Original Article

EXAMINATION OF BREAST CANCER SCREENING BEHAVIOUR AMONG FEMALE SECONDARY SCHOOL TEACHERS IN RIVERS STATE

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Abstract

Background: Female secondary school teachers play a very important role in creating basic awareness about breast cancer screening among their students.

Objective: To examine breast cancer screening behaviour among female secondary school teachers in Rivers State.

Materials and Methods: This was a descriptive survey conducted among female secondary school teachers in Rivers State. A multistage sampling technique was used to select 720 participants from ten LGAs in the two areas (upland and riverine area) of the State. A validated semi-structured questionnaire with a reliability coefficient of 0.85 for screening practice was used to collect data. Data collected were analysed using IBM SPSS Statistics version 21 and presented in tables and percentages.

Result: About 60% of female secondary school teachers in Rivers State had a low extent of breast cancer screening practice.

Conclusion: Female secondary school teachers in Rivers State have a poor breast cancer screening behaviour.

Keywords: Breast cancer, Female teachers, Screening and screening behaviour.

Cite this article Inyang ME, Madume AK, Kua PL. Examination of Breast Cancer Screening Behaviour Among Female Secondary School Teachers in Rivers State. Yen Med J. 2022;4(3):67–73.

INTRODUCTION

The breast is a mammary gland, it lies within the pectoral region. Breast cancer is a disease that affects the breast and it occurs due to the over proliferation of breast cells. Screening is the examination of individuals without symptoms of any form, in order to detect disease or find out if they are at increased risk of a specific disease. It is often the first step in making a definitive diagnosis. The purpose of breast cancer screening is to find women who have breast cancer before the appearance of any symptom, in order to offer treatment early. It aims at detecting the disease at an early stage to improve treatment outcome.[1,2] The screening practice of individuals is very important for the effective control of breast cancer. Early detection of breast cancer which is key to positive treatment outcome can be achieved through good screening practice. Early detection of breast cancer through regular screening activities such as mammography/breast self-examination (BSE), clinical breast examination (CBE) and magnetic resonance imaging (MRI) have been found to decrease mortality rates by 25-30%.[3]

Screening mammography is a low dose X-ray examination modality with high resolution that reveals changes in the breast that may be cancerous.[4,5] Breast self-examination as a breast cancer screening method is a process whereby women examine their breast regularly to detect any abnormal lumps or swelling in order to seek prompt medical attention. It is a noninvasive adjuvant screening method for detection of early breast cancer.

When mammography screening facilities are not available in the rural and poor urban areas, breast self-examination becomes a useful measure for the detection of breast cancer. Though the procedure of breast self-examination is simple, and requiring little time, it can only be practiced with the right attitude in order to sustain it and achieve the desirable goal of early diagnosis and treatment before metastasis, which is a prerequisite for better outcome. Breast self-examination is an important method for the prevention of breast cancer when it is being carried out accurately and appropriately. Breast self-examination carried out once monthly between the 7th and 10th day of menstrual cycle helps individuals in detecting breast cancer at the early stages of growth when there is low risk of spreading, ensuring a better prognosis when treated.[6,7] A woman who correctly performs BSE monthly is more likely to detect a lump (if any) at early stage of breast cancer development.[8,9]

Clinical breast examination is a breast cancer screening method which involves a thorough physical examination of the breast by a medical practitioner. The physical examination include; visual inspection, palpation to examine for breast tenderness, breast lump and axillary lymph nodes.[10] Magnetic resonance imaging as a form of breast cancer screening method utilizes magnetic fields to create detailed cross-sectional images of tissue structures, providing very good soft tissue contrast.[4,5,6] MRI utilizes magnetic fields to cause changes in the movement of protons in fat and water and creates images of the breast by measuring the differences in tissue relaxation characteristics. MRI may particularly be helpful in certain situations. The use of MRI for breast cancer detection is based on the concept of tumor angiogenesis or neo-vascularity.[11]

There are several factors that can influence breast cancer screening behaviour, these factors include; lack of knowledge about where to go for screening, inconvenience, cost of screening, feeling embarrassed to seek such service, worry, fear of the screening outcome, unwillingness to adhere to doctors' recommendations, fear of pain from the screening procedure, provider unavailability, cultural beliefs about fate, the absence of support from friends; family members and spouse, absence of signs of breast tumour, unavailability of screening facilities. Others are not knowing the breast self-examination technique, not trusting one's own examination, concerns about lack of recognition, and forgetting the schedule of BSEs.[12-14] In addition, socioeconomic status, distance of screening facilities, age of the individual, health and disability, lack of breast cancer awareness, stigmatization, beliefs about breast cancer, religion and unemployment can also influence breast cancer screening.[15,16] Women of higher socioeconomic status participate more in breast cancer screening programmes than women of low socioeconomic status.[15,16]

The access factor is a multidimensional concept based on five major dimensions which are; availability of health facilities, accessibility of care facilities, affordability of health services, accommodation and acceptability.[17] Availability and accessibility are spatial in nature. Availability is about the handiness of health care facilities and the adequacy of supply of health care providers while accessibility is about travel barriers to health care facilities and health care providers. The travel obstacles include; travel distance to health facilities, cost and duration. When the locations of the breast cancer screening sites are not accessible for women, especially those living in low-income countries, they will not develop the interest of subjecting themselves to breast cancer screening. For example, most mammography screening centres are located in far areas and they are not accessible for people living in rural areas.[17,18] Fear of costs of screening has been an obstacle to participation in screening programme among women with low income.[19] Most women who are unemployed do feel unwilling to ask for financial assistance from their husband and kids to go for screening.[20,21,22]

Language barrier is also one of the factors that determine the participation of individuals in screening programme. Many women face significant language difficulties when they access health facilities, including seeing practitioners and attending a mammography screening programme. This barrier can keep women away from learning about programmes for the early detection of breast cancer. Some women, who do not understand certain general language perfectly, find it difficult to explain their health concerns to their health care providers in deep detail. Many also lacked confidence about seeking help from health professionals as they are confused by medical

terminologies. Most require an interpreter to explain their concerns to the providers and to understand what the providers' offers are.[23]

There are some benefits of participation in breast cancer screening and these include early detection of breast cancer. Treatment for early-stage cancer is mild with less complication and higher rates of successful treatment. Successful treatment will prevent the occurrence of advanced cancer.[1] In Nigeria, like other underdeveloped countries, breast cancer cases are characterized by late presentation of patients at advanced stages of the illness when nothing rewarding can be done in order to prevent the death of the patient.[24,25] Female secondary school teachers play a very important role in creating basic awareness about breast cancer screening among the younger generation. Previous school-based studies highlighted the knowledge and practice of breast cancer screening among female secondary school teachers.[3,26] This study sought to examine breast cancer screening behaviour among female secondary school teachers in Rivers State.

METHODOLOGY

This was a descriptive survey conducted in secondary schools in Rivers State, Nigeria. Rivers State is one of the 6 states in the south-south region of Nigeria. There are both government owned and privately owned secondary schools in Rivers State spread across the local government areas (LGAs). The study population were female teachers in government secondary schools in Rivers State. Ethical approval and a letter of introduction was obtained from the Department of Human Kinetics Health and Safety Studies, Ignatius Ajuru University of Education, Rumuolumeni, Port Harcourt.

A minimum sample size of 381 was derived for the study using Taro Yamane formula[27] as follows:

Sample size, $n = N/((1+Ne^2))$

Where N = Population size = 7939

e = precision/level of significance = 0.05

$$n = \frac{7939}{1 + 7939(0.05)^2}$$

$= 380.8130 \sim 381$

A multistage sampling technique which included cluster sampling technique, simple random sampling technique and purposive sampling techniques was used to select respondents. In the first stage, the study area was clustered into two (upland and riverine area). Upland area had fourteen (14) LGAs and four hundred and forty (440) government secondary schools with six thousand, eight hundred and twenty-four (6,824) female teachers. The riverine area consisted of nine (9) LGAs and one hundred and forty-six (146) government secondary schools with one thousand, one hundred and fifteen (1,115) female teachers. In the second stage, five (5) LGAs were randomly selected from each of the clustered areas through balloting (with non-replacement method). The selected LGAs were Tai LGA, Ahoada West LGA, Obio/Akpor LGA, Etche LGA, Ikwere LGA, Ogu Bolo LGA, Okrika LGA, AkukuToru LGA, Abua/Odual LGA and Degema LGA. In the third stage, all the female teachers in the government secondary schools in each of the selected LGA, who were capable of responding and who gave consent to participate were selected. This eventually resulted in a final sample size of 720.

Permission was sought to carry out the research through the letters to the heads/principals of the schools. The instrument for data collection was a semi-structured questionnaire titled Examination of Breast Cancer Screening Behaviour Questionnaire (EBCSBQ). The aim and procedure of the research was explained to the teachers and consent obtained from them before administering the questionnaires. The questionnaire was administered directly to the respondents by the researcher with the help of two experienced research assistants. Instructions regarding the filling of the instrument were intensively explained to the respondents, and the filled instruments were collected on the spot. A total number of 720 copies of questionnaire were administered and retrieved with a return rate of 100%. It took an hour to fill a questionnaire, and two and half months to gather data.

The data collected were entered into a spreadsheet and cleaned for easy analysis, it was then transferred to IBM SPSS Statistics version 21 for descriptive analysis and results presented using percentages.

RESULTS

Table 1 shows that generally, majority of the respondents practiced breast cancer screening to a low extent (52.2%). Only 47.2% of the respondents did perform breast self-examination 7-10 days after their menstrual cycle, 51.3% had never performed breast self-examination ever, and 50.7% had not gone for clinical breast examination for breast cancer detection. Also, 53.5% of the respondents never had a mammography. Thus, overall female secondary school teachers in Rivers State had poor breast cancer screening behaviour.

Table 1: Screening behaviour of female secondary school teachers

S/N	Screening Practice	Yes	No	Population Verdict
1	Have you ever performed a breast self-examination?	351 (48.7%)	369(51.3%)	**Low Extent**
2	Do you practice breast self-examination 7-10 days after your menstrual cycle?	340(47.2%)	380(52.8%)	**Low Extent**
3	Have you ever gone for clinical breast examination for breast cancer detection?	355(49.3%)	365(50.7%)	**Low Extent**
4	Do you go for clinical breast examination once every three years?	350(48.6%)	370(51.4%)	**High Extent**
5	Do you go for clinical breast examination annually?	351(48.7%)	369(51.3%)	**Low Extent**
6	Have you ever had a mammography screening?	335(46.5%)	385(53.5%)	**Low Extent**
7	Did you have mammography at least once in three years?	329(45.7%)	391(54.3%)	**Low Extent**
	Population Screening Behaviour	**47.8%**	**52.2%**	**Poor**

DISCUSSION

The findings of the study in Table 1 indicated that secondary school female teachers in Rivers State had poor breast cancer screening behaviour. The findings of this study were not expected, thus surprising because the respondents were expected to have a good screening behaviour due to their educational status. The findings of this study are similar to that of Parsa et al,[28] who carried out a study on factors associated with breast self-examination among Malaysian female teachers who had a low rate of practice of breast self-examination. Only 19% of the women performed BSE regularly. Izanloo et al[29] conducted a study on knowledge and attitude of women regarding breast cancer screening test in eastern Iran and found that the attitude of Iranian women towards breast cancer screening was poor and the lack of knowledge of the respondents was the main barrier to their participation in breast cancer screening practices. More than 84% of the respondents were not well informed about breast cancer and its screening tests. Korkut,[30] undertook a study on assessment of knowledge, attitudes, and behaviours regarding breast and cervical cancer among women in western Turkey and found that almost all the women (95.5%) had inadequate frequency of performing screening tests. Birhan et al,[9] conducted a study on practices of breast self-examination and associated factors among female Debre Berhan university students and found that the respondents had poor screening behaviour. Nde et al,[31] reported on the knowledge, attitude and practice of breast self-examination among female undergraduate students in the University of Buea, where majority of female students did not practice breast self-examination as a screening method for early detection of breast cancer. They also found that majority of the female students had never been to any health facility for clinical breast examination; only 3% performed BSE regularly.

The findings of the study differ from that of Sreedharan et al[32] who conducted a study on breast self-examination: knowledge and practice among nurses in United Arab Emirates, where the nurses had a satisfactory knowledge (96.1%) of BSE and this was reflected in their practice of BSE. A high proportion (84.4%) of the respondents, reported performing BSE. Yakubu et al[33] undertook a study on knowledge, attitudes, and practice of breast self-examination among female nurses in Aminu Kano teaching hospital, Kano, Nigeria, where the nurses were

aware of breast self-examination, with 91.2% practicing it, but there was appallingly poor knowledge of its method, timing, and frequencies among the female nursing staff included in the study. The variation between the finding from this study and that of Sreedharan et al[32] and Yakubu et al[33] could be due to the profession of the respondents who were nurses, and nurses are likely to have more knowledge on general health than teachers.

CONCLUSION

Based on the findings of the study, it was concluded that female secondary school teachers in Rivers State had poor breast cancer screening behaviour.

AUTHOR CONTRIBUTIONS

Author IME designed the study and wrote the protocol which was reviewed by all authors; led data collection and analysis and wrote the initial draft of the manuscript. Authors MAK and KPL managed literature search and attended all manuscript revisions. All authors read and approved the final draft.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

FUNDING

This research received no specific grant from any funding agency in the public, commercial or not-for-profit sectors.

ETHICAL APPROVAL

Ethical approval was obtained from the Department of Human Kinetics Health and Safety Studies, Ignatius Ajuru University of Education, Rumuolumeni, Port Harcourt.

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