

Assessment and Reported cases of Breast Cancer amongst Women in Bayelsa State Nigeria.

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Abstract

Breast cancer is the most common life-threatening cancer among women of reproductive age with a rising prevalence noticed among young women over the years in some parts of the globe. This study is aimed at Assessing reported cases of Breast Cancer, to determine the trend in age of onset of Breast cancer amongst women in Bayelsa state. A retrospective study involving the review of secondary data obtained from the cancer registry in Federal Medical Centre Yenagoa, Bayelsa state from 2017-2021 was conducted. Data were analyzed using Microsoft Excel to obtain summary statistics such as mean and prevalence of study. Result revealed that a total of 231 cases of breast cancer were recorded out of a total of 8150 women who visited the surgical ward. This resulted to a prevalence of 2.8% over the study period ranging from 1.5% in 2017 to 3.6% in 2021. Women aged 15 – 49 years constitute the highest percentage of breast cancer cases (64.9%) while those who are 60years and above had the least (16.0%). In conclusion, the prevalence of breast cancer in Bayelsa is high with a rising trend of the disease among women. Immediate public health action including awareness creation and sensitization on preventive measures such as breast self-examination and routine screening for at risk population is recommended for timely medical or surgical intervention that will save life.

Keyword: Breast Cancer, Prevalence, Women of Reproductive Age, Middle Age women.

Introduction

Breast cancer refers to a broad category of malignant tumors that arise in the breast and are highlighted by the exponential expansion of monoclonal cells that have acquired a changed state. Despite a decline in mortality arising from breast cancer ((Scowcroft, 2011), clinicians have described breast cancer as the most life-threatening type of cancer women of reproductive age face and in 2020, an estimated 2.3 million cases of breast cancer were recorded across the globe, and this resulted to an estimated 685,000 deaths (WHO, 2021). In Africa, estimates from the GLOBOCAN (2018) revealed that there were 168,690 cases of breast cancer with 74,072 deaths. In Nigeria the breast cancer prevalence was worrisome with an estimated 26,310 cases and 11,564 deaths recorded across the country (GLOBOCAN, 2018). In countries with low and moderate incomes, this cancer is known to kill more people than every other cancers combined; this is unlike in high-income countries where deaths due to breast cancer are relatively low with lung cancer having the highest prevalence (Sung, Ferlay, Siegel, Laversanne, Soerjomataram & Jemal, et al., 2021).

Breast cancer accounts for 19.6 million DALYs out of a total of 107.8 million DALYs lost to malignant neoplasms among women (WHO, 2018). With an estimated 2.26 million [95% UI, 2.24-2.79 million] emerging Trends in 2020 (Ferlay, et al., 2020). Breast cancer survival rates over 5 years may be estimated from the MIR, which was 0.30 in 2020 (Ferlay, et al., 2020) (Vostakolaei, 2010). In countries with advanced healthcare systems, including Hóng Kóng, Singapóre, and Turkey, the likelihood of surviving five years for breast cancer is 89.6% for locally-confined disease and 75.4% for regional cancer. In developing countries, localized breast cancer had a 76.3% five-year survival rate while regional breast cancer had a 47.4% probability of survival (Sankaranarayanan, et al., 2010).

The risk factors for breast cancer have been identified and this include changes in diet and lifestyle that have resulted to an increase in the number of cases of breast cancer among women in the Africa sub-continent (McCormack, McKenzie, Forester, Zietsman, Galukande & Adisa et al., 2020), and a changing trend in its epidemiology has been noticed over time with the disease currently occurring among females in their early twenties (Adegeye, Ogunbiyi & Omigbodun, 2020). In addition to the morbidity and mortality associated with breast cancer, the condition has been associated with high economic burden due to high cost of management with difficulties in paying for treatment in most low- and middle-income countries like Nigeria. In addition to this challenge, breast cancer is also known to result to various psychological stress and places high demand and stress on caregivers across the globe.

Two forms of breast cancer have been described and this include advanced ductal carcinoma and lobular carcinoma (Centre for Disease Control and Prevention, 2021). In the former, the malignant cells spread outside the tubes and into neighboring breast tissue, while in the latter, cancer cells begin in the lobule and spread from there (Centre for Disease Control and Prevention, 2021). These cancers have been attributed to various risk factors which could be classified into modifiable and non-modifiable factors. Non-modifiable factors include an individual's family history of breast cancer, advanced age (over 50), and inheriting an abnormal gene associated with breast cancer (CDC, 2021). Modifiable factors for breast cancer include physical inactivity, being obese and overweight, some form of hormone replacement therapy, first pregnancy at 30years and above and excessive intake of alcohol. Scowcroft (2011) asserts that there is a major trend in the number of cases of breast cancer with studies also showing a change in the age distribution of this disease as younger age group are commonly affected in recent times.

Management of breast cancer consist of involves various methods which include surgery, radiotherapy, chemotherapy and the use of hormonal methods. A key important means of management of breast cancer is through screening and timely action. According to Adeloye et al., (2018), early detection of breast cancer has been found to increase overall survival rates and decrease treatment costs. Ngatali et al., (2020) noted that the lack of systematic screening programs and methods of investigation, as well as financial and cultural restraints, have complicated breast cancer care in most resource poor nations. This gaps on screening for timely detection calls for more public health efforts.

Despite the rising number of cases and recent claims about breast cancer occurring among young females, there has been paucity of knowledge regarding the epidemiology of breast cancer among women in Bayelsa State. This study sought to determine the epidemiology of breast cancer in Bayelsa State with the overall goal of understanding the trend and age group that are mostly affected by the disease to guide control efforts for the disease.

Method

Study Area

This study was carried out in Federal Medical Centre (FMC) Yenagoa, Bayelsa State which has the cancer registry for the entire Bayelsa State. FMC Yenagoa is a was established in 1999 and by 2015, the hospital became a 230-bed capacity tertiary centre with various wards which include Surgery, Obstetric and Gynaecology, Internal Medicine, Paediatrics, and a Radio-diagnostic unit that supports the process of diagnosis and effective patient management. This hospital was chosen because it is a tertiary hospital in the state with experts in surgery where most of the breast cancer cases in Bayelsa state are treated and reported. The hospital serves as a referral center to neighboring, communities in Rivers and Delta State for women with breast cancer. Specifically, the study was carried out in the Surgical Department which has an oncology unit that is part of the Federal Ministry of Health Cancer Registries in Nigeria. The department has **3** consultants, **4** resident doctors, **8** nurses and a dedicated nurse who collects and records the various breast cancer cases that are seen in the hospital. This makes the Centre suitable for this study.

Study Population

The study populations comprise of females of all age group with categorization of females into groups which include young and elderly women that visited the breast cancer clinic in Federal Medical Centre Yenagoa.

Sample and Size Determination

For the purpose of this study, a 5years review of records of all cases of breast cancer at the cancer registry was done.

Study Design

This research uses a retrospective descriptive approach to assess the prevalence of breast cancer among women in Bayelsa State.

Instrument for Data Collection

A carefully designed well-structured checklist was used for the purpose of this study. The checklist which was scrutinized by experts (a supervisor and consultant in surgery) was designed to collect information on the age distribution of breast cancer amongst women in Bayelsa State.

The inclusion and exclusion criteria for this study are stated below.

Inclusion Criteria

The inclusion criteria for this study include cases of breast cancer among women aged 15years and above and breast cancer cases reported within the study period.

Exclusion criteria

The exclusion criteria for this study include few cases of breast cancer among men, cases of breast cancer among females less than 15years and other forms of cancer which are not breast cancer.

Validity and Reliability of Instrument

Validity of instrument used for the study was determined by conducting a test-retest method to ensure the checklist is valid and able to answer to the research questions posed by the study. The researcher will ensure an in-depth review of literatures, consultation and scrutiny by the researcher's supervisor and comparison with standards to make sure that the checklist is valid and reliable for the study.

Method of Data Collection

Secondary data of breast cancer was collected from the Cancer Registry Unit, Federal Medical Centre Yenagoa, Bayelsa State.

Method of Data Analysis

Data was analyzed using Microsoft Excel to obtain rates and percentage of breast cancer for the study. The prevalence of breast cancer was calculated as the total number of women who had breast cancer divided by the total number of women who came to the surgical ward over a study period of five years.

Ethical Considerations

Ethical clearance and approval to conduct this research was collected before the conduct of the study. This involved a two-step approach. First is the ethical clearance and approval from the Post Graduate Department, Niger Delta University. Second was the ethical approval of Federal Medical Centre Yenagoa Ethics Committee. Confidentiality of information gotten will be ensured as

names of subjects will not be captured in the process and best practices in the management of biomedical data will be strictly adhered to.

Result

This is a retrospective study of the assessment of reported cases of breast cancer among women aged 15-49, 50-59 and women >60 and above in FMC Yenagoa, Bayelsa State. The analysis was done using rates and simple percentage. The results are presented with table 1 and 2 and figure 1 and 2 below.

Table 1: Five Years Distribution of Breast Cancer in FMC Yenagoa

	Total Number of Women that attended the Surgery Department	Total Number of Women that had Breast Cancer	Prevalence of Breast Cancer
2017	2,124	32	1.5
2018	2,260	36	1.6
2019	2,965	57	1.9
2020	2,449	58	2.4
2021	1317	48	3.6
Total	8,150	231	2.8

Table 1 shows the distribution and a 5years trend of breast cancer in FMC Yenagoa, Bayelsa State. During the 5year period, a total of 8,150 women reported at the surgical clinic, out of the number of women who reported, 231 cases of them were diagnosed with breast cancer. The yearly distributions are 32 out of 2,124 in 2017, 36 out of 2,260 in 2018, 57 out of 2,965 in 2019, 58 out of 2,449 in 2020 and 48 out of 1317 in 2021. This translates to a prevalence of 1.5%, 1.6%, 1.9%, 2.4% and 3.6% from 2017, 2018, 2019, 2020 and 2021 respectively. The yearly trend clearly revealed that the prevalence of breast cancer in FMC Yenagoa is on the rise from 1.5% in 2017 to 3.6% in 2021 with an overall prevalence of 2.8% over the five years study period.

The table below shows the age distribution of Breast cancer among women attending the surgical department for care in FMC Yenagoa.

Table 2: Age Distribution of Breast cancer in FMC Yenagoa (n = 231)

Year	15 -49	50 - 59	≥60
2017	14	7	11
2018	25	9	2
2019	42	7	8
2020	39	13	6
2021	30	8	10
Total	150	44	37

The result showed that those within 15 – 49years have a total of 150 cases out of a total of 231 cases of breast cancer recorded, those within 50 – 59 years have 44 cases out of 231 total number of cases over the study period while those that are 60years and above had 37 cases out of a total of 231 cases of breast cancer diagnosed in the hospital.

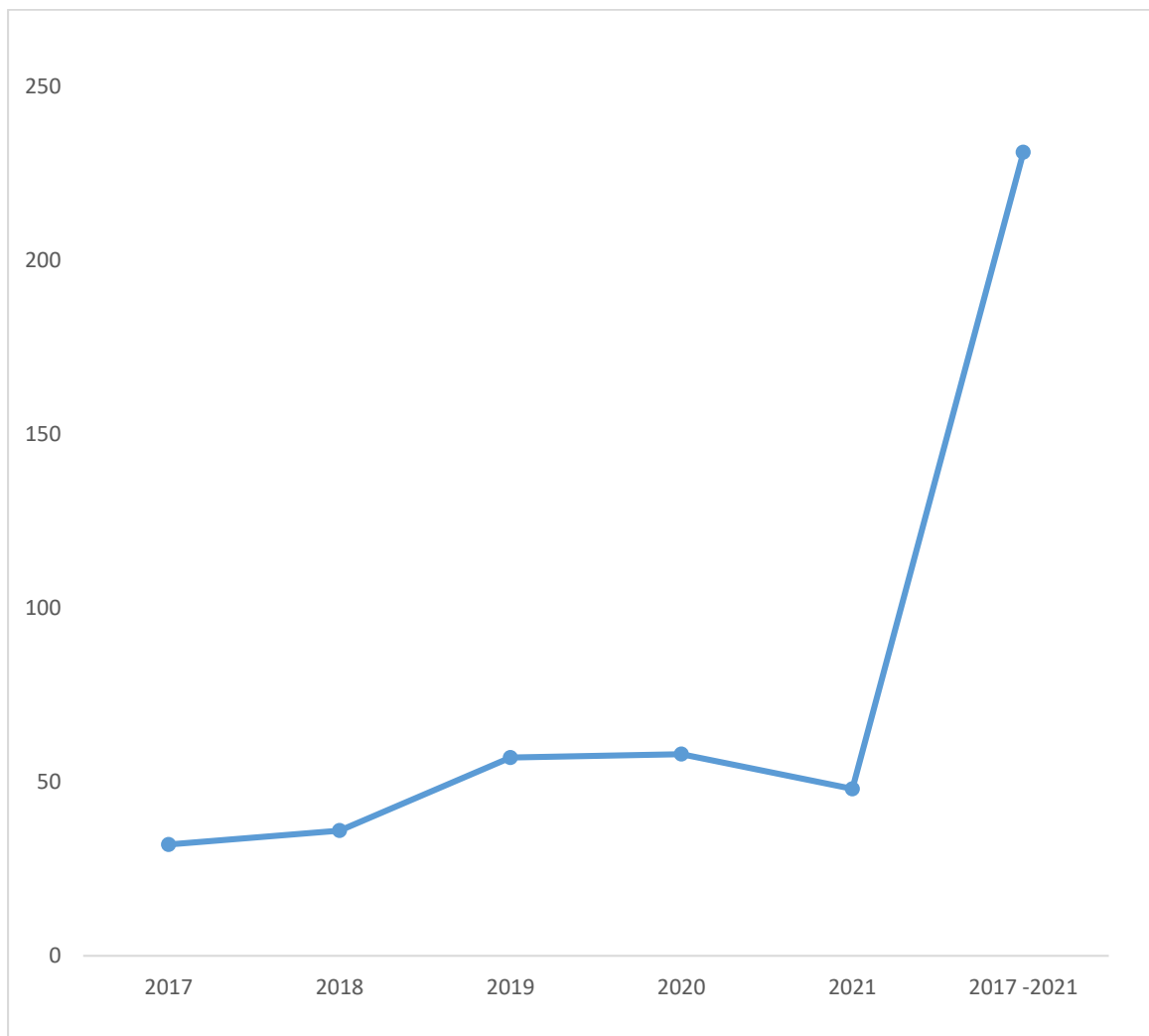


Fig 1: Yearly Distribution of Breast Cancer Cases in FMC Yenagoa.

The yearly breakdown of breast cancer cases at FMC Yenagoa, Bayelsa State, is shown in Figure 1. The findings showed that the incidence of breast cancer rose steadily from 2017 to 2020, then leveled off somewhat in 2021.

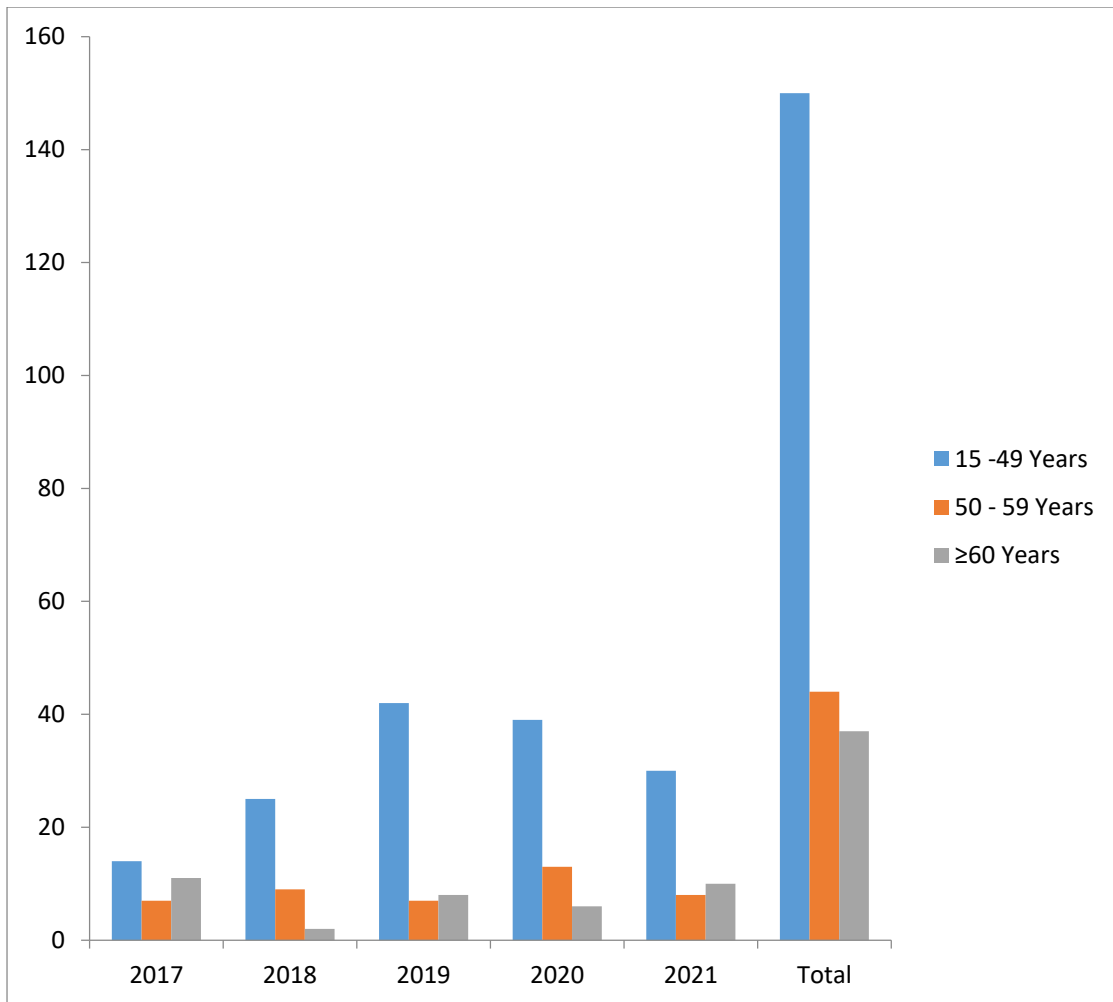


Figure 2. Age distribution of breast cancer cases in FMC Yenagoa, Bayelsa State. Those within 15 – 49years had the highest number of cases while those who are 60years and above had the least cases of breast cancer over the study period.

Discussion

Prevalence of breast cancer

The result from this study revealed that during the study period, the prevalence of breast cancer is 2.8% women who visited the general surgical unit of FMC Yenagoa, Bayelsa State. This is lower than the 5.6% prevalence reported by Johnson et al in the USA. This suggests that the rate of breast cancer among women of childbearing age in the USA is greater than in FMC Yenagoa, Bayelsa State, Nigeria.

Age of Onset of breast cancer

The age most commonly affected by breast cancer is 15 - 49 years and this was followed by 50 – 59 years with the least age being 60years and above. The study showed that within the age of 15 – 49years have higher risk of breast cancer (Table 1 and Figure 1). A finding that corroborates reports by Zingue et al (2021) who noted that breast cancer is commoner among women who are 45years.

Yearly Distribution of Breast Cancer

Breast cancer yearly trend showed a slight increase from 2017 to 2020. It then plateau and started to decline slightly in 2021. The yearly distribution of breast cancer showed that breast cancer has been on the rise from 2017 to 2021. This is worrisome and demands the need to investigate and address the various risk factors associated with the rise in the disease.

Trend in breast cancer

There is an increasing trend from 2017 – 2020 with a slight decline in 2021 (Table 1 and Figure 2). This could be explained by the changing lifestyle in Bayelsa State like other low and middle income countries that have adopted western lifestyle. There was a steady rise in the prevalence of breast cancer from 1.5% in 2017 to 3.6% in 2021. A finding that could be explained by possible increase in the exposure of women to the various risk factors of breast cancer as the year progresses to another year. This finding is in agreement with other studies that demonstrated a rising trend in the prevalence of breast cancer and according to Nggada et al. (2008), lowering the number of breast cancer diagnoses and related mortality in an area that demands urgent health promotion, population level screening of at risk populations, early identification, and adequate care of women with breast cancer.

Conclusion

Breast cancer is an issue of public health concern amongst women of reproductive age group. Both modifiable and non-modifiable factors have been implicated as responsible for breast cancer. This study reviewed the prevalence of breast cancer amongst women attending FMC Yenagoa, Bayelsa State. The result showed that breast cancer occurrence have been increasing from 2017 to 2021. Women aged 40 – 49years have the highest prevalence while those aged 20 – 29years had the least number of cases of breast cancer. Bayelsa State is seeing an alarming rise in the rate of breast cancer among women of childbearing age, and its cause must be determined immediately.

Conflict of Interest

No conflict of interest as no form of financial support or grant was used for the conduct of this study.

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