

A STUDY ON BREAST CANCER AWARENESS AND BREAST SELF-EXAMINATION PRACTICES AMONG FEMALE NATIONAL YOUTH CORPS SERVICE (NYSC) MEMBERS IN IBADAN

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ABSTRACT

Background: Breast cancer is a type of malignancy that originates in the breast tissue. It occurs when abnormal cells in the breast multiply uncontrollably, forming a tumor. The study aims to evaluate the awareness of breast cancer and Breast Self-Examination (BSE) practices among female National Youth Corps Service (NYSC) members in Ibadan. **Method:** A retrospective study was conducted using data obtained from the female corps members in Ibadan, which cut across all ages, irrespective of syndicate, religion, Marital status, level, and educational status. **Results:** The research revealed that the majority of the respondents have heard of breast cancer, 136 85%. Just a few of them, 15%, haven't, while only 5% of them have a family history of breast cancer, and 90% of them don't have. Unfortunately, only a few of them (17.5%) have discussed breast cancer with healthcare providers. Also, it was observed that 70% (112) of them had heard about Breast Self-Examination, but it was quite disheartening that only 27.5% (44) of them knew the proper technique of doing it, and few of them, 32.5% (52) just received training on Breast Self-Examination while 82.5% (132) of them doesn't know the causes of the breast cancer which shows their limitations on breast cancer. **Conclusion:** a study on breast cancer awareness and breast self-examination practices among female National Youth Corps Service (NYSC) Members in Ibadan was conducted.

KEYWORDS: Breast Cancer, Breast Self-Examination (BSE), Awareness, NYSC, Ibadan (Nigeria).

INTRODUCTION

Cancer is a disease in which some of the body's cells grow uncontrollably and spread to other parts of the body. Cancer can start almost anywhere in the human body, which is made up of trillions of cells. Normally, human cells grow and multiply (through a process called cell division) to form new cells as the body needs them (NCI 2021). Cancer is increasingly becoming of public health concern in recent years (Thomas, 1999). In 2002 alone, cancer was reported to have been responsible for 12.5% of all deaths, more than all deaths due to HIV/AIDS, tuberculosis, and malaria combined (WHO,

2005). More than 70% of all cancer deaths occur in low- and middle-income countries, and deaths are projected to continue rising, with an estimated 12 million deaths in 2030 (WHO, 2009). In Nigeria, the estimated number of cancer cases per year is predicted to be 100,000, and by 2010, it was estimated that about 500,000 new cases will be diagnosed annually (Thomas, 1999). In 2005, cancer killed approximately 89,000 people in Nigeria, 54,000 of whom were under the age of 70 years (WHO, 2005). Many types of cancers affect the human body, and breast cancer is one of the most frequently occurring, especially in women (ACS, 2005). Breast cancer is the second

most common carcinoma and the most prevalent malignancy in women. It is also the leading cause of cancer-related death globally. The multifaceted nature of this cancer, considering numerous elements, such as demographic and oxidative, it can arise due to stress, bacterial infection, hormonal changes during pregnancy, inherited factors, and stressful lifestyle (Sohel *et al.*, 2022).

Breast cancer is usually caused as a result of unregulated cell propagation and differentiation of breast cells. It's very common in women and a demanding target for the scientific and medical community. (Sadwal *et al.*, 2022). Review of the data supporting the idea that several endogenous and exogenous sex hormones contribute to the development of breast cancer. It's believed that early menarche, late menopause, willful nulliparity, and late childbearing all result in prolonged exposure to normal levels of ovarian estrogens and cyclic progesterone, which act at an early stage in the development of breast cancer by encouraging excessive proliferation of healthy epithelial stem cells. By encouraging the proliferation of epithelial cells that have undergone partial malignant transformation, excess endogenous or exogenous estrogens can have increased risk. However, compared to the endometrium, the breast is significantly less susceptible to the tumor-promoting action of estrogens, and estrogens are presumably less significant in the latter stages of mammary carcinogenesis. (David and Thomas 1984).

Family history of breast cancer is an established risk factor for this disease and is usually used to identify women at higher risk, although the impact of risk factors for breast cancer among women with a family history is not well defined. (Graham *et al.*, 1996).

Despite the well-established benefits of postoperative radiation for breast cancer, several potential side effects could negatively impact a patient's quality of life and even their chance of survival. Heart and lung damage, lymphedema, brachial plexopathy, shoulder motion, and secondary cancers are among the serious long-term effects of radiation exposure. With the advent of contemporary technologies, the risk of these consequences has diminished, which was formerly very significant with old ineffective irradiation procedures. (Senkus and Jassem 2006).

Preventative strategies have not been fully adopted in the fight against breast cancer in Nigeria (Elmore *et al.*, 2005). Generally, proper treatment and care are seriously lacking in developing countries, Nigeria inclusive. Kanavos (2006) predicted that the majority of new cases of cancer morbidity and mortality will occur in developing countries due to their poor health infrastructure.

Nigeria does not have many radiotherapy facilities, and those that do exist are having trouble keeping up with the

country's rising need for radiation treatment. Cost is a barrier to accessing radiologic services, and equipment malfunctions frequently. With a population of over 140 million in Nigeria, there was no national center, structure, or program dedicated to cancer care and research until very recently. An International Cancer Centre was set up in 2009 in Abuja, but this has yet to make a significant impact in the treatment of people affected by the disease. Anticancer drugs are not readily available and are expensive (Durosinmi, 2007).

Under such circumstances, Breast Self-Examination (BSE) is the best alternative for early detection of breast cancer, as it is done at no cost. Medical advances have shown that one-third of all cancer breast cancer cases are preventable, and a further one-third if diagnosed sufficiently early, is potentially curable. This observation demands that cancer control should be of increasing priority in the health care programs of developing countries (Anyanwu, S.N. *et al.*, 2017).

In a bid to reduce the incidence of mortality and morbidity of breast cancer, there is a need for an effective screening and awareness program. This study, therefore, aims to investigate the awareness of breast cancer risk factors, warning indicators, and preventive methods among female National Youth Corps Service (NYSC) Members in Ibadan. The study also aimed to assess participants' knowledge of breast self-examination (BSE) and their practices with this crucial screening method. Findings from this research can aid in the creation of appropriate health intervention programs to improve the awareness and practice level of BSE among Nigerians. This will, in turn, curtail the increasing incidence rate and mortality of breast cancer in Nigeria.

MATERIALS AND METHOD

Study Location

Ibadan (Ìbàdàn) is the capital and most populous city of Oyo State in Nigeria. It is the third-largest city by population in Nigeria after Lagos and Kano, with a total population of 3,649,000 as of 2021 and nearly 4 million within its metropolitan area. At 3,080 square kilometers, it is the country's largest city by geographical area. At the time of Nigeria's independence in 1960, Ibadan was the largest and most populous city in the country and the second-most populous in Africa behind Cairo. Ibadan is ranked one of the fastest-growing cities in sub-Saharan Africa, according to the UN Human Settlements Program (2022). It is also ranked third in West Africa in the tech startups index. Ibadan joined the UNESCO Global Network of Learning Cities in 2016. Oyo State Sectarian, located in Ibadan.

Geographically, Ibadan is a city located in Nigeria with GPS coordinates between 7°19'30"N to 7°27'30"N latitude and 3°50'0"E to 3°58'30"E longitude. It is located in southwestern Nigeria, 129 kilometers (80 mi) inland northeast of Lagos and 530 kilometers (330 mi) southwest of Abuja, the federal capital. It is a

prominent transit point between the coastal region and areas in the hinterland of the country. Ibadan had been the administrative center of the old Western Region since the early days of British colonial rule, and parts of the city's ancient protective walls still stand to this day. The principal inhabitants of the city are the Yoruba people, as well as various communities (notably Igbo, Hausa, Edo, and Ibibio) from other parts of the country.

The city of Ibadan is a major Nigerian transport hub with freeways linking it with Lagos in the South-West, Ijebu Ode and Shagamu in the South, Abeokuta in the West, Oyo, Ogbomosh, Offa and Ilorin in the North, Ife, Ado Ekiti, Osogbo, Ilesha, Akure, Okene, Auch and other cities towards the East. The city is also served by an airport, the Ibadan Airport, which operates daily flights to Abuja, Lagos, Kano, Ilorin, etc., through major airlines in Nigeria. The city is a major terminus railway station on the main railway line linking Lagos with Kano in the North of the country.

Sample Population

The sample population of the study was the female National Youth Corps Service (NYSC) Members in Ibadan. The population is cut across all ages, specifically for female gender, religion, syndicate, Marital status, level, and educational status.

Survey Methodology

A well-structured questionnaire was administered between August and December 2024 to over 200 female corps members, but about 150 respondents were collected from all the syndicates at the end of the survey.

Ethical Approval

This study underwent an ethical review process and received approval from the Local Government Inspector (LGI) in Ibadan, South-West Local Government. Participants were provided with information about the study, including the purpose, methods, and potential benefits. The questionnaires were distributed to female corps members during Community Development Service (CDS) periods and for a better understanding of the respondents. The respondents participated in this research voluntarily and were emphatically assured that the information provided was treated under strict confidentiality.

Statistical Analysis

Data were coded, cleaned, and analyzed using the SPSS Statistical Package for Social Sciences (version 27). Descriptive statistics such as frequency, percentages, mean, and standard deviation were used to summarize the data. Results will be presented in diverse formats such as mean $\pm$ SEM, percentages, tables, and figures.

RESULTS

Demographics

Overall, 160 questionnaire forms were collated. The demography study of the respondents is shown in Table 1, according to the results, which are displayed below. The highest age among the female corps members in Ibadan was between 20-25 (96, 60%), and the respondents were mostly Yoruba (140, 87.5%). The study also indicates that the majority of their corps member was single (148, 92.5%) and married (12, 7.5), respectively.

Table 1: Demography study.

		Frequency(N)	Percent (%)
Age	1-20yrs	4	2.5
	20-25yrs	96	60.0
	26-30yrs	52	32.5
	31-35yrs	8	5.0
	36-40yrs	0	0.0
Tribe	Yoruba	140	87.5
	Igbo	8	5.0
	Others	12	7.5
Marital Status	Single	148	92.5
	Married	12	7.5
	Divorce	0	0.0
	Widow	0	0.0
Educational Status	University	104	65.0
	Polytechnics	44	27.50
	Health technology	4	2.50
Total	Total	160	100

The majority of the respondents have heard of breast cancer, with 136 85%, and just a few of them with, 15% have not ever heard breast cancer. While only 5% of them have a family history of breast cancer, and 90% of them don't have one. Unfortunately, only a few of them

(17.5%) have discussed breast cancer with healthcare providers despite the facts of how important it is in their health status, as illustrated in Table 2.0 below. These findings are based on research done among female corps members in Ibadan.

Table 2.0: Breast cancer awareness.

	Yes (frequency (N), percentage (%))	No (frequency (N), percentage (%))	Maybe (frequency (N), percentage (%))
Have you ever heard of breast cancer?	136, 85.0	24, 15.0	0, 0.0
Do you have a family history of breast cancer?	8, 5.0	144, 90.0	8, 5.0
Have you ever discussed breast cancer with a healthcare provider?	28, 17.5	128, 80.0	4, 2.5

As shown in Figure 3.0 below, it has been observed that 70% (112) of the respondents have heard about Breast Self-Examination, but it is quite disheartening that only

27.5% (44) of them know the proper technique for doing it, and few of them with 32.5% (52) just received training on Breast Self-Examination.

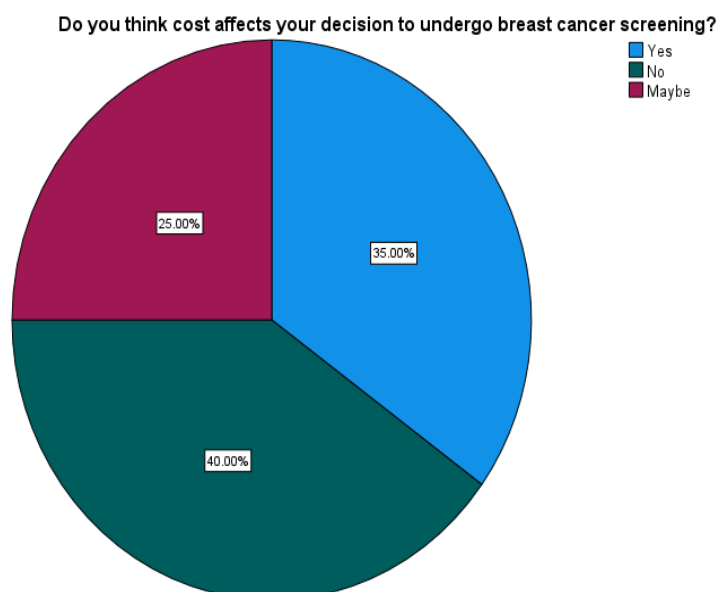
Table 3.0: - Breast Self-Examination Practices.

	Yes (frequency (N), percentage (%))	No (frequency (N), percentage (%))	Maybe (frequency (N), percentage (%))
Have you heard about Breast Self-examination (BSE) before?	112, 70.0	48, 30.0	0, 0.0
Do you know the proper technique for BSE?	44, 27.5	92, 57.5	24, 15
Have you ever received training on BSE?	52, 32.5	108, 67.5	0, 0.0

Barriers to BSE and Screening

From the result illustrated below in Figure 1.0, it has been observed that the majority of the respondents were not affected by cost in making their decision not to

undergo breast cancer screening 40% while 35% were affected by cost, and 25% of them doesn't know maybe it is the cost that affects them not to undergo the screening or not.

**Figure 1.0: Do you think cost affects your decision to undergo breast cancer screening.**

According to the results presented in figures 2.0, 2.1, 2.2, 2.3, 2.4, and 2.5 below, 40% of the female corps members at Ibadan have a fair knowledge of breast cancer symptoms, while just 10% of them only have an outstanding knowledge of the breast cancer symptoms. It

has been observed that 35% of the respondents perform Breast Self-Examination monthly, 15% do it anytime they remember, 2.5% of them perform it yearly, and the majority (65%) of those that were motivated to perform BSE as a result of them being scared or fear of getting

breast cancer with 30% not confident at all in detecting the abnormalities in performing the BSE. Unfortunately, 132 (82.5%) of them don't know the causes of breast cancer, which shows their limitations on breast cancer.

Finally, 42.5% of the respondents have a low risk of developing breast cancer, with just a few 2.5% of them having a high risk, which might be due to several reasons known by them.

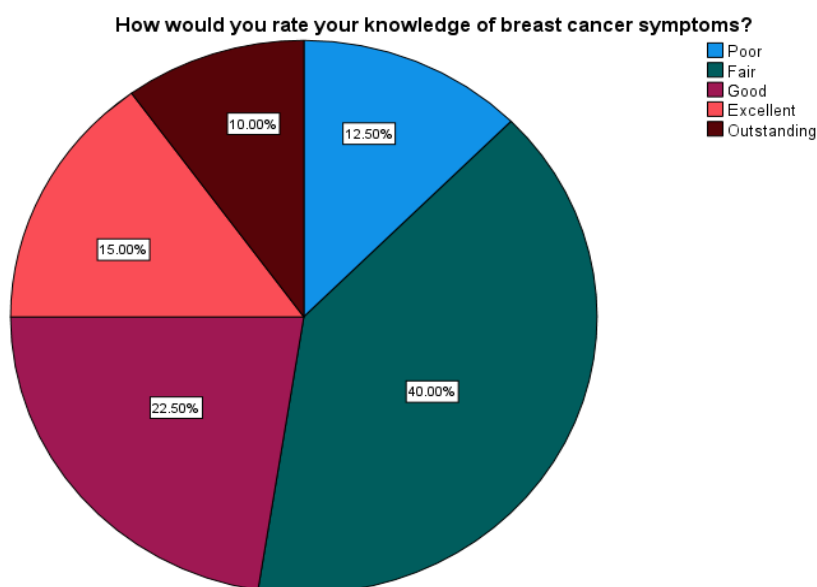


Figure 2.0: How would you rate your knowledge of breast cancer symptoms.

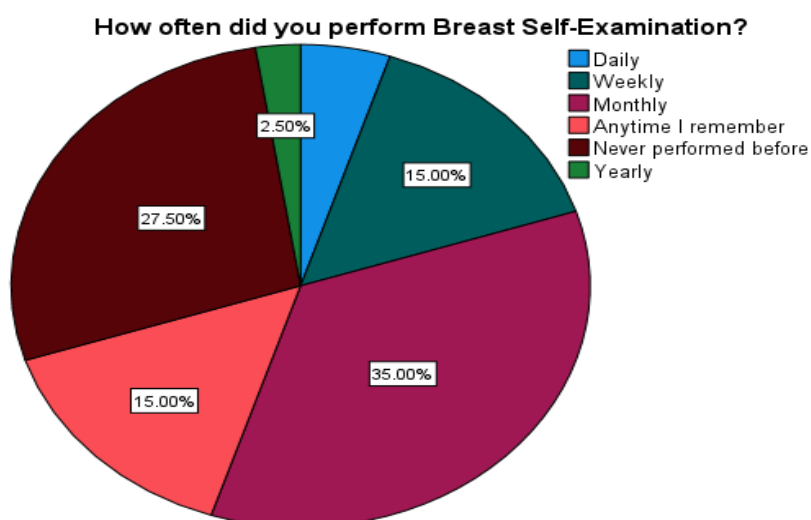


Figure 2.1: How often did you perform Breast Self-Examination.

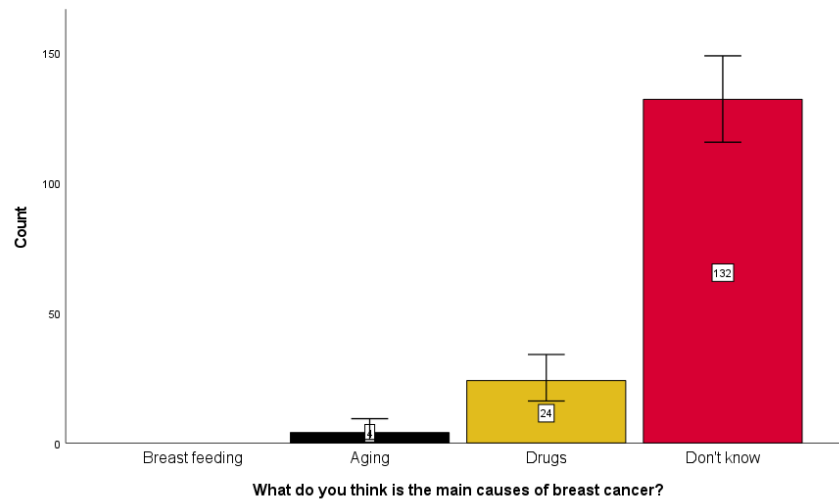


Figure 2.2: What do you think are the main causes of breast cancer?

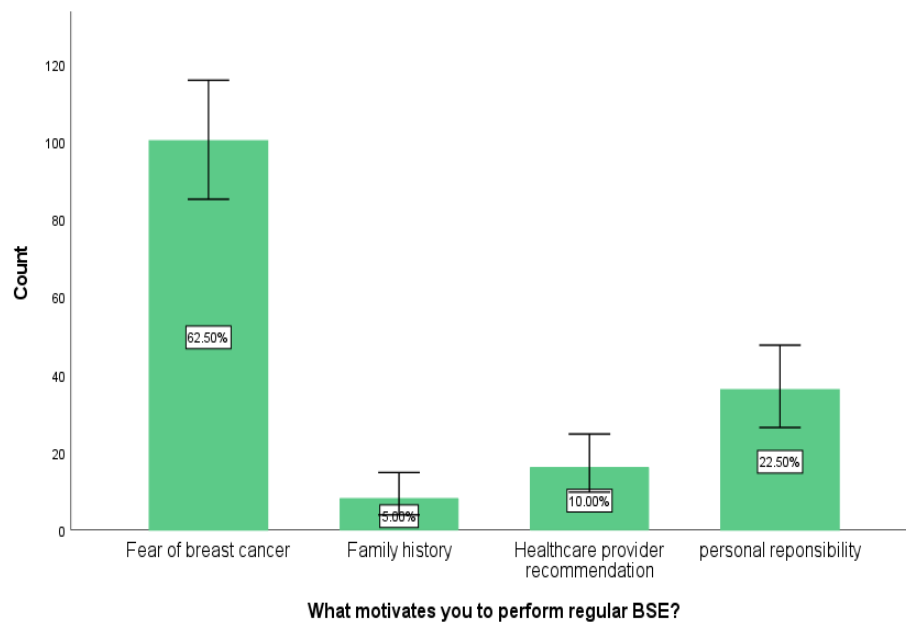


Figure 2.3: What motivates you to perform regular BSE?

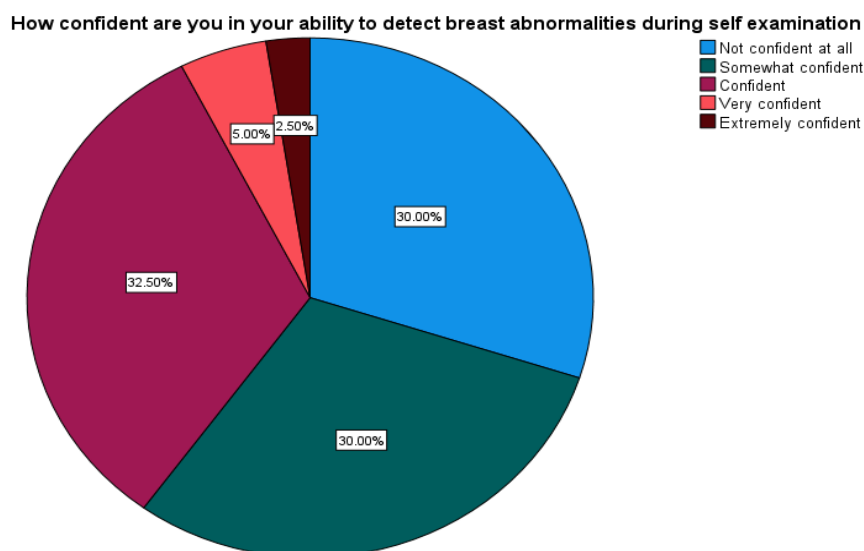


Figure 2.4: How confident are you in detecting breast abnormalities during self-examination.

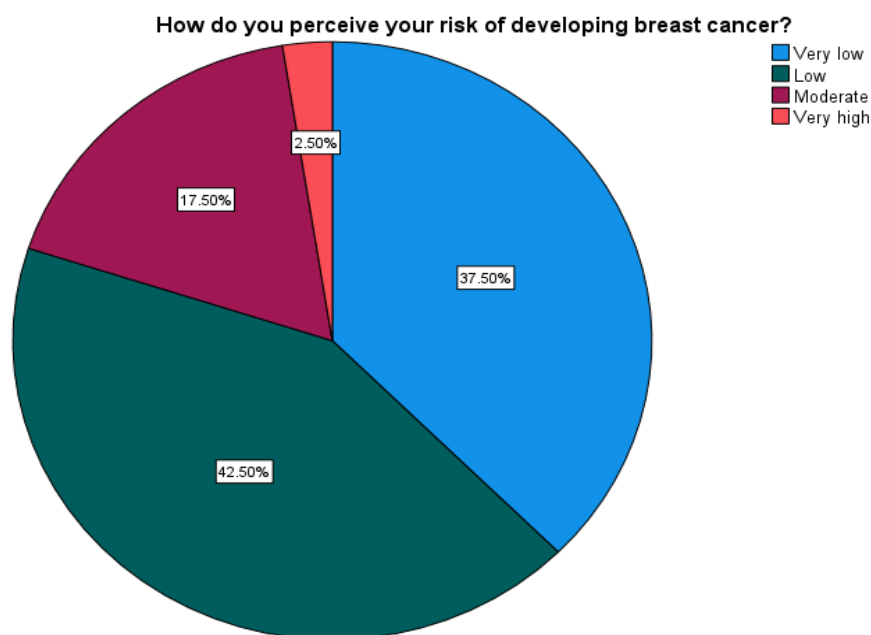


Figure 2.5: How do you perceive your risk of developing breast cancer?

DISCUSSION

According to the study, the majority (60%) of the respondents were young women aged 20-25, while 32.5% were married. This shows that where the research was conducted, they were younger than older women. The population for the study was literate. The implication of this is that the literacy problem is an issue in the study area, thereby influencing knowledge of breast cancer screening. In line with this, a study reported that a relationship existed between education level and women's awareness of breast cancer and its screening tests (Okolic, 2011). The study further revealed that the majority (136, 85%) of the respondents had heard of breast cancer, while just (24, 15%) had not.

This does not support a study among women in a rural community that revealed that only half of the women had heard of breast cancer (Omotara et al., 2012). While only 5% of them have a family history of breast cancer, and 90% of them don't have one. Unfortunately, only a few of them (17.5%) have discussed breast cancer with healthcare providers despite the facts of how important it is in their health status.

The research findings indicate that over 70% (112) of the respondents have heard about Breast Self-Examination, but so quite disheartening that only 27.5% (44) of them know the proper technique of doing it, and few of them, 32.5% (52) just received training on Breast Self-

Examination. This corresponds with a research study that says the level of awareness regarding how to perform simple life-saving diagnostic breast checks such as breast self-examination (BSE) further compounds the problem of late detection. Empowerment of women with information on BSE is of paramount importance, especially in countries without modern technologies for breast cancer screening (Shepherd JH and McInerney PA, 2017). Most of the Nigerian communities lacked the required technological resources (Ajayi LA *et al.*, 2018), but BSE can contribute greatly if women are informed about this technique, and regular practice would reduce late presentation (Ramathuba D *et al.*, 2015). Further results revealed that only a slight majority knew about screening for breast cancer. This finding is worrisome because it shows that many did not take action to examine themselves for any sign of breast cancer. Again, as previously stated, the low literacy and income level of the women are responsible for such low knowledge. In the same vein, scholars have revealed that many women had limited knowledge of breast cancer-related symptoms (Kingsley, 2010).

Further findings revealed that respondents were scared of going for breast cancer screenings. Interview sessions with the community health workers revealed that even though there were no breast cancer screenings in the health centers, corps members rarely visited for scans or tests on any medical condition. This is in tandem with similar research, which revealed one of the reasons for not going for breast cancer screening is a lack of health facilities, fear, and the belief that one is immune to breast cancer (Agboola *et al.*, 2009). The attitude towards breast cancer screening among women in the study is not encouraging. Even those who had a positive attitude towards breast cancer screening were limited by financial constraints and would prefer to use their time for other things rather than go for breast cancer screenings. This supports a study that shows that limited resources remain a barrier when it comes to breast cancer screening among women (Anyanwu, Egwuonwu, and Ihekwoaba, 2012). Another scholar opined that women in low-income populations are faced with financial incapacitation, which might affect their decision to perform breast cancer screening (Izanloo *et al.*, 2018).

Furthermore, 40% of the female corps members at Ibadan have a fair knowledge of breast cancer symptoms, while just 10% of them only have an outstanding knowledge of breast cancer symptoms, which is due to inadequate medical facilities and a lack of medical equipment prevented them from going for breast cancer screening. This was also confirmed by the community health officers, who said explicitly that there were no medical facilities or equipment for breast cancer screenings. When they are diagnosed with any patients of breast cancer, they would have to refer them to the state level for further treatments. Also, many of the women in the study rely on general hospitals located far away from the local people. Rather than going to the hospital

because of its distance, the women patronized the nearest available pathways to cater to their health needs, such as traditional means or Patent Medicine Vendors (PMVs), which is not reliable.

CONCLUSION

Early detection of breast cancer through screening and self-breast examination is crucial for prevention. However, many female corps members lack the necessary knowledge to perform breast self-examination due to inadequate awareness. To address this, a concerted effort is needed to raise awareness and educate them on the importance of breast self-examination.

This is very important because the issue of breast cancer is still under-flogged as many women do not attend medical check-ups until they have tried other means that could not work out. Besides, the primary health centers in rural areas should be up to standard and well equipped as this would encourage the rural dwellers to go for a general check-up to know their health status.

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