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AWARENESS AND KNOWLEDGE OF BREAST CANCER AMONG FEMALE DIPLOMA STUDENTS IN DELTA STATE UNIVERSITY, ABRAKA, NIGERIA

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Abstract:
The study investigated the awareness and knowledge of breast cancer among female diploma students at Delta State University, Abraka. Two research questions guided the study. The study adopted the descriptive survey research method of the ex-post facto design. The population comprised one hundred and seventy-five (175) female Diploma students in Delta State University, Abraka. The sample size for the study is one hundred and seventy-five (175) female Diploma students. Hence, the sampling technique employed for the study is the total enumeration sampling technique. The instrument used for the data collection was a questionnaire. The data obtained were analyzed using descriptive statistics of frequencies, mean and standard deviation to answer the research questions. The findings of the study revealed that the awareness level of female diploma students about breast cancer is high. The study also found that the knowledge level of breast cancer among diploma students at Delta State University, Abraka, is high. The study concluded that breast cancer continues to be a significant public health issue in Nigeria. The study revealed a high level of awareness among female diploma students about breast cancer. Also, the knowledge level of breast cancer among diploma students at Delta State University, Abraka is high. It was recommended that higher institutions, government, non-governmental organizations, center for women and gender studies, churches, communities, female organizations, health educators and health professionals should enlighten all female students irrespective of their age group, marital status, family history of breast cancer and religious denomination, so as to raise further the level of their knowledge of breast cancer. Female students should read, learn and study about breast cancer.

Keywords: breast cancer, female students, awareness, knowledge, public health

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1. Introduction

Breast cancer can be conceptualised as a malignant growth in the breast. This disease, which is more common in women than men, has been variously defined. Breast cancer as a malignant, metastasizing cancer of the mammary gland (Martini, 2011). Breast cancer is a space-occupying destructive mass that grows and progresses at its own rate, independent of the body's control. It is a disease that starts in the cells of the breast and can metastasize (spread) to the draining lymph nodes of the region, usually in the armpit. Once the region has been affected, it may result in swelling or even an ulcer and infection.

Breast cancer remains a major health problem all over the world, affecting women in both developing and developed countries. The incidence of breast cancer is even growing in regions of the world (such as Africa) that had a low incidence of the disease in the past. Breast cancer has been observed to have caused the death of many women due to poor knowledge of the existence of the disease, as it has been mistaken for mere swelling as pain is usually present in an advanced stage. According to Jayadevan *et al.*, (2010), the incidence of breast cancer is increasing in most countries in Asia and Africa. Isara *et al.* (2011) observed that breast cancer is a public health problem that is increasing throughout the world, especially in developing countries, including Nigeria.

Breast cancer is the most common cancer and the principal cause of cancer-related deaths in women worldwide, as well as in Nigeria. Globally, about one million new cases are diagnosed annually, and the lifetime risk of developing breast cancer is at an incidence level of 1 in 9. The peak age of breast cancer in Nigerian women is about a decade earlier than Caucasians (World Cancer Research Fund, 2012).

2. Literature review

Adebamowo *et al.* (2010) reported that the peak age of incidence in Nigeria is 42.6 years and that 12% of cases occurred before the age of 30 years, while postmenopausal women accounted for 20% of cases. Furthermore, the late presentation of breast cancer cases has been consistent for three decades, and this late presentation of patients at late stages when little or no benefit can be obtained from any form of treatment is the hallmark of breast cancer in Nigeria.

The National Cancer Control Programme reports that breast cancer incidence in Nigeria has gone up over the decade, and in 2010, it accounted for 40 per cent of women's cancer, Muanya (2014). According to Isara *et al.* (2011), more young Nigerian women are being exposed to breast cancer risk factors as they may also be exposed to breast cancer due to inadequate knowledge of breast cancer risk factors and other breast cancer issues.

It is a deadly disease, which is better prevented than cured, and adequate knowledge and awareness of breast cancer issues can help women prevent the disease. According to Smyke (2013), one-third of cancers could be prevented if women are aware and are armed with the proper knowledge. Obionu (2011) observed that breast cancer was seen more among women who lack the awareness and knowledge of breast cancer

concept, risk factors, signs and symptoms, and preventive measures, while Junaibi *et al.*, (2011) stated that a significant number of women present with advanced stages of breast cancer due to lack of information, knowledge and awareness on breast cancer risk factors, symptoms and preventive measures. Supporting the above statement, Muhammad (2010) stated that a lack of knowledge and awareness of breast cancer issues predisposes Despite increasing reports of breast cancer awareness (Isichei, *et al.*, (2015); Azubuike, *et al.* (2013); and Tobin *et al.* (2014), noted that tertiary centers in Nigeria continue to receive patients at late stages when treatment is least rewarding. A recent report from Northern Nigeria reported 99% late presentation (Agbo, *et al.* (2014). This paradoxical trend of both growing awareness and persisting late presentation coupled with reports suggesting other competing drivers of late presentation, questions the "*theory of poor awareness*" as the foremost driver of the persistent late presentations.

Bellgam (2012) opined that one of man's greatest enemies is ignorance, but agrees that knowledge will give one the necessary power and put one in the appropriate frame of mind to practice healthy lifestyles and avoid diseases. Balogun *et al.* (2015) defined knowledge as the fact of understanding events, issues or objects that are acquired either through learning or experiences. The role of knowledge and information in the process of performing certain practices conducive to improved health has gained increased recognition. Knowledge can be empowering in that it enables one to make informed decisions regarding health. One's knowledge about health and disease prepares the way for a meaningful, healthy lifestyle (Ademuwagun, *et al.*, 2013).

Female diploma students' knowledge of breast cancer is a prerequisite for them to implement desirable behavioural practices towards its prevention. Knowledge of breast cancer, including its concept, risk factors, signs and symptoms, and preventive measures, is seen as a factor in breast cancer morbidity and mortality prevention in women (Muhammad, 2010). Therefore, female diploma students should possess adequate knowledge of the concept of breast cancer, breast cancer risk factors, signs and symptoms, and preventive measures in order to prevent the disease fatality. Investigating the awareness and knowledge of breast cancer among female diploma students in Delta State University, Abraka, seems a likely step in the journey towards breast cancer incidence and mortality reduction.

Breast cancer was previously known to be a disease of adult females (45 years and above), but recently, this has become a myth because the incidence of the disease in young female age groups such as 16 to 35 years abound. Reports have it now that breast cancer incidence is growing faster in young females who used to have a low incidence of the disease (Abazie, 2014) and that these young females have the lowest survival rates because they detect and present themselves for treatment late. Female diploma students belong to the age group of young females who now suffer from breast cancer. Therefore, it is important to create awareness and give adequate knowledge about the deadly disease of cancer. Despite the fact that female students could be affected by breast cancer and the need for them to know about breast cancer, few research studies have ascertained their knowledge of breast cancer. While numerous research studies have investigated

breast cancer-related awareness and knowledge of older adult women who are age 45 and above, studies that have presented females (16-35 years) are few in Nigeria and virtually non-existent, to the best knowledge of the researcher. It is against this background that this study tends to investigate the awareness and knowledge of breast cancer among female diploma students at Delta State University, Abraka.

2. Material and Methods

The study adopted the descriptive survey research method of the ex-post facto design to ascertain the awareness and knowledge of breast cancer among female diploma students at Delta State University, Abraka. The descriptive research method was adopted for the study because it is concerned with the collection of data for the purpose of describing and interpreting existing conditions prevailing in the awareness and knowledge of breast cancer among female diploma students.

The population of female Diploma students for the study is one hundred and seventy-five (175) in Delta State University Abraka. The population was drawn from 100 level and 200 level female diploma students of Delta State University Abraka. The population was used as the sample for the study. A self-structured questionnaire was used for the study with a reliability of 0.65. Frequency Tables Percentages, Mean and Standard Deviation, were used for the research questions

3. Results and Discussion

3.1 Demographic variables of the respondents

Table 1 shows that 58.3% of the respondents were in the 100 level, while 41.7% of them were in 200 level. This means that the majority of the respondents are in the 100 level. This implies that more students were admitted into the programme in the previous year and in the year the 100 level were admitted, fewer of them applied to be admitted as more students put in application for degree programmes.

Table 1: Level Profile of the Respondents

Level	Frequency	Percentage (%)
100	102	58.3
200	73	41.7
Total	**175**	**100**

Source: Fieldwork 2023.

Table 2 shows the age of the respondents as shown in the table above, 140 (80%) of the respondents are within 18-25 years, while 35 (20%) of the respondents are within 26-35 years of age. This implies that most of the students were in their teenage ages. This is the period where children are explorative and believe that they have the knowledge of everything.

Table 2: Age Profile of the Respondents

Age	Frequencies	Percentage (%)
18-25	140	80
26-35	35	20
36-45	0	0
46 and above	0	0
Total	**175**	**100**

Source: Fieldwork 2023.

3.2 Department Profile of the Respondents

Table 3 shows the department of the respondents as shown in the table above, 19 (10.9%) of the respondents are in Guidance and Counselling, 2 (1.1%) of the respondents are in Social Studies, Physics Education, Health and Safety Education, 11 (6.3%) of the respondents are in Library & Information Science, 27 (14.4%) of the respondents are in Political Science Education, 30 (17.1%) of the respondents are in Biology Education, 6 (3.4%) of the respondents are in Accounting and Finance, 16 (9.1%) of the respondents are in Business Education, 15 (8.6%) of the respondents are in Chemistry Education, 9 (5.1%) of the respondents are in Physics Education, 9 (5.1%) of the respondents are in Economics Education, 15 (8%) of the respondents are in Mass communication,14 (2.7%) of the respondents are in Nursery and Primary Education and 15 (8%) of the respondents are in Mass Communication and 2 (1.1%) of the respondents are in Mass Communication. Most of the respondents were either in the social sciences or arts. These are not areas of study where the content of the study includes human biological studies, and it is thus expected that their knowledge of human-related ailments will be low.

Table 3: Department Profile of the Respondents

Department	Frequencies	Percentage (%)
Guidance and Counselling	19	10.9
Social Studies	2	1.1
Library and Information Science	11	6.3
Political Science Education	27	15.4
Biology Education	30	17.1
Accounting &Finance	6	3.4
Business Education	16	9.1
Chemistry Education	15	8.6
Physics Education	9	5.1
Economics Education	9	5.1
Mass Communication	15	8.6
Nursery and Primary Education	14	8
Health & Safety Education	2	1.1
Total	**175**	**100**

Source: Fieldwork, 2023.

Table 4 shows the marital profile of the respondents as shown in the table above; 168 (96%) of the respondents are single, and 7 (4%) of the respondents are married. This shows that the majority of the respondents are single.

Table 4: Marital Profile of the Respondents

Marital Status	Frequencies	Percentage (%)
Single	168	96
Married	7	4
Divorced	-	-
Widow/Widower	-	-
Total	**175**	**100**

Source: Fieldwork 2023.

3.3 Questionnaire Response Rate

Table 5 shows the questionnaire response rate. A total of 175 copies of the questionnaires were administered by the researcher, and 175 (100%) copies were retrieved.

Table 5: Questionnaire Response Rate

Respondents	Number of questionnaires administered	Number of questionnaires retrieved	Percentage (%)
Students	175	175	100%

Source: Fieldwork 2023.

3.4 Analysis of Research Questions

3.4.1 Research Question 1: Please add the question

Table 6 shows the mean and standard deviation analysis on the awareness level of female students about breast cancer. The mean score on whether they are aware that breast cancer exists among women in Nigeria is 1.03, while the standard deviation is 0.16. The mean score on whether they are aware that breast cancer is one of the leading causes of death in women is 1.13, with a standard deviation of 0.33.

Table 6: Mean and Standard Deviation Analysis of the Awareness Level of Female Diploma Students about Breast Cancer

S/N	Awareness	N	Mean	SD
1	Are you aware that breast cancer exists among women in Nigeria?	175	1.03	0.16
2	Are you aware that breast cancer is one of the leading causes of death in women?	175	1.13	0.33

Table 7 shows the respondents' responses on signs and symptoms of breast cancer they know: 82(46.9%) stated lumps in the breast, 45(25.7%) indicated swollen breast, 20(11.4%) of the respondents said pain in the breast while 28(16%) do not know the signs and symptoms of breast cancer. This implies that the awareness level of female diploma students about breast cancer is low.

Table 7: Which of Signs and Symptoms of Breast Cancer You Know?

S/N	Signs and Symptoms	Frequencies	Percentage (%)
1	Lumps in the breast	82	46.9
2	Swollen breast	45	25.7
3	Pain in the breast	20	11.4
4	None/I don't know	28	16

Research Question 2: What is the knowledge level of breast cancer among diploma students at Delta State University, Abraka?

Table 8 shows the mean and standard deviation analysis on the knowledge of breast cancer. The mean score and standard deviation on if they know the signs of breast cancer is (mean = 1.64; SD = 0.94).

Table 8: Mean and Standard Deviation Analysis on the Knowledge of Breast Cancer

S/N	Knowledge	N	Mean	SD
1	Do you know the signs of breast cancer?	175	1.64	0.94

Table 9 shows the analysis of respondents on the danger signs of breast cancer. 109 (62.3%) said swelling/lump, 14 (8%) said fever, 49(26.4%) of the respondents indicated pain and 3 (1.7%) indicated bleeding in localized tissue.

Table 9: Which among These Is a Danger Sign in Breast Cancer?

S/N	Danger signs in breast cancer	Frequencies	Percentage (%)
1	Swelling/lump	109	62.3
2	Fever	14	8
3	Pain	49	28
4	Bleeding in localized tissue	3	1.7

Table 10 shows the respondents' responses to the treatment of cancer in the early stages. Chemotherapy 70(40%), Radiation therapy 60(34.3%), Surgery 35(20%) and no treatment 10(5.7%).

Table 10: What Is the Treatment of Cancer in the Early Stage?

S/N	Treatment of cancer in early stage	Frequencies	Percentage (%)
1	Chemotherapy	70	40
2	Radiation therapy	60	34.3
3	Surgery	35	20
4	No treatment	10	5.7

Table 11 shows respondents' responses on which examination is done regularly to detect breast cancer. The respondents indicated Xray 67 (38.3%) and Self breast examination 108 (61.7%).

Table 11: Which Examination Is Done Regularly to Detect Breast Cancer?

S/N	Items	Frequencies	Percentages (%)
1	Xray	67	38.3
2	Self Breast Examination	108	61.7

Table 12 shows the data analysis on what a person is supposed to do if a lump is detected in the breast. The respondents said to see a doctor/health center/hospital 5 (2.9%), self-examination 98(56.8%), chemotherapy 65(37.1%), radiation therapy 2(1.1%), and none/I do not know 5(2.9%). This means that the knowledge level of breast cancer among diploma students at Delta State University, Abraka, is high.

Table 12: What Is a Person Supposed to Do If a Lump Is Detected in the Breast?

S/N	Items	Frequencies	Percentage
1	See doctor/health center /hospital	5	2.9
2	Self-examination	98	56
3	Chemotherapy	65	37.1
4	Radiation therapy	2	1.1
5	None/I don't know	5	2.9

4. Discussion of Results

4.1 Awareness of Breast Cancer among Female Diploma Students

Table 6 shows the mean and standard deviation analysis on the awareness level of female students about breast cancer. The mean score on whether they are aware that breast cancer exists among women in Nigeria is 1.03, while the standard deviation is 0.16. The mean score on whether they are aware that breast cancer is one of the leading causes of death in women is 1.13, with a standard deviation of 0.33. The mean score of 1.03 is less than the criterion mean of 2.5, and the mean score of 1.13 is less than the criterion mean of 2.5. This means that they are not aware that breast cancer exists among women in Nigeria. Also, it implies that they are not aware that breast cancer is one of the leading causes of death in women.

Table 7 shows the respondents' responses on signs and symptoms of breast cancer they know: 82 (46.9%) stated lumps in the breast, 45 (25.7%) indicated swollen breast, 20 (11.4%) of the respondents said pain in the breast while 28 (16%) do not know the signs and symptoms of breast cancer.

The signs and symptoms revealed that the awareness level of female diploma students about breast cancer is high. This is in disagreement with the findings of Onwusah (2017) in their study of knowledge and awareness of breast cancer in South-South Nigeria. They revealed that awareness of breast cancer symptoms, breast cancer prevention and treatment and breast cancer detection methods is excellent, but poor awareness of breast cancer risk factors.

4.2 Knowledge of Breast Cancer among Female Diploma Students

Table 8 shows the mean and standard deviation analysis on the knowledge of breast cancer. The mean score and standard deviation on if they know the signs of breast cancer is (mean = 1.64; SD = 0.94). Table 9 shows the analysis of respondents on the danger signs of breast cancer. 109 (62.3%) said swelling/lump, 14 (8%) said fever, 49 (26.4%) of the respondents indicated pain, while 3 (1.7%) indicated bleeding in localized tissue. Table 10 shows the respondents' responses on the treatment of cancer in the early stage. Chemotherapy is 70(40%), radiation therapy is 60 (34.3%), surgery is 35 (20%), and no treatment is 10 (5.7%). Table 11 shows respondents' responses on which examination is done regularly to detect breast cancer. The respondents indicated Xray 67 (38.3%) and self breast examination 108 (61.7%). Table 12 shows the data analysis on what a person is supposed to do if a lump is detected in the breast. The respondents said to see a doctor/health center/hospital 5 (2.9%), self-examination 98(56.8%), chemotherapy 65(37.1%), radiation therapy 2(1.1%) and none/I don't know 5(2.9%).

Also, the result of the findings indicated that the knowledge level of breast cancer among diploma students at Delta State University, Abraka, is high. This is in consonance with Johnson and Dickson-Swifta (2008), who stated that a lack of knowledge about breast cancer and breast cancer risk factors may lead to inaccurate perceptions of the disease and a lack of utilization of early detection techniques.

5. Recommendations

Based on the findings and conclusions reached, the following recommendations were made:

- Higher institutions, Government, Non-Governmental Organizations, Center for Women and Gender Studies, Churches, Communities, Female Organizations, Health educators and health professionals should enlighten all female students irrespective of their age group, marital status, family history of breast cancer and religious denomination, so as to raise further the level of their knowledge of breast cancer.
- Female students should read, learn and study about breast cancer.
- Higher institutions should include breast cancer as a topic in general health studies of their institutions.
- To enhance knowledge and awareness about breast cancer, the responsible bodies should design breast cancer awareness campaigns, primarily through the electronic media.

6. Conclusions

Based on the findings of the study, it was concluded that breast cancer continues to be a major public health issue in Nigeria. The study revealed a high level of awareness among

female diploma students about breast cancer. Also, the knowledge level of breast cancer among diploma students at Delta State University, Abraka, is high.

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Conflict of Interest Statement
The author declares no conflicts of interest.

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