

**ASSESSMENT OF KNOWLEDGE AND PRACTICE OF BREAST CANCER SCREENING  
AMONG WOMEN ATTENDING MURTALA MUHAMMAD SPECIALIST HOSPITAL KANO  
METROPOLIS.**

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ABSTRACT

**Background:** Breast cancer cases are detected late due to poor knowledge and awareness of screening method. Evidence suggests that early diagnosis and screening might help to improve the outcomes.

**Aim:** The study aimed at assessing the knowledge and practice of breast cancer screening among women attending Murtala Muhammad Specialist Hospital Kano

**Methodology:** It was cross-sectional study conducted in Murtala Muhammad Specialist Hospital Kano from April 2019 to October 2019. 375 respondents were selected conveniently. A structured questionnaire was used which comprised six sections (section A to section F). Section A contained questions on socio-demographic information. Section B contained questions on knowledge of breast cancer. Section C was questions about knowledge and practice of breast self-examination. Section D contained questions on knowledge and practice of clinical breast examination. Section E and F contained questions on knowledge of mammography and ultrasound respectively. Data was analysed using statistical package for social sciences (SPSS) version 20.

**Results:** A total of 400 questionnaires were distributed of which 93.8% were properly filled and returned. The mean age of the participant was  $37 \pm 1.0$ , 96.8% had heard of breast cancer, and the source of information was media (68.8%). 59.5% and 43.2% were aware of (BSE) and (CBE) respectively. Only 45.6% had ever practice BSE. 38.7% and 42.4% (n=159) have heard of mammography and USS respectively.

**Conclusion:** The participant had good knowledge about breast cancer with relatively low knowledge about breast cancer screening and practices.

## **INTRODUCTION**

Breast cancer is a disease in which cells begin to grow out of control in the tissues of the breast. These abnormal cells can often be seen on an x-ray or felt as a lump [1]. It occurs in both genders, but more in female [2]. Annual incidence is more than one million worldwide, these makes it the most commonly occurring disease in women and results for over one third of the approximate annual 4.7million cancer diagnosis in females and the second most common tumour [3]. Fifty five percent of breast cancer occurred in developed and developing countries [4]. In West-Africa the prevalence was 39.9% and 41.2% in Nigeria [5, 6]. Garcia [7] reported that it is the leading cause of cancer death in women. Breast cancer predisposing factors include, being female gender, older age, and exposure to ionizing radiation, high intake of fats, sedentary life, previous family history, and history of breast cancer, obesity, oral contraceptives, weakened immune system, alcohol and smoking [6].

Breast cancer screening is the medical screening of asymptomatic, apparently healthy women for breast cancer. European Commission [8] recommended that asymptomatic women with average risk are to attend screening programs between 45 and 74 years old. A number of screening tests have been recommended, including clinical and self-breast exams, mammography, ultrasound, and magnetic resonance imaging [9]. Clinical or self-breast involves feeling the breast for lumps or other abnormalities by a medical personnel or by someone self respectively. Mammography as a screening tool is recommended for older women at normal risk for breast cancer every two years by many national organizations [10], and is the only screening method that has proven to be effective [9]. Medical ultrasonography is a diagnostic aid to mammography. Adding ultrasonography testing for women with dense breast tissue increases the detection of breast cancer [11]. Magnetic resonance imaging (MRI) has been shown to detect cancers not visible on mammograms. The chief strength of breast MRI is its very high negative predictive value [12]. Awareness of breast cancer screening is incredibly important as early detection can identify when the disease is curable. Patients experience better outcomes as a result of early diagnosis, state of the art treatment options and less extensive surgery.

## **RESULTS**

A study conducted by Ayoola and Ayedunni [13]

regarding breast cancer knowledge and screening practices among female secondary schools teachers in Ibadan, Nigeria. Among 411 female teachers, 76.2% were aware of breast self examination (BSE), 42.7% knew someone who practices BSE. 10.7% knew the appropriate age of commencing BSE. 53.1% were aware of clinical breast examination (CBE). Another cross sectional study conducted by [14] on breast cancer screening awareness and practices among women attending primary health care centers in Yemen. 317 women were randomly selected result was for CBE 47.0%, for BSE 58.0%. Empirical study showed that women present with signs and symptoms of the late stage of the disease, such as swollen, redness, tender breast however mistaking it with other inflammatory condition in Murtala Muhammad Specialist Hospital. The findings of the study will be used as a baseline for making recommendations to the relevant authorities; it will also serve as a guide to practitioners. The study aims at assessing the knowledge and practice of breast cancer screening among woman attending breast clinic in Murtala Muhammad Specialist Hospital Kano.

## **MATERIALS AND METHODS**

The study was cross-sectional study conducted in Murtala Muhammad Specialist Hospital Kano from April 2019 to October 2019. A convenient sampling technique was used to select 375 respondents. All respondent were female adult that attended breast clinic in the hospital. Ethical approval was obtained from the Human Research and Ethics Committee of Kano State Ministry of Health. An informed consent was obtained from each respondent. Data were collected using a pre-designed, pre-tested, structured and self-administered questionnaire which was adapted from [15]. The questionnaire comprised six sections (section A to section F). Section A contained questions on socio-demographic information. Section B contained questions on knowledge of breast cancer. Section C was questions about knowledge and practice of breast self-examination. Section D contained questions on knowledge and practice of clinical breast examination. Section E and F contained questions on knowledge of mammography and ultrasound respectively. Data was analyzed using statistical package for social sciences (SPSS) version 20. Descriptive statistics were used to describe the demographic information, knowledge and practice of breast cancer screening.

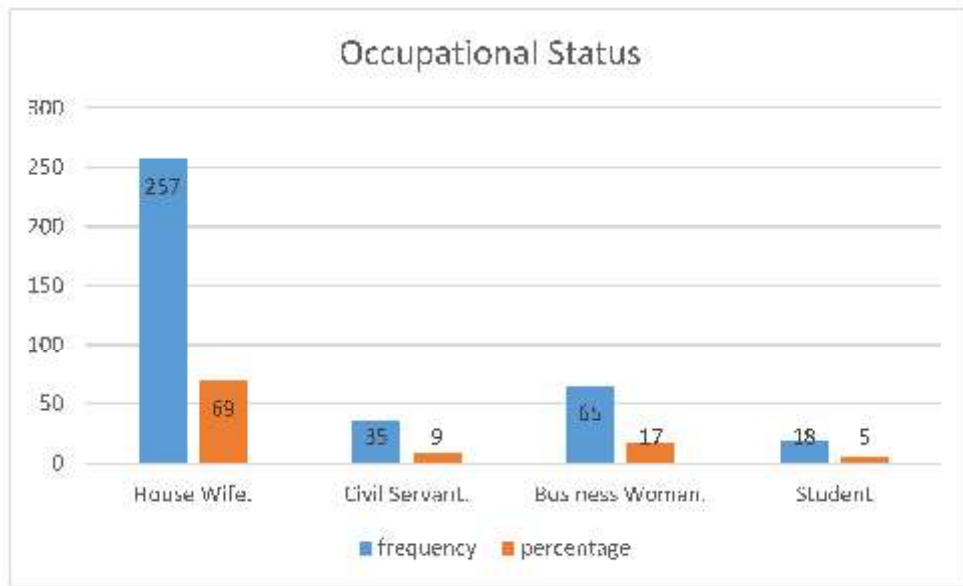


Figure 3: Occupation of the participants

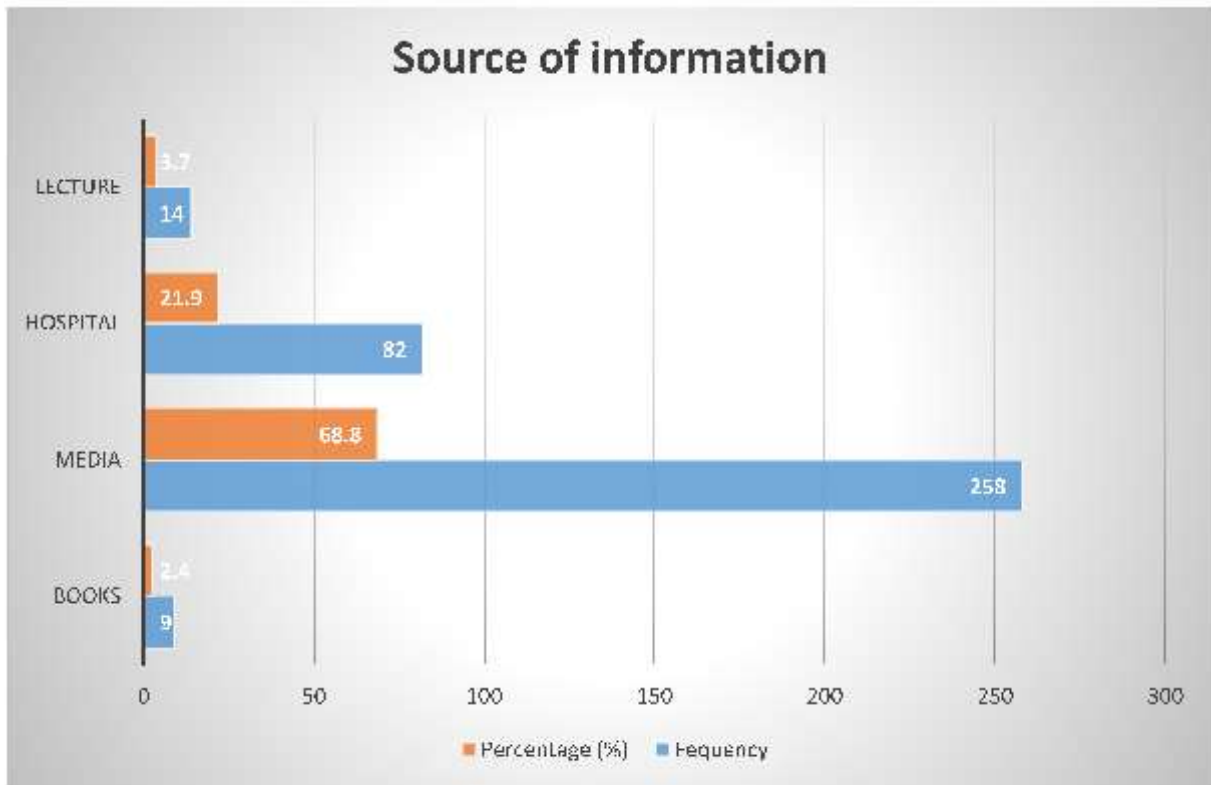


Figure 4: Source of information of the participants

**Table 1: Frequency and percentage of the knowledge of breast cancer screening, clinical breast examination, self-breast examination and practice of self-breast examination among participants.**

Knowledge	Types of knowledge			Practice of breast self - examination
	Breast cancer Frequency (%)	CBE Frequency (%)	BSE Frequency (%)	
<b>Yes</b>	363(96.8)	162(43.2)	223(59.5)	171(45.6)
<b>No</b>	12(3.2)	213(56.8)	152(40.5)	204(54.4)
<b>Total</b>	375(100)	375(100)	375(100)	375(100)

**Table 2: Knowledge of the imaging modalities among the participants**

Knowledge	Types of modalities	
	Mammography Frequency (%)	Ultrasound Frequency (%)
Yes	162(43.2)	223(59.5)
No	213(56.8)	152(40.5)
Total	375(100)	375(100)

**DISCUSSION**

The findings of the study show that, the age of the participant ranged 30-50 years as shown in Figure 1, which is within reproductive age. The findings are similar to the findings of the study conducted by [13] and that of [16] both among female secondary schools teachers. Breast cancer occurs usually in female after the age of 20 years and increases to a peak at 50-60 [17]. Majority (61%) of the respondents have no formal education with only (7%) completed tertiary institution as shown in Figure 2. Regarding occupational status, (69%) are full house wives and only (5%) enrolled into schools as indicated in Figure 3. In any population with high rate of illiteracy especially in middle aged and older women and lack of socialism can influence breast cancer awareness and practices. It is evident that less educated people most often present with poor health behavior including breast cancer screening and practices compared to educated people. It was reported that literacy was significantly correlated with a better level of breast cancer knowledge, screening and practices [18, 19].

The findings of the study show that (68.8 %) of the source of information was from media as shown in Figure 4. These are similar to the studies conducted by [19, 0] among female teachers they found that, the leading source of information was television (59.0%). However, the findings of the study are contrary to the findings of the study conducted by [15] that reported the major source of information were relatives and friends (37.2 %) with only (16.10 %) heard it through media. This could be probably because majority (69%) of the respondent in the present study are full house wife and the availability of many radio and TV stations in Kano metropolis they have more time to utilize the stations.

The findings of the study also show that (96.8 %) of the respondents had a knowledge of breast cancer

as shown in Table 1. The findings of the study are in agreement with the findings of the studies conducted by [15, 16] among female tertiary workers in Nnewi Nigeria, and Primary Health Care center in Ghail Yemen. The two studies indicated (98.75%) and (91.2%) knowledge of breast cancer among the participants. The possible reason of the excellent knowledge of breast cancer in the current study and previously published articles might be as a result of the breast cancer movement which was developed in the 1980s and 1990s and the women's health movement through modern advocacy and awareness campaigns [22]. The second reason might be as a result of the increasing incidence, as in Nigeria the number of women at risk for breast cancer increase steadily from approximately 24.5 million in 1900 to approximately 40 million in 2010 and is projected to rise to over 50 million by 2020[23].The findings of the current study show that (43.2%) had knowledge of CBE as shown in Table 1. The findings are in agreement with the findings of the studies conducted by [14, 24] that reported (47 %) and (49.4 %) of CBE among the participants. However, the findings are contrary to the findings of the study conducted by [15] that reported (79.4%) knowledge of CBE among the respondents. The findings of the study also show (59.5%) of the respondents had knowledge of BSE as shown in Table 1. The findings of the current study are similar to the findings of the studies conducted by [14, 24] that reported (58 %) and (48.6%) knowledge of BSE among the respondents. The similarity could be because all the studies were carried out among women with low level of education. However, the findings are contrary to the findings of the studies conducted by [13, 15] that reported (98.75 %) and (76.2%) knowledge of BSE among the respondents. The possible reason might be the previous studies involved educated respondents. Medical evidence, however, does not support the use of BSE in women with a typical risk for breast cancer [25].

Table 1 shows that only (45.6%) had ever practice BSE, of which (31.5%) palpates the breast with hand, (9.3%) palpates the armpit while (4.8%) inspect in the mirror. The findings are in close agreement with the study of [13] with (36.2%) practicing BSE. However is in disagreement with study of [25], where they found that 84.0% of their study population practiced BSE. Ayoola and Ayedunni [13] lamented that variables such as

higher level of education and years of service were not significant determinants of BSE practice in their study; as age was significantly related to BSE practice and practice of BSE increased significantly with age from among those who were 20-29 years to those who were 40 years and above. Doing regular breast self-exams has not been shown to decrease the chance of mortality from breast cancer [26].

Furthermore, the findings of the study show (38.7%) of the respondents had knowledge on mammography as shown in Table 2. The findings are similar to the findings of the studies conducted [13, 24] that reported (44.9%) and (23.8%) knowledge mammography among the respondents. The possible reason might be as a result of the scarcity of mammographic equipment in Nigeria. However, the findings of the study are contrary to the findings of the study conducted by [15] that (90.0%) of the respondents had knowledge on mammography. Mammography is the best tool for screening healthy women for breast cancer, as it has been shown to lower deaths from the disease [27]. It plays a central part in early detection of breast cancers because it can often show changes in the breast before a patient or physician can feel them [28, 29]. Mammography screening programs can reduce breast cancer mortality by around 20% in the screened group versus the unscreened group across all age groups, thus the benefit outweighs the risk [9]. The findings of the current study also show that (42.4 %) of the respondents had knowledge of ultrasound as shown in Table 2. The findings of the study are contrary to the findings of the study conducted by [14] that reported (89.3 %) of the respondents had knowledge of ultrasound. Breast ultrasound is used primarily to differentiate between a cyst and a solid mass, to explore a palpable abnormality not clearly visible on a mammogram or to obtain a better view of a lesion that cannot be seen in mammogram [23].

## CONCLUSION

The participant had good knowledge about breast cancer with relatively low knowledge about breast cancer screening and practices.

## RECOMMENDATIONS

The management should frequently organize interventional programmes targeting all adult women. Education and Communication materials (IEC) translated in the language that all can understand should be available. Awareness

regarding the screening exercise via media should be sponsored by NGOs.

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**CONFLICT OF INTERESTS:** have not declared any conflict of interests.

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## Appendix I

### Questionnaire.

My name is Nafisa Bunyamin Musa, a Radiographer and a graduate of Bayero University Kano. My self and a team of researchers are conducting a research work titled '**ASSESSMENT OF KNOWLEDGE AND PRACTICE OF BREAST CANCER SCREENING AMONG WOMEN ATTENDING MURTALA MUHAMMAD SPECIALIST HOSPITAL**'. The information you will provide is for research purpose and will be treated confidentially please answer honestly. You are free to withdraw your consent at any given time is you feel you cannot participate in the study.

### SECTION A: SOCIODEMOGRAPHIC CHARACTERISTICS

1. Age (years) (1) 30-35 (2) 36-40 (3) 41-45 (4) 46-50 (5) 51-55 (6) 56-60 (7) 60 and above
2. Marital status: (1) Single (2) Married
3. Occupation: (1) House wife (2) Civil servant (3) Business woman (4) Student
4. Highest level of education (1) No formal education ( ) (2) Primary school completed ( ) (3) Junior Secondary School completed ( ) (4) Senior Secondary School completed ( ) (5) Tertiary school completed ( ) (6) Others (specify) \_\_\_\_\_

### SECTION B: KNOWLEDGE OF BREAST CANCER

5. Have you heard of breast cancer? (1) Yes ( ) (2) No ( )
6. What are your source(s) of information? Tick all that apply. i. Books ( ) ii. Media (TV, Radio, Internet, etc) ( ) iii. Hospital ( ) iv. Lecture ( ) v. Conferences/seminars ( ) vi. Friends ( ) vii. Others (pls. specify) \_\_\_\_\_
7. Has any member of your family been diagnosed of breast cancer? (1) Yes ( ) (2) No ( )
8. If answer to the question above is yes, what is her relationship to you? (1) Mother ( ) (2) Aunt ( ) (3) Sister ( ) (4) Cousin ( ) (5) Others (specify) \_\_\_\_\_

### SECTION C: KNOWLEDGE AND PRACTICE OF BREAST SELF EXAMINATION (BSE)

9. Have you heard of Breast Self Examination (BSE)? (1) Yes ( ) (2) No ( )
10. Do you know that BSE is a useful tool for early detection of breast cancer? (1) Yes ( ) (2) No ( )
11. At what age should BSE be started? (1) From birth ( ) (2) From puberty ( ) (3) From 20 years ( ) (3) From 30 years ( ) (5) After menopause ( ) (6) No idea ( ).
12. How often should BSE be done? (1) Daily ( ) (2) Weekly ( ) (3) Monthly ( ) (4) Yearly ( ) (5) No idea ( ).
13. BSE should be done by: (1) Doctor ( ) (2) Trained Nurse ( ) (3) The individual ( ) (4) Others (Pls. specify) \_\_\_\_\_
14. BSE is done by:
  - i. inspecting the breast in the mirror Yes or No
  - ii. Feeling the breast with the hand Yes or No
  - iii. Feeling the armpit with the hand Yes or No
  - iv. Doing Ultrasound of the breast Yes or No
  - v. no idea Yes or No
15. If you discover any abnormality during BSE, what will you do? (1) Pray over it ( ) (2) Do some laboratory tests ( ) (3) See a doctor ( ) (4) Do nothing ( ).
16. Do you practice BSE? (1) Yes ( ) (2) No ( )

17. If answer to the question above is yes, how often? (1) Weekly ( ) (2) Monthly ( ) (3) Occasionally ( ) (4) Rarely ( ).

**SECTION D: KNOWLEDGE AND PRACTICE OF CLINICAL BREAST EXAMINATION (CBE)**

18. Have you heard of Clinical Breast Examination (CBE)? (1) Yes ( ) (2) No ( )

19. Do you know that CBE is a useful tool for detection of breast cancer? (1) Yes ( ) (2) No ( )

20. How often should CBE be done? (1) Daily ( ) (2) Weekly ( ) (3) Monthly ( ) (4) Yearly ( ) (5) When abnormality is found on BSE ( ) (6) No idea ( )

**SECTION E: KNOWLEDGE OF MAMMOGRAPHY**

21. Have you heard of mammography? (1) Yes ( ) (2) No ( )

22. Is mammography a useful tool for the early detection of breast cancer? (1) Yes ( ) (2) No ( ) (3) Don't know ( ).

23. At what age should mammography be started? (1) From birth ( ) (2) From puberty ( ) (3) From 20 years (s ) (4) From 40 years ( ) (5) After menopause ( ) (6) No idea

**SECTION F: KNOWLEDGE OF ULTRASOUND (USS)**

24. Have you heard of USS ? (1) Yes ( ) (2) No ( )

25. Is USS a useful tool for the early detection of breast cancer? (1) Yes ( ) (2) No ( ) (3) Don't know ( ).

26. How often should USS be done? (1) Weekly ( ) (2) Monthly ( ) (3) Yearly ( ) (4) Every three years ( ) (5) When a lump is found on BSE or CBE ( ) (6) No idea ( ).

Thank you very much for your time and effort. It is very well appreciated.