

Knowledge, Attitude and Practice of Mammographic Screening among Female Staff of a Nigerian University

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Abstract: The incidence of breast cancer has continued to rise among Nigerian women however early detection holds the key to better prognosis. This study aimed to assess the Knowledge, Attitude and Practice of Mammographic Screening among Female Staff of University of Nigeria, Enugu Campus. Academic and non-academic female staff of University of Nigeria Enugu Campus within the age range of 35-64 years who met the inclusion criteria were enlisted into the study. Quota sampling technique was employed to divide the population into seven to cover the six faculties and the service departments. Random sampling was employed to proportionately enlist the respondents to the seven quotas. A total of 220 questionnaires were distributed and 204 finally returned duly completed giving a return rate of 92.7%. Result showed that majority of the respondents (70.1%) has good knowledge of mammographic screening. Majority of the respondents (84.4%) reported willingness to undergo mammographic screening on the recommendation of their physicians. A greater percentage (64.2%) reported their willingness to go for mammographic screening to detect breast cancer and 64.7% were willing to undergo mammography if a lump was palpable on their breasts. Majority of the respondents (79.9%) had never undergone mammographic screening while only 20% had undergone mammographic screening once or more. This showed poor practice of screening mammography despite good knowledge and positive attitude towards it. Conclusion; the results of our study revealed high level of knowledge of mammographic screening and positive attitude to mammographic screening among female staff of University of Nigeria Enugu Campus. There is however poor practice of mammographic screening among these seemingly literate women. It therefore brought to fore other factors not often considered in literature.

Key words: Mammographic screening • Knowledge • Attitude • Practice • Nigeria

INTRODUCTION

Breast cancer is the commonest malignancy among females worldwide including Nigeria [1-4]. It is the leading cause of cancer related deaths and accounts for almost one in every five of all cancer-related deaths among women [5]. Several studies in Nigeria had reported lack of adequate knowledge of breast cancer among women [6, 7]. The inadequate knowledge may be responsible for late presentation of the disease in Nigeria [3, 8, 9]. Breast cancer has been reported to have early onset among Nigeria women [10].

Early detection is the key to prompt treatment and recovery of the patients. It has been documented that the earlier the detection, the better the prognosis [11]. The most widely used screening techniques to enhance early detection of breast cancer are: breast self-examination (BSE), clinical breast examination (CBE) and Mammography. Of the three techniques, mammography was reported to be the best and most reliable method for early detection of breast cancer [12]. Mammography is the cheapest and most available diagnostic technique for both screening and diagnostic purposes. A recent study had recorded poor knowledge of mammographic

screening among civil servants in Benin City, Nigeria [7]. Although ultrasonography is a cheaper imaging modality, it is not ideal for screening purposes [13].

Most studies on breast cancer in Nigeria dwelt on the awareness of the disease and its clinical presentation [3, 7 & 11]. There is need to ascertain the knowledge, attitude and practice of mammography among the literate class in Nigeria. Employees of a university with base teaching hospital have easy access to mammographic screening. This study was therefore conducted to assess the knowledge, attitude and practice of mammography by staff of University of Nigeria, Enugu Campus. It aimed to elucidate the challenges to routine mammographic screening among the population under study.

Subjects and Methods: This study adopted the cross-sectional survey design. It was conducted at University of Nigeria Enugu campus. The respondents were drawn from the six faculties and the seventh group made up of female staff outside the six faculties namely: Works department, Medical Centre, Personnel department, Students' Affairs department and the Library. The faculties were Health Sciences and Technology, Business Administration, Medical Sciences, Environmental Sciences, Law and Dentistry. The target population was women aged between 35 and 64 year. The choice of the age group was predicated on the recommendation of the American cancer society [14]. A total of 220 female staff who met the inclusion criteria were proportionately enlisted into the study. Ethical

approval was obtained from the Ethical Committee of the University of Nigeria Enugu Campus and informed consent was obtained from each of the participants. The instrument for data collection was a researcher-developed semi-structured questionnaire divided into four sections A, B, C and D. Sections A elicited information on some demographic variables while section B sought data on the knowledge of mammographic screening. Section C and D sought data on attitude to and practice of mammographic screening by female staff of University of Nigeria Enugu Campus. The instrument was validated by three experts from Public Health Nursing and Medical Radiography and Radiological Sciences. The reliability of the instrument was carried out through test retest and computed using Cronbach's alpha which yielded a coefficient of 0.83. Data were subjected to descriptive statistics and analyzed using Chi square. Probability value ($p < 0.05$) was considered statistically significant. The instruments were administered to the respondents and confidentiality was assured. A total of 204 instruments were duly completed and returned showing a return rate of 92.7%.

RESULTS

The results presented were based on the 204 questionnaires completed and returned.

Majority of the respondents had tertiary education qualification, were married and within the age range of 40 to 49 years (Table 1).

Table 1: Demographic characteristics of the respondents (n = 204)

Characteristics	Frequency (%)
Age of respondents (years)	
35 - 39	30 (14.7%)
40 - 44	61 (29.9%)
45 - 49	61 (29.9%)
50 - 54	34 (16.7%)
55 - 59	11 (5.4%)
60 - 64	7 (3.4%)
Marital status	
Single	34 (16.6%)
Married	154 (75.5%)
Divorced	5 (2.5%)
Widow	11 (5.4%)
Educational status	
Primary	9 (4.4%)
Secondary	47 (23%)
Tertiary	148 (72.6%)

Table 2: Respondents' knowledge of mammographic screening (M.S) n = 204

Questions on mammographic screening	Yes (%)
I have heard of mammographic screening	143 (70.1%)
Mammographic screening should start below 40yrs	102 (50%)
Mammographic screening should start from 40-49yrs	50 (24.5%)
Mammographic screening should start from 50yrs and above	11 (5.4%)
I don't know when mammographic screening should start	41 (20.1%)
Mammographic screening is for healthy asymptomatic women	82 (40.2%)
M.S is for women who have breast symptom	92 (45.1%)
M.S is for both symptomatic and asymptomatic women	10 (4.9%)
Don't know who M.S is meant for	20 (9.8%)

Table 3: Responses on the attitude towards Mammographic Screening (M.S), n = 204

Questions on attitude	Yes (%)
I will go for M.S on doctor's recommendation	172 (84.3%)
I will go for M.S upon a nipple discharge	9 (4.4%)
I will go for M.S upon a lump on the breast	132 (64.7%)
I will go for M.S upon dimpling of the nipple	0 (0%)
None of the above will make me go for M.S	31 (15.2%)
I will go for M.S to detect breast cancer early	131 (64.2%)
I will not go for M.S since it doesn't detects breast cancer early	12 (5.9%)
I'm not sure if M.S detects early breast cancer	20 (9.8%)
I prefer to be examined by a female radiographer	131 (64.2%)
I prefer to be examined by a male radiographer	32 (15.7%)
Any of them can examine me	41 (20.1%)
I will shun M.S if only male radiographers are available	41 (20.1%)

Table 4: Responses on the practice of mammographic screening (MS), n = 204

Questions on practice	yes %
I have NOT gone for mammographic screening	163 (79.9%)
I have gone for mammographic screening once	29 (14.2%)
I have gone for mammographic screening more than once	12 (5.9%)
I have not gone for M.S for fear of radiation	20 (9.8%)
I just neglect mammographic screening	50 (25.0%)
I have not gone for M.S because of the cost	0 (0.0%)
I have not gone for M.S for religious reasons	10 (4.9%)
I have not gone for M.S because of inaccessibility of machines	22 (10.8%)
I have not gone for M.S because I don't know about it	61 (29.9%)

Table 5: Responses on the knowledge of breast cancer and the associated risk factors

	Yes %
I have heard of breast cancer	204 (100%)
I know that breast cancer is hereditary	52 (25.5%)
I don't know any risk factor of breast cancer	90 (44.1%)
I know at least one risk factor of breast cancer	41 (20.1%)
I know more than one risk factor	21 (10.3%)

Majority of the respondents (70.1%) have good knowledge of mammographic screening. On when to start mammographic screening, half of the respondents (50%) reported that mammographic screening should start below the age of 40yrs. A good percentage of the respondents (40.2) believed that mammographic screening was for women who have breast symptoms (Table 2).

Majority of the respondents (84.3%) reported willingness to undergo mammographic screening on the recommendation of her doctor. A greater percentage (64.2%) reported their willingness to go for mammographic

screening to detect breast cancer and 64.7% were willing to undergo mammography if a lump was palpable on their breasts. A female mammographer was likely to influence the attitude of the respondents (64.2%) to undergo mammographic screening (Table 3).

A total of 79.9% of the respondents have not undergone mammographic screening while only 20% have had mammographic screening once or more (Table 4).

All the respondents (100%) have knowledge of breast cancer but only 55.9% could identify one or more risk factors (Table 5).

DISCUSSION

In this study, 72.6% of the respondents had tertiary education and therefore can be described as literate population. Majority of the respondents (59.8%) were within the age range of 40 to 49 years. This is the age range recommended by the American Cancer Society for women to undergo annual clinical breast examination (CBE) and mammography [15].

Our study showed that majority (70.1%) of the respondents had knowledge of mammography and 65.7% have good knowledge of mammography. This is contrary to the findings of Kiguli-Malwadde *et al.* [16] and Aylin *et al.* [17] in their studies in which majority of the respondents have no knowledge of mammography. Our results showed that educational status was significantly associated ($p < 0.05$) with knowledge of mammographic screening while age and marital status showed no association ($p > 0.05$).

On attitude, majority of the respondent (84.3%) will undergo mammographic screening if they were directed by their physicians, 64.2% will voluntarily go for mammographic screening while 64.7% will go for mammographic screening if they noticed a lump in their breasts. The positive attitude in our study may be related to the high educational status of the respondent. Our result however is contrary to that of Kiguli-Malwadde *et al.* [16], Aylin *et al.* [17] and Okobia *et al.* [18] where majority of the respondents had negative attitude to breast cancer and screening probably due to low educational status of their respondents.

Majority of the respondents (79.9%) had never undergone mammographic screening while only 20% had undergone mammographic screening once or more. This showed poor practice of screening mammography among the respondents despite good knowledge and positive attitude towards it. Major reasons for not undergoing screening mammography were lack of awareness (29.9%), negligence (25%), inaccessibility (10.8%), religious belief (10%) and fear of radiation (9.8%). Cost was not a factor because the respondents were under the National Health Insurance Scheme which they believed will cover the cost of screening mammography. There is therefore need for awareness campaign and sensitization workshops to win the confidence of the women to undergo mammographic screening and dispel the fear of radiation and possible cultural and religious biases.

All the respondents (100%) have knowledge of breast cancer but only 59.9% could identify one or more risk factors. This level of knowledge was significantly

associated ($p < 0.05$) with educational status but not associated with age or marital status ($p > 0.05$). This finding is in contrast with Okobia *et al.* [18] where they reported poor knowledge of the risk factors of breast cancer among their study participants.

CONCLUSIONS

The results of our study revealed high level of knowledge of mammographic screening and positive attitude to mammographic screening among female staff of University of Nigeria Enugu Campus. There is however poor practice of mammographic screening among these seemingly literate women. It therefore brought to fore other factors not often considered in literature. There should be strong emphasis on media campaign and awareness seminars in print and electronic forms. Also awareness campaign should be undertaken in religious gatherings, antenatal clinic and social event centres. Non-governmental organizations and women groups should take the campaign to rural areas as well as urban centres. These measures will ensure early detection of breast cancers and will lead to reduction in the morbidity and mortality associated with breast cancer.

REFERENCES

1. Parkin, D.M., F. Bray, J. Ferlay and P. Pisani, 2005. Global Cancer Statistics 2002. *CA cancer J. Clin.*, 55(2): 74-108.
2. Ikpat, O.F., I. Kuopoo, R. Ndoma-Egba and Y. Collen, 2002. Breast cancer in Nigeria and Finland: epidemiological, clinical and histological comparison. *Anticancer Res.*, 22: 3005-3012.
3. Okobia, M.N. and U. Osime, 2001. Clinicopathological Study of Carcinoma of the Breast in Benin City. *Afr. J. Reprod. Health*, 5(2): 56-62.
4. Adebamowo, C.A. and O.O. Ajayi, 2000. Breast Cancer in Nigeria. *West African Journal of Medicine*, 19(3): 179-191.
5. Ramirez, A.J., A.M. Westcombe, C.C. Burgess, S. Sutton, P. Little Johns and M.A. Richards, 1999. Factors Predicting delayed Presentation of Symptomatic Breast Cancer: A Systematic Review. *Lancet*, 353(9): 1127-1131.
6. Uche, E.E., 1999. Cancer Awareness among a Nigerian Population. *Trop. Doct.*, 29(1): 39-40.
7. Osime, O.C., O. Okojie, E.T. Aigbekaen and I.J. Aigbekaen, 2008. Knowledge attitude and practice about breast cancer among civil servants in Benin City, Nigeria. *Annan Afr Med.*, 7(4): 192-197.

8. Ihekwa, F.N., 1992. Breast Cancer in Nigerian Women. *Br. J Surg*, 79 (8):771-775.
9. Anyanwu, S.N., 2000. Breast cancer in Eastern Nigeria: a ten year review. *West Afr J. Med.*, 19(2): 120-125.
10. Madong, B.M., P.O. Obekpa and K.S. Orkar, 1998. Histopathological pattern of breast diseases in Jos Nigeria. *NigPostGrad Med J.*, 5: 167-170.
11. Odusanya, O.O. and O.O. Tayo, 2001. Breast Cancer Knowledge, Attitude and Practice among Nurses in Lagos, Nigeria. *ActaOncol*, 40(7): 844-848.
12. Tabar, L., G. Fagerberg, S.W. Duffy, N.E. Day, A. Gad and O. Grontoft, 1992. Update of the Swedish two-country program of mammographic screening for breast cancer. *Radio Clin North Am*, 30: 187-201.
13. Okeji, M.C., K.K. Agwu, K.K. Agwuna and I.C. Nwachukwu, 2015. Sonographic Features and Its Accuracy in Differentiating between Benign and Malignant Breast Lesions in Nigerian Women. *World Journal of Medical Sciences*, 12(4): 370-374.
14. Oeffinger, K.C., E.T.H. Fontham, R. Etzioni, A. Herzig, J.S. Michaelson, T.Y. Shih, L.C. Walter, T.R. Church, C.R. Flowers, S.J. LaMonte, A.M.D. Wolf, C. DeSantis, J. Lortet-Tieulent, K. Andrews, D. Manassaram-Baptiste, D. Saslow, R.A. Smith, O.W. Brawley and R. Wender, 2015. Breast Cancer Screening for Women at Average Risk: 2015 Guideline Update From the American Cancer Society. *JAMA.*, 314(15): 1599-1614.
15. American Cancer Society recommendations, 2015. Early breast cancer detection in women without breast symptoms. www.cancer.org.
16. Kiguli-Malwadde, E., M.A. Gonzaga, B. Francis and G.M. Kawooya, 2010. Current Knowledge, Attitudes and Practices of Women on Breast Cancer and Mammography at Mulago Hospital. *The Pan Africa Medical Journal*, 5(16): 9.
17. Aylin, Y., D. Bumin, A. Murat, H. Lya, A. Ramazan and H. Alpay, 2005. Knowledge about breast cancer and mammography in breast cancer screening among women awaiting mammography. *Turk J. Med. Sci.*, 35: 35-42.
18. Okobia, M.N., C.H. Bunker, F.E. Okonofua and U. Osime, 2006. Knowledge, attitude and practice of Nigerian women towards breast cancer: A cross-sectional study. *World Journal of Surgical Oncology*, 4: 11.