



## **Knowledge of Breast Cancer among Women in Rivers East Senatorial District**

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### **Authors' contributions**

*This work was carried out in collaboration among all authors. Author GA designed the study, performed the statistical analysis and wrote the protocol. Author ENA wrote the first draft of the manuscript and managed the analyses of the study. Author CEE managed the literature searches. All authors read and approved the final manuscript.*

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### **ABSTRACT**

Knowledge is a primary step towards achieving behaviour change in the prevention of breast cancer. In recent years, breast cancer has been prevalent especially among women, however information on the level of knowledge of this illness especially in the study location is scarce. This study thus investigated the knowledge of breast cancer among women in Rivers East Senatorial District. The descriptive cross-sectional research design was adopted for the study. The population for the study consisted of all 545,056 women in Rivers East Senatorial District with a sample size of 1,200 women determined using the Taro Yamane's formula and selected using the multistage sampling procedure. Data was collected using a structured questionnaire with a reliability coefficient of 0.74 and analysed; results were presented using charts and tables. The finding of this study showed that overall, 558(50.4%) had good knowledge of breast cancer. It was concluded that women in Rivers East senatorial District have average knowledge of breast cancer. It was recommended that, health educators should establish a sustainable awareness campaign for women about breast cancer preventive practices through the mass and social media as well as other channels of communication, such as posters, handbills, and fliers among others.

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## 1. INTRODUCTION

Breast cancer is a malignant tumour that grows very rapidly from normal cells. The disease is characterized with progressive and uncontrolled growth that spreads to other parts of the body such as the lymph node making such cells dangerous and life threatening [1]. Early diagnosis becomes necessary to its successful treatment than when lately diagnosed. Breast cancer accounts for over 10% of all cancer cases among women worldwide; it remains the most frequent causes of death in women and accounts for about 1.6 million deaths in both developing and developed countries [2,3,4].

Breast cancer incidence rates have been reviewed to be increasing each year by 5% in low resource regions such as Nigeria. Where breast cancer is diagnosed late, the chance of survival is usually poor [2]. In 2012, over 1.7 million new cancer case of breast cancer was reported; this accounted for 25% of all new cancer cases in women and about 53% of these cases were from developed countries [2,5]. According to the World Health Organization, over 1.5 million cases of breast cancer are diagnosed in the entire world with about 502,000 of deaths each year, making breast cancer the second cause of death among women worldwide, after lung cancer [6]. In Africa, studies conducted in Cameroon and Ghana revealed breast cancer to be the most common malignant cancer in women with estimate at 2625 per 100,000 in 2012; in Uganda reports show estimated breast cancer survival rate at 56% [7].

Knowledge is a primary step towards achieving behaviour change in prevention of breast cancer; it is an understanding of something, such as facts, information, or skills required through experience or education. Onyekwere [8] defined someone who is knowledgeable of breast cancer as one who can identify at least one preventive behaviour of breast cancer while Okobia et al. [9] defined knowledge of breast cancer as the ability to carry out self-breast examination and mention one risk factor of breast cancer [8,9,10]. A study done in Nigeria showed that women's knowledge and attitude towards breast cancer is poor despite a global warning to adopt positive preventive behaviour [11,12]. Even though early detection of breast cancer is clearly associated with breast cancer survival, many women still do

not follow recommended screening guidelines [13].

Several obstacles have been found to influence women's choices regarding breast cancer prevention. These factors amongst others include accessibility to health facility, cost, trust of health care providers, lack of transportation, limited or lack of knowledge on cancer preventive behaviour and the underlying belief that cancer is incurable. Other studies have shown that early detection of cancer is related to screening compliance and patients' perceptions of potential health risks [13].

In essence, study on knowledge related to breast cancer screening behaviours are multi-faceted, the overarching idea is that knowledge and awareness are crucial for breast cancer prevention. It is pertinent to state here that man's greatest enemy is ignorance, but knowledge will give one the necessary power to put one in the appropriate frame of mind to practice healthy lifestyles and avoid diseases. Good health knowledge with understanding of all the related factors undoubtedly, have favourable effect on quality of life and the overall well-being of an individual or a family. Also, one's exposure to proper health knowledge will influence the person's attitude and practice positively. Thus, it could rightly be said that knowledge put to action or practice is the key to optimum well-being [14]. This background thus shows a need to carry out a study on knowledge of breast cancer among women in Rivers East Senatorial District as an indication of what may be expected in the rural areas since urban dwellers are expected to have more access to information.

### 1.1 Aim and Objective of the Study

The aim of this study was to investigate the level of knowledge of breast cancer among women in Rivers East senatorial District while the specific objective was to find out the level of knowledge of Breast cancer among women in Rivers-East Senatorial District.

### 1.2 Research Question

To guide the study, the research question "What is the level of knowledge of breast cancer among women in Rivers East Senatorial District?" was posted.

## 2. METHODOLOGY

### 2.1 Sampling

Descriptive research design was adopted for the study. The population of the study consisted of all women in Rivers East Senatorial District; this population comprised of 545,056 women. (National population census 2016). The sample size was determined using Taro Yamani formula. However, to increase the power of statistics the calculated minimum sample size value of 480 was increased to 1,200. However, some of the returned questionnaires were not completely filled which reduced the sample size to 1,107. The study utilized a Multi-Stage sampling technique. A self structured questionnaire titled Knowledge of Breast cancer among women in Rivers East senatorial District (KBC) with two (2) sections was used. Section A was made up of the demographic data such as age, marital status, educational level and occupation, presented as Closed-ended questions, while section B contained research questions on knowledge presented as YES or NO.

### 2.2 Validity and Reliability of the Instrument

Face and content validity of the instrument were established by constructing the questions in line with the study objective as well as certification that the items were relevant to the study by relevant authorities.

The reliability of the instrument was determined using Kuder-Richardson because the section has

dichotomous responses. A reliability Coefficient of 0.71 was obtained which is considered reliable for the study.

## 3. RESULTS

Fig. 1 shows the pictorial presentation of the age of the respondents. The result shows that 174(15.7%) of the respondents were within the age range of 15-24 years, 471(42.5%) were aged 25-34 years, 269(24.3%) were aged 35-44 years while 193(17.4%) were aged 45 years and above.

Fig. 2 shows the percentage distribution of the marital status of the respondents. The result shows that 406(36.7%) were single, 656(59.3%) married while 45(4.1%) were divorced.

Fig. 3 shows the educational status of the respondents. The result shows that 136(12.3%) had no formal education, 90(8.1%) had primary education, 281(25.4%) had secondary education while 600(54.2%) had tertiary education. The high percentage of tertiary educated respondents is because of the setting where the study was carried out.

Fig. 4 shows the pie chart showing the occupation of the respondents. The result shows that 531(48.0%) were public servants, 260(23.5%) were traders, 107(9.7%) were farmers while 209(18.9%) were students.

Research question 1: What is the level of knowledge toward breast cancer among women in Rivers East Senatorial District?

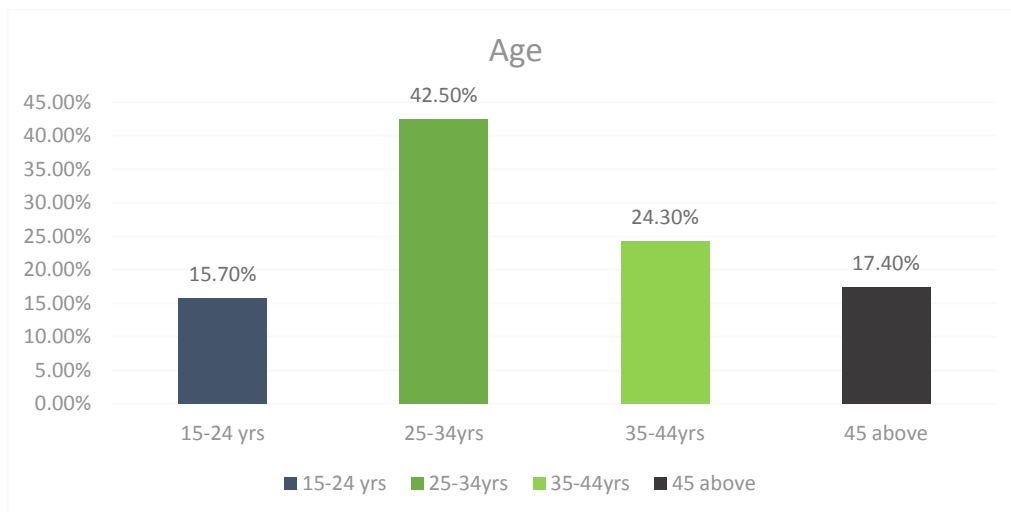
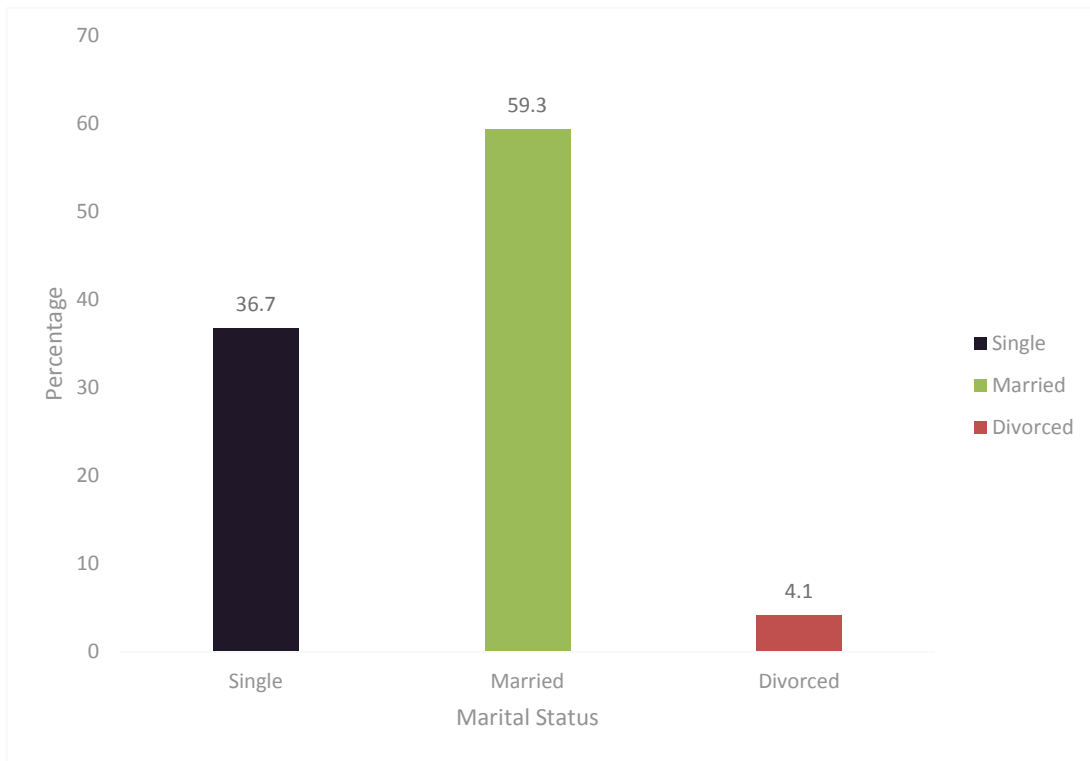
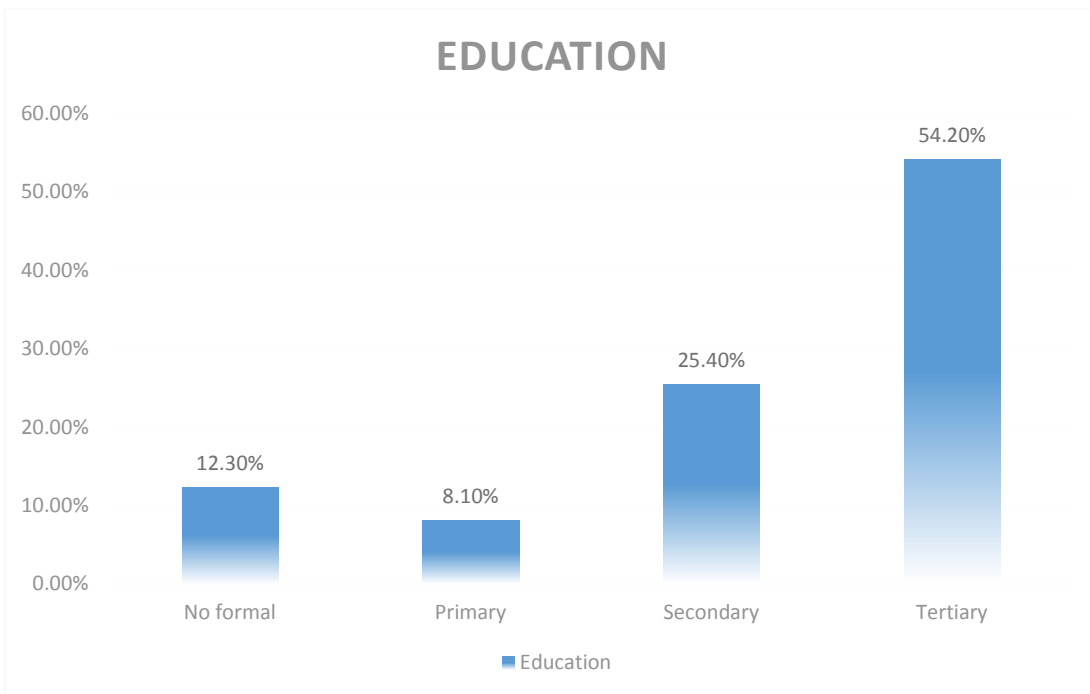


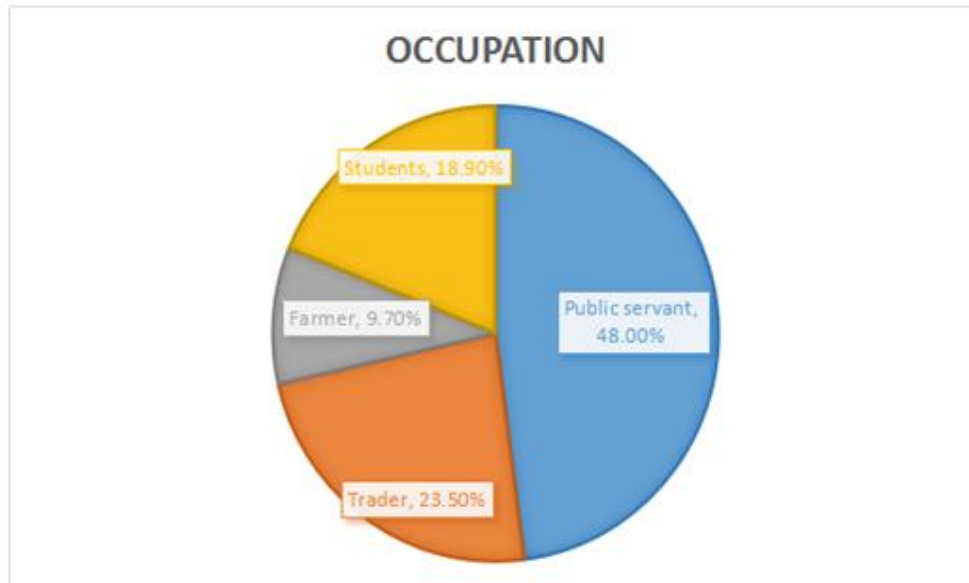
Fig. 1. Bar chart showing the age of the respondents



**Fig. 2. Marital status of the respondents**



**Fig. 3. Educational status of the respondents**



**Fig. 4. Pie chart showing the occupation of the respondents**

Table 1 shows the knowledge of breast cancer among the respondents. The result shows that overall 558(50.4%) had good knowledge while 549(49.6%) had poor knowledge of breast cancer. Thus the level of knowledge of breast cancer among women in Rivers-East Senatorial District was average (50.4%).

#### 4. DISCUSSION

The findings of this study show that overall 558(50.4%) had good knowledge while 549(49.6%) had poor knowledge of breast cancer. Thus the level of knowledge of breast cancer among women in Rivers East Senatorial District was average (50.4%). The finding of this study may not be surprising given that the study was a community-based one involving women of all educational cadres thus, the average knowledge found. The findings of this study is similar to that of Lois et al. [15] who reported on a study on breast cancer knowledge among women in Ebonyi State that, knowledge of breast cancer was found to be on the average [15]. The finding of this study also agrees with that of Arkierupaia et al. [16] who studied the knowledge of breast cancer among women in a district in India and found average knowledge of breast cancer among the women (45.3%) [16]. The similarity found between the present study and others might be due to the fact they were all community-based.

However, the finding of this study differs from other studies which reported high knowledge of breast cancer among respondents including that of Adibe et al. [17] on knowledge, attitude and perception of breast cancer among female staff of a Nigerian university reporting high knowledge of breast cancer among majority (89.7%) of the respondents [17]. Also Lemlem et al. [18] reported in a study on knowledge of breast cancer and screening methods among nurses in university hospitals in Addis Ababa, Ethiopia that only 57.8% of the respondents were knowledgeable about breast cancer and its screening [18]. This variation can be attributed to the fact that the study of Adibe et al. [17] and that of Lemlem et al. [18] were carried out among respondents in learned institutions considered to be custodians of knowledge whereas the present study was a community-based study [17,18].

The finding of this study on the knowledge of breast cancer also differs from other studies which reported low level of knowledge among respondents including that of Nwaneri et al. [19] on knowledge and awareness of breast cancer among rural women in Umuowa, Orlu Local Government Area in Imo State, Nigeria where more than one quarter (29.8%) of the respondents said breast cancer was an illness caused by ancestral forces [19]. This variation may be due to the difference in the study location. Although both studies were carried out in Nigeria, the culture and belief about disease

**Table 1. Level of knowledge on breast cancer among women in Rivers East senatorial district**

SN	Items	Responses		Remark
		Correct F (%)	Incorrect F (%)	
1	Breast cancer is most common among women	828(74.8)	279(74.8)	**
2	Breast cancer is hereditary (runs in family)	409(36.9)	698(63.1)	*
3	Breast cancer can be transmitted from one person to another through contact	866(78.2)	241(21.8)	**
4	Breast cancer is a preventable disease	744(67.3)	361(32.7)	**
5	Breast cancer is not curable	424(38.4)	681(61.5)	*
6	Mammography screening test is for breast cancer detection	660(61.5)	414(38.5)	**
7	Lump in the breast can be a sign of breast cancer	392(35.6)	708(64.4)	*
8	Palpable mass or rash on the breast means nothing and should be ignored	578(52.3)	527(47.7)	**
9	Discharge on the breast should be reported to the doctor	512(46.5)	590(53.5)	**
10	Nipple retraction may not be a sign of breast cancer	673(61.3)	424(38.7)	**
11	A change in the colour of the skin over the breast could be a sign of breast cancer	586(53.2)	515(46.8)	**
12	Sore on the breast that does not heal could be a sign of breast cancer	465(42.1)	639(57.9)	*
13	Redness and warmth over the breast is not common with breast cancer	674(61.9)	414(38.1)	**
14	Breast cancer presents commonly as a painless lump	478(43.3)	625(56.7)	*
15	Sedentary life style is a risk factor to breast cancer development	375(34.0)	728(66.0)	*
16	Diet has no relationship with breast cancer prevention	313(28.4)	791(71.6)	*
17	Drinking excess alcohol beverages increases chances of having breast cancer	654(59.1)	453(40.9)	**
18	Moderate use of hormone replacement therapy reduces risk for breast cancer	460(41.7)	644(58.3)	*
19	Exposure to ionized radiation increase the chances of having breast cancer	732(66.4)	370(33.6)	**
20	Excessive consumption of fatty foods can lead to breast cancer	437(39.8)	662(60.2)	*
21	Every woman above age 45 is at risk for breast cancer occurrence	471(42.7)	631(57.3)	*
	Overall	558(50.4)	549(49.6)	**

Key: \*\*Good knowledge (≥50%). \*Poor Knowledge (<50%)

causation differs among the respondents in the two study locations. The finding of this study also differs from that of Opoku et al. [20] who studied the knowledge, attitudes, beliefs, and behaviour towards breast cancer screening practices in Ghana and found a deficit in knowledge about breast cancer [20]. The finding of this study also differs from that of Bhore & Mahadalkar on knowledge regarding breast cancer among women in urban slums of Pune city which reported that, majority of the women had inadequate knowledge of breast cancer; only 1% of them had adequate knowledge regarding breast cancer [21].

Similarly, the result of this study is in disparity to that of Lokossou & Ogoudjobi whose report on women in hospital environment in Urban Areas of Southern Benin, showed poor knowledge of breast cancer among majority of the respondents [22]. Also, the report by Ademola & Edoni on the awareness, knowledge and practices of breast cancer prevention among women with family history of breast cancer in Ede, Osun State that a good proportion of the respondents were not aware of breast cancer, particularly their susceptibility to the disease, is not in agreement with the present study [23]. The finding of this study is not in tandem with that of Dorah et al. [24] who carried out a similar study in a rural South African community and among women in Baghdad City of Iraq, respectively and reported that a high percentage of the respondents had poor knowledge of breast cancer [24,25]. This variation found between the present study and the previous studies might be due to the difference in the sampling technique, sample size and location of the studies.

## 5. CONCLUSION

Based on the findings of the study, it was concluded that women in Rivers-East senatorial District have good knowledge of breast cancer, which was significantly related to their age and educational level. This percentage is regarded as good since 50% and above is considered a pass mark in the academic environment.

## 6. RECOMMENDATIONS

Based on the findings of the study, the following were recommended:

1. Health educators should establish a sustainable awareness campaign for women about breast cancer preventive practices through the mass and social media and other channels of communication such as posters, handbills, and fliers among others.
2. The primary health care board should adopt breast cancer screening package by integrating it with other reproductive health services like antenatal and postnatal care services and also making the preventive practices a continuous topic during health talk.
3. The Ministry of Health should make efforts to promote breast cancer screening among women by establishing well-organized breast cancer screening programme primary health care services.

## CONSENT

As per international standard or university standard, Participants' written consent has been collected and preserved by the author(s).

## COMPETING INTERESTS

Authors have declared that no competing interests exist.

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