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Original Research Article

Knowledge and screening practices for breast cancer among women of reproductive age in Akodo town, Lagos, Nigeria

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ABSTRACT

Background: Breast cancer (BC) is a major global health concern, especially in developing regions like Nigeria. This study addresses the knowledge gap, screening practices, and associated factors related to BC among women of reproductive age in Akodo town, Lagos, Nigeria. It is crucial to explore this aspect of women's health as early detection through screening is vital in reducing mortality rates associated with BC.
Methods: A cross-sectional descriptive survey design was adopted for this study using women of reproductive age living in Akodo town. A total of 320 respondents was recruited through multistage sampling technique. SPSS was used for data analysis.
Results: Most respondents (232, 80%) were aware of BC, of which only 122, (52.6%) knew about at least one screening method. About half, 125 (53.9%) had good knowledge of BC. Only 25% had good screening practice of BC, with 47 (84.5%) having done self-breast examination (SBE) only, 2 (3.4%) had had clinical breast examination (CBE) only, 6 (10.3%) had done both SBE and CBE, while only one (1.7%) had ever had a mammogram. Knowledge of screening methods as well as age below 40 years [OR=2.76; 95% CI (1.00-7.58), OR=2.97; 95% CI (1.09-8.11)] were associated with good screening practices.
Conclusions: Though awareness about BC has significantly increased, screening practices is still very low. Hence, knowledge about the various screening practices needs to be scaled up, and probably incentives should probably be given to those who go for screening.

Keywords: BC, Knowledge, Practice, Screening methods

INTRODUCTION

Breast cancer (BC) poses a significant global health challenge, impacting millions of women and their families. Of particular concern in women's health is its prevalence as the most diagnosed cancer among women of reproductive age in Nigeria. According to 2020 GLOBOCAN estimates, BC was reported as the leading cause of cancer-related deaths in Nigeria, accounting for 18.1% of all cancer deaths.[1]

Historically, BC incidence in Nigeria has been low, but current trends indicate a rise attributed to urbanization and lifestyle changes.[2] This increase is associated with demographic, socioeconomic, and psychosocial factors that significantly shape health behaviours and healthcare-seeking practices.[3] Challenges such as insufficient health services, high service costs, geographical distance to healthcare centres, lack of awareness, and sociocultural beliefs, including herbal remedies, collectively hinder the adoption of screening practices in developing countries like Nigeria.[4,5]

BC screening employs various methods to detect cancerous cells or abnormalities in breast tissue at an early stage, often before symptoms appear. These methods include breast self-examination (BSE), clinical breast examination (CBE), breast ultrasound, mammography and breast magnetic resonance imaging (MRI).[6,7]

Effective early detection through screening plays a crucial role in enhancing survival rates and treatment outcomes. As we delve into the nuanced landscape of BC screening, a critical aspect to explore is the practice and willingness of women of reproductive age to undergo screening. This demographic, typically aged between 15 and 49, forms a pivotal segment where awareness, access, and individual choices significantly influence trajectory of BC outcomes.

Despite the high incidence of BC in Nigeria, studies have shown a lack of awareness and knowledge about the risk factors and symptoms of BC among Nigerian women in respective of locations, and this invariably contributes to delayed diagnosis and poorer treatment outcomes.[8-10] Though the world health organization emphasizes that adhering to existing evidence-based preventive strategies and minimizing exposure to modifiable risk factors can prevent between 30% and 50% of cancer deaths, many women in reproductive age group often neglect preventive measures and early screening due to various cultural, social, and economic barriers.[11,12] As a result, BC is often diagnosed at advanced stages when treatment options are limited, leading to higher mortality rates.

Effectively addressing this issue requires implementing comprehensive strategies aimed at enhancing awareness of BC, encouraging regular screening practices, and tackling the underlying factors associated with the problem. Therefore, the objective of the study was to address the knowledge gap, screening practices, and associated factors related to BC among women of reproductive age in Akodo town, Ibeju Lekki local government area (LGA) of Lagos State.

METHODS

The study period was from August 2021 to October 2021 among women of reproductive ages (18-49 years) in Akodo town, Ibeju-Lekki LGA, Lagos State, Nigeria. The town has ten wards, and the people engage mainly in fishing activities. Cross-sectional descriptive survey design was adopted for study. Women aged 18-49 years who were sexually active and had lived in Akodo for not less than three months were included in study, while women who had been diagnosed with BC were excluded.

A 24.2% prevalence of SBE, derived from a prior study, was utilized to determine the sample size, with an additional 10% accounting for potential non-responses.[13] This calculation yielded a sample size of 320. The selection of respondents employed a multistage sampling technique. In the initial stage, two wards were randomly chosen from the ten wards using a simple random sampling method with the ballot technique. Subsequently, two communities were randomly selected from the two chosen wards. Households in each community were numbered, and systematic random sampling was employed to determine the first household. Within each household, one respondent was selected for participation in the study.

To assess knowledge of BC and its screening methods, a total of 18 questions were asked, and for each correct answer, a score of "1" was given, while "0" was given for every incorrect answer. The mean score was calculated and scores ≥the mean score were categorized as good knowledge while scores below the mean score were categorized as poor knowledge. Respondents who had practiced any screening method in the questionnaire were categorized as having "good practice", In contrast, those who have never used any screening methods were categorized as having "poor practice".

The data was entered and analysed using SPSS version 22 software and then summarized using proportions, mean, and standard deviation. Bivariate analysis was conducted using the Chi-square test to test the association between categorical variables, while multivariable logistic regressions were performed to eliminate confounding factors and determine good knowledge and screening practice predictors. The p value was set at a significant level of 5% (0.05).

RESULTS

Socio-demographic characteristics of study population

Three hundred and twenty questionnaires were administered, but 290 were retrieved, giving a response rate of 90.6%. A more significant proportion of respondents, 117 (40.3%), were 30 years and below, while 64 (22.1%) were above 40 years. The majority of the respondents, 168 (57.9%) were Christians, while the rest, 122 (42.1%) were Muslims, 216 (71.0%) had secondary school education and above, 45 (15.5%) attended primary school, while 39 (13.4%) had no formal education. Of all respondents, 193 (66.6%) were married while 52 (17.9%) were single (Table 1).

Knowledge of BC and its screening methods

The majority of the respondents (232, 80%) were aware of BC, and their primary source of information was the hospital, followed by the media. Prolonged use of oral contraceptives (47.9%), smoking and alcohol intake (37.9%), being female (37.6%), and having a positive family history (33.4%) were the most reported risk factors for BC by respondents. In comparison, breast lump was mentioned by majority (63.8%) as being common sign and symptom of BC (Table 2). Among respondents aware of BC, 122 (52.6%) knew about at least one screening

method (Figure 1). Overall, 125 (53.9%) had good knowledge, while 107 (46.1%) had poor knowledge.

Practices of BC screening methods

Among respondents aware of BC, 55 (23.7%) had done a self-breast examination, 8 (3.4%) had had clinical breast examination, and one (0.4%) had ever had mammogram done (Figure 2). Overall, 25% women had good practice, while 75% had poor practice. Of those with good practice, 47 (84.5%) had done SBE only, 2 (3.4%) had had CBE only, 6 (10.3%) had done both SBE and CBE, while only 1 (1.7%) had ever had a mammogram done.

Willingness to go for screening

Among respondents who were aware of BC, 200 (86.2%) were willing to go for screening, while 32 (13.8%) were not ready to go for screening.

Factors associated with the practice of BC screening

Bivariate and logistic regression analysis was carried out to determine the association between socio-demographic characteristics and respondent's knowledge and practice of BC screening. Age, family history of BC, and knowledge of BC screening methods were found to be significantly associated with the practice of BC screening. However, only age and knowledge remained significant on binary logistic regression. Those ≤30 years and those between 31 and 40 years were about three times more likely to have good practice of BC screening compared to those above 40 years of age. **[**OR=2.76; 95% CI (1.00-7.58), OR=2.97; 95% CI (1.09-8.11)]. Those who had poor knowledge about the screening methods were 81% less likely to have good practice compared to those who had good knowledge of the BC screening methods. **[**OR=0.19; 95% CI (0.09-0.41).

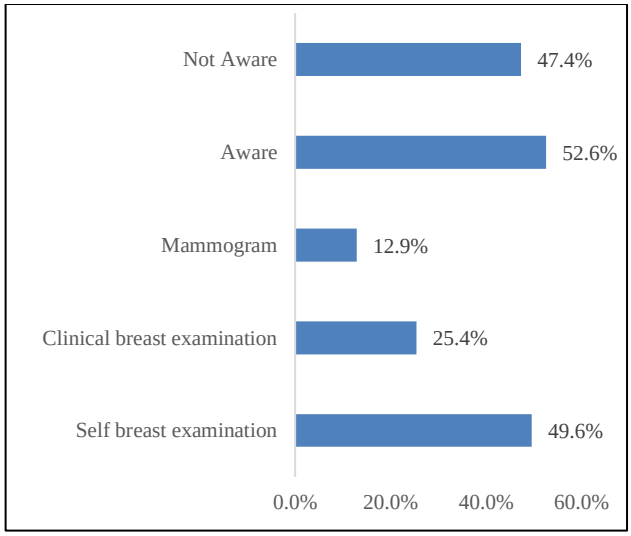

Figure 1: Awareness of breast cancer screening methods (multiple responses).

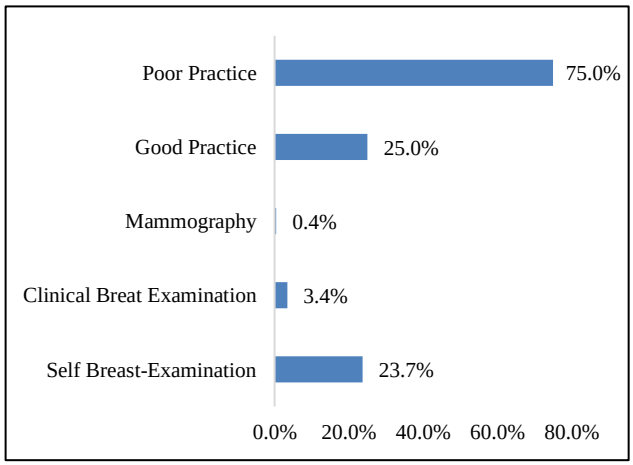

Figure 2: Screening practice for BC.

Table 1: Socio demographic characteristics.

Variables	N	Percentage (%)
Age (in years)		
≤30	117	40.3
31-40	109	37.6
> 40	64	22.1
Marital status		
Married	193	66.6
Single	52	17.9
Divorced	21	7.2
Widowed	24	8.3
Level of education		
No formal education	39	13.4
Primary	45	15.5
Secondary	98	33.8
Tertiary	108	37.2
Religion		
Christianity	168	57.9
Islam	122	42.1

Continued.

Variables	N	Percentage (%)
Family history of breast illness		
Yes	15	6.5
No	217	93.5
Occupational status		
Students	34	11.7
Unemployed	37	12.8
Civil servants	61	21.0
Artisan	58	20.0
Traders	100	34.5

Table 2: Knowledge of breast cancer and its screening methods.

Variables		N	Percentages (%)
Awareness of breast cancer	Yes	232	80.0
	No	58	20.0
Signs and symptoms	Swelling / breast lump	185	63.8
	Breast pain, redness and engorgement	178	61.4
	Nipple discharge	171	59.0
	Change in breast size / shape	182	62.8
Risk factors	Late age of pregnancy	63	21.7
	Prolong use of oral contraceptives	139	47.9
	Smoking cigarette and alcohol intake	110	37.9
	Positive family history	97	33.4
	Little or no breast feeding	69	23.8
	Early menarche/late menopause	47	16.2
	Treatment using radiation therapy	73	25.2
	Overweight/obesity	24	8.3
	Lack of exercise	20	6.9
	Fatty diet	41	14.1
	Being a female	109	37.6
	Old age	33	11.0
	DES (Diethylstilbestrol) exposure	78	26.9
Level of knowledge	Poor	107	46.1
	Good	125	53.9

Table 3: Predictors breast cancer screening practices.

Variables	AOR	P value	95% confidence interval	
			Lower	Upper
Age (in years)				
≤ 30	2.755	0.050	1.002	7.578
31-40	2.974	0.033	1.091	8.111
>40	(Ref)			
Knowledge				
Good	(Ref)			
Poor	0.194	0.000	0.092	0.408
Family history				
Yes	3.122	0.056	0.973	10.015
No	(Ref)			

DISCUSSION

This study revealed that a large proportion of respondents (80%) were aware of BC before the conduct of this study. This is in tandem with a systematic review done by Agodirin et al in which a weighted percentage of 80.7% was obtained but much lower when compared to the studies conducted amongst female students of a tertiary institution in South-South Nigeria and among healthcare workers in Delta State, Nigeria.[14-16] This, however, shows that the awareness level of BC is high among women in Akodo town and the country at large.

Hospitals and the media were the primary sources of information about BC. Consistent with our results, studies done in Lagos and Imo States found that hospitals and media were primary sources of information for BC awareness.[17,18] This finding underscores the critical role of healthcare institutions and mass media in disseminating information about BC and the potential for leveraging these channels to enhance further awareness.

Although, it is encouraging to see that respondents were able to identify some common risk factors such as prolonged use of oral contraceptives, smoking, alcohol intake, being female, and having a positive family history as well as the recognition of breast lumps as a common sign and symptom of BC, it is of concern that nearly half of the respondents had poor knowledge of BC. Though risk factors, signs and symptoms play a crucial awareness factor, as early detection often begins with individuals recognizing changes in their own bodies, there is the need for ongoing and targeted education campaigns aimed at improving knowledge of BC among women in Akodo town and the general populace.

Our study reveals suboptimal practices related to BC screening, with only 1.7% of the respondents having ever had a mammogram. While the finding of 1.7% for mammograms is worrying, it is heartening to note that this is still an improvement compared to a similar study in Ethiopia, where none of the respondents had done a mammogram.[19] While self-breast examination is the most common method adopted, the low utilization of mammography, an effective early detection tool, is a cause for concern. This is likely connected to the high cost of mammography and the low socioeconomic status of the majority of the citizenry.

Age and positive family history were found to significantly influence screening practices, with younger individuals (those below 40 years) and those with a family history of BC demonstrating better practices, however no statistically significant association was found on logistic regression for family history. This is in contrast to findings by Seiffert et al in which patients with a family history of BC performed more screening procedures than patients without a positive family history.[20] This could be related to the small number of respondents with good screening practice. Our findings suggest that younger age groups are more proactive in practicing BC screening, possibly due to increased awareness or a perception of personal vulnerability.

In addition, the study revealed that good knowledge of BC and its screening methods correlates with improved screening practices, emphasizing the importance of targeted educational interventions on behavioural change and improving screening practices. This is similar to findings by Dibisa et al in a study conducted in Eastern Ethiopia, where women's knowledge of BC risk factors and its screening methods were identified as essential factors for BC screening practice.[19]

The study has notable limitations. Firstly, reliance on self-reported data introduces the possibility of social desirability and recall bias, potentially influencing the accuracy of responses. Secondly, the cross-sectional design limits the ability to establish causal relationships or observe changes in knowledge and practices over time. Additionally, the study's focus on a specific geographic location may restrict the generalizability of findings to other regions with different sociodemographic characteristics and healthcare access.

CONCLUSION

In conclusion, this study contributes to BC awareness, knowledge, and screening practices among women of reproductive age in Akodo, Ibeju Lekki LGA, Lagos State. The findings provide valuable insights into the factors influencing this demographic's knowledge levels and screening behaviors. The identified predictors, particularly age and knowledge, offer essential guidance for targeted interventions to improve screening outcomes. This research enhances our understanding of the current situation and lays the foundation for informed public health strategies. The study emphasizes the need for culturally sensitive education campaigns and interventions addressing specific screening barriers, contributing to advancements in BC prevention and early detection efforts locally and potentially informing strategies in similar settings globally.

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