ORIGINAL ARTICLE

Assessment of culture as a determinants of breast cancer screening among women of child bearing age in Ogun state, Nigeria

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ABSTRACT

This study assessed culture belief as a factor in breast cancer screening among childbearing-age Nigerian women in Ogun State. This was achieved by using an ex post facto study design. Using a multi-phase sample process that included proportionate sampling, systematic sampling, and simple random sampling, 384 women of reproductive age were chosen from the community. The study's instrument was a structured questionnaire created by the researcher and pilot tested using the Cronbach Alpha reliability test, yielding a value of 0.798. After the data collection, out of 384 questionnaire administed, 382 copies of questionnaires were valid for the study because one copy of questionnaire is invalid. The findings showed that among women of childbearing age in the southwest region of Nigeria, culture was a significant determinant of breast cancer screening t (381) = 5.133, $p < 0.05$). The findings demonstrated that among women of reproductive age in Ogun State, Nigeria, culture played a role in breast cancer screening. The conclusion suggested, among other things, that the government and governmental organisations should work twice as hard to maintain public awareness of breast cancer screening through community campaigns and the media.

Keywords: culture, detaminant, breast cancer screening, women of child bearnig age.

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INTRODUCTION

Global statistics show that the annual incidence of breast cancer is increasing, and that this increase is occurring more quickly in countries with historically low incidence rates. One of the main causes of cancer-related fatalities in the majority of developing countries is breast cancer.

Furthermore, the most common cancer in Nigeria is breast cancer. According to [1], western Nigeria has a higher incidence of breast cancer than northern Nigeria, where it is second only to cervix cancer. Breast cancer has always caused a tremendous deal of distress for patients and their families because of the disease's high prevalence. This cancer still claims the lives of around 25% of women globally, despite improvements in identification and treatment. 70% of women with breast cancer are over fifty, compared to just 5% who are younger than five. The prevalence of breast cancer is rising in emerging nations as a result of increased urbanisation, longer life expectancies, and the adoption of Western lifestyles [2]. The situation remains dire in the majority of medically underserved communities, unlike wealthy nations where the number of deaths has steadily decreased over time as a result of more treatment, more favourable breast cancer stage distribution, and earlier detection [3].

According [4] breast cancer has over 16,332 deaths in 2022, representing approximately 20.5 % of all cancer deaths in the country. Nigeria recorded 32,278 new breast cancer cases in 2022, and this burden is expected to rise if early detection and treatment efforts do not improve. Breast cancer's mortality rate in Nigeria remains high due to late presentation, limited access to screening, and treatment services, contributing to Nigeria having one of the highest age-standardized breast cancer mortality rates in sub-Saharan Africa. Breast cancer is also the most commonly diagnosed cancer among women in tertiary hospital registries such as those at the University College Hospital (UCH), Ibadan.

In southwestern Nigeria's Ogun State and other regions of the country, breast cancer constitutes a significant proportion of female cancers, highlighting persistent regional disparities in incidence and outcomes [5].

The Health Belief Model (HBM) is one of the most widely applied theoretical frameworks for understanding health-seeking behaviors, including cancer screening. According to the HBM, perceived barriers individual assessments of obstacles that deter engagement in preventive actions are a critical determinant of whether people undertake health behaviors such as cancer screening. Perceived barriers often outweigh perceived benefits when individuals believe the obstacles (e.g., fear, cost, stigma) are greater than the advantages of action, and this construct is consistently identified as a strong influence on screening uptake across health behaviors. It comprises determining what obstacles stand in the way of adopting a new conduct. Embarrassment, fear of failing to perform a desired behaviour, and difficulty initiating a new behaviour or habit are some of the obstacles [6]. Screening for breast cancer is also impacted by perceived barriers. According to [7], the three most frequently mentioned obstacles are fear, ignorance, and neglecting oneself. In the case of mammography, obstacles may include time, expense, travel, pain, and fear of cancer [8].

Mothers in Nigeria suffer poor health indicators, and variables jeopardise women's health and wellbeing. No matter how well-equipped a medical institution is, the level of patronage determines whether a mother and her child are in good health. When it comes to seeking and accepting medical care, women's determinants are crucial. Culture is a strong, all-encompassing, and complex concept that affects behaviour, attitudes, and health. Research has highlighted the importance of culture in shaping behaviour, including participation in breast cancer screenings, and in explaining the differences in cancer screening rates among racial and ethnic groups [9, 10]. According to [11], access to healthcare services may also be delayed by the particular complexities of Asian Muslim immigrant women's cultural backgrounds. There are communication issues between older Asian Muslim women and their doctors because of linguistic, cultural, and religious differences. According to [12], breast screening minimises the morbidity and mortality connected to breast cancer, enables early identification, and improves the likelihood of successful treatment and disease cure. It also increases survival rates and decreases the need for invasive treatment. According to [13], there are two primary ways to justify an improvement in the prognostic outcome: making sure early diagnostic and screening services are available and acting right away; where early detection is thought to lead to better results.

In many Nigerian communities, cultural interpretations of ill-health significantly influence health-seeking behavior. Traditional beliefs often frame breast cancer as a consequence of spiritual forces such as curses, witchcraft, or divine punishment, leading some women to seek help from traditional healers or religious leaders instead of formal healthcare systems. This cultural framing delays engagement with screening and professional medical advice, reducing timely detection and intervention. Evidence from African settings notes that such belief systems are linked to delayed

presentation for breast cancer and preference for alternative healing practices over clinical screening and treatment [14].
Low awareness and misconceptions about breast cancer and its screening are pervasive across diverse Nigerian settings. Many women demonstrate limited understanding of risk factors, screening modalities, and the benefits of early detection, which in turn lowers perceived susceptibility and perceived benefits of screening practices. Evidence suggests that women's attitudes toward breast cancer screening are shaped not only by cultural norms but also by the accessibility and quality of health information they receive.

Research Questions

1) Does culture determine breast cancer screening among women of child bearing age in Ogun State, Nigeria?

Hypothesis

Ho: Culture is not a significant determinant of breast cancer screening among women of child bearing age in Ogun State, Nigeria.

MATERIALS AND METHODS

A cross-sectional survey research design was used to assess culture as a determinant of breast cancer screening among women of childbearing age in Ogun State, Nigeria. A cross-sectional survey research design is survey study in which data are collected from a defined population at a single point in time to examine the distribution and relationships of variables of interest [17]. In public health research, cross-sectional surveys are commonly used to examine determinants of health behaviors and service utilization. Given that this study is non-experimental, it is appropriate for it. 8,261,284 women in the south-west region of Nigeria who were of childbearing age made up the study's population. A multi-stage sampling technique that involves a simple random sampling, proportionate sampling and systematic sampling techniques was used for this study.

The first stage involved the use of simple random sampling technique to select five (5) states from six (6) existing states which are Ekiti, Lagos, Ondo, Osun and Oyo by writing all the name of States on a pieces of paper, folded and dropped in a container, shuffled it, and the selection was made in order to get equal chance of selection.

The second stage involved the use of simple random sampling to select three (3) local government areas each from five (5) states which are Ekiti, Lagos, Ondo, Osun and Oyo by writing all the name of local government areas in each State on a pieces of paper, folded and dropped in a container, shuffled it, and the selection was made in other to get equal chance of selection.

At the third stage, proportionate sampling was used to calculate the number of women of child bearing age per town by using 29.8% of the population to form the target population according to National Demographic Health Survey (2025).

The fourth stage employed the use of simple random sampling to select one town per local government by writing all the name of towns on a pieces of paper, folded and dropped in a container, shuffled it, and the selection was made by one of the research assistant.

At the fifth stage proportionate sampling was used to calculate the proportion of sample size per town was derived by dividing each target population by total target population multiply by the sample size. The last stage involved the use of systematic random sampling to select every fifth household in the selected areas in order to make up the number of sample size required.
Among the screening techniques used to identify breast cancer early are mammograms, breast self-examinations, and physical examinations by doctors. Unfortunately, most breast cancers occur after they have spread. Even with the advancement of sophisticated technology for breast cancer detection, the death rate is still high.
Data for this study was gathered using a standardised questionnaire created by the researchers that had four modified Likert scale responses: strongly disagree (SD) at 1 point, disagreed (D) at 2 point, agreed (A) at 3 point, and strongly agree (SA) at 4 point. Cronbach Alpha reliability test, which was used to pilot test the study's instrument, yielded a result of 0.798. The reliability test results demonstrate the instrument's dependability.

The instrument of this study was administered using systematic random sampling to select every fifth household in the selected areas with the assistance of ward heads in selecting the houses and women of child bearing age. Following collection, the questionnaire was coded and organised on an Excel sheet. Descriptive statistics of means and standard deviation were used to answer the research questions, and a one sample t-test was used to analyzed the hypothesis at the 0.05 alpha level of significance.
Ethical approval for this research was obtained from the Ogun State local government offices permission to conduct the study was obtained from the various local

government involved. Consent was obtained from the participants (women of child bearing age) themselves. Participants were assured of the confidentiality of their responses and were requested to provide informed verbal consent. They were assured of anonymity in the research report. The participants were informed that their involvement in the study was voluntary and that they were free to withdraw at any stage.

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RESULTS

After data collection, out of 384 questionnaire administed, 382 copies of questionnaires were valid for the study because one copy of questionnaire is invalid.

Research Question One: Does culture determine breast cancer screening among women of child bearing age in south-west zone, Nigeria?

Table 1 displays the mean and standard deviation of the respondents' answers about whether culture influences breast cancer screening in women who are of childbearing age. The 3.6019 aggregate mean was higher than the 2.5 constant mean. Therefore, in the southwest region of Nigeria, culture influences breast cancer screening among women who are of childbearing age.

Hypothesis One: Culture among women of child bearing age in south-west zone, Nigeria is not significant determinant for breast cancer screening

Table 2 shows that among women of childbearing age, culture influences breast cancer screening. This is because, at degree of freedom 383 with probability value 0.000, the one-sample t-test calculated result is 5.133 higher than the t-critical value of 1.972, which is less than the 0.05 level of significance. As a result, this finding supports the sub-hypothesis (null), which claims that "Culture among women of child bearing age in south-west zone, Nigeria is not significant determinant for breast cancer screening" is therefore rejected.

DISCUSSION

This study's findings are consistent with those of [9], who found that culture is a powerful, comprehensive, and intricate construct that influences behaviour and beliefs. Research has highlighted how culture plays a significant role in explaining the differences in cancer screening between racial and ethnic groups and how it influences behaviours like breast cancer screening participation. In addition, [14] proposed that cultural differences in health beliefs could discourage people from engaging in health-promoting behaviours. People who believe that illnesses or tragic events are predestined and unavoidable, or are caused by a higher force (such as God), develop a fatalistic mindset. Chronic illnesses are typically linked by Yoruba communities to witchcraft and evil spirits [16]. Some women put off getting help because they are afraid of the stigma associated with their daughters, and may not be accepted into a desirable marriage. Moreover, cancer is thought to be a divine death sentence [18]. According [4], breast cancer is the leading cause of cancer-related deaths among women in Nigeria, with an estimated 16,332 deaths in 2022, representing approximately 20.5 % of all cancer deaths in the country. Nigeria recorded 32,278 new breast cancer cases in 2022, and this burden is expected to rise if early detection and treatment efforts do not improve. Breast cancer's mortality rate in Nigeria remains high due to late presentation, limited access to screening, and treatment services, contributing to Nigeria having one of the highest age-standardized breast cancer mortality rates in sub-Saharan Africa. Breast cancer is also the most commonly diagnosed cancer among women in tertiary hospital registries such as those at the University College Hospital (UCH), Ibadan.

In southwestern Nigeria's Ogun State and other regions of the country, breast cancer constitutes a significant proportion of female cancers, highlighting persistent regional disparities in incidence and outcomes [5].

According to the HBM, perceived barriers individual assessments of obstacles that deter engagement in preventive actions are a critical determinant of whether people undertake health behaviors such as cancer screening. Perceived barriers often outweigh perceived benefits when individuals believe the obstacles (e.g., fear, cost, stigma) are greater than the advantages of action, and this construct is consistently identified as a strong influence on screening uptake across health behaviors. It comprises determining what obstacles stand in the way of adopting a new conduct.

Recommendations

Governmental and non-governmental organisations should use the local government's mass media and community campaigns to raise awareness and educate women of childbearing age about the significance of breast cancer screening.

The local government, king township, traditional rulers, the media, and community campaigns should collaborate with governmental and non-governmental organisations to educate how culture plays a role in this process.

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TABLES AND FIGURE

Table 1: **Mean scores of responses on research question one**

S/N	Item	Mean	Standard Deviation
1	Ethnic diversity is a barrier to breast cancer screening	3.7119	1.25223
2	Modesty (covering of the body) is a barrier to breast cancer screening	3.5126	1.29391
3	Tribe is a barrier to breast cancer screening	3.4101	1.10038
4	My culture influences my attitude in attending breast screening	3.6114	1.21851
5	Myth (history about breast cancer) is a barrier to breast cancer screening	3.7633	1.23217
	Aggregate Mean	**3.6019**	**1.21944**

Source: Field survey, 2024

Table 2: One sample t test on hypothesis one

	Mean	Std. Deviation	t-value	Df	P-value
Aggregate mean	3.6019	1.2194	5.133	381	0.000
Constant mean	2.50	0.00			

t (381) = 1.972, P < 0.05