLUSIONS

The participants demonstrated a very high knowledge of mammography screening. Their attitude towards screening is also encouraging but they have a very poor practice despite being in an academic environment where they are supposed to have gained certain awareness about this programme.

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