

## **Knowledge of Breast Cancer Possessed by Female Staff of University of Nigeria, Nsukka**

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### ***Abstract***

*The study investigated the knowledge of breast cancer possessed by female non-academic staff of University of Nigeria, Nsukka, Enugu State. Population of the study was made up of 821 female non-academic staff of University of Nigeria, Nsukka. The multi stage sampling technique was used to pick 261 female non-academics. The instrument for data collection was a researcher designed questionnaire. Data was analysed using frequencies and percentages to answer research questions while chi-square statistics at 0.05 level of significance was used to test the hypotheses. Major findings revealed that overall level of knowledge of breast cancer possessed by female non-academic staff was high irrespective of age and level of education. Also, there was a significant difference in the knowledge of Breast cancer by the respondents based on age and level of education. It was recommended among others that awareness programmes on preventive measures against breast cancer be mounted for all women irrespective of age, level of education and place of residence for women generally.*

**Keywords:** Breast Cancer, women, knowledge, age, education

### ***Introduction***

Despite research findings and efforts made by the World Health Organization, other leading health partners and workers, available records show that breast cancer is one of the leading causes of cancer deaths among women in the world (Gudilla, 2017). Katende, Tukamuhebwa and Nankumbi (2016) reported that breast cancer is the second leading cause of cancer deaths in women and poses a global public health concern. The authors further stated that the burden of breast cancer has increased both in developing and developed countries especially in Uganda where they conducted their study. Doumit, Fares and Arevian (2016) stated that breast cancer is responsible for the most frequent causes of deaths and cancer-related mortality and morbidity in women. These authors opined that cancer deaths in women are more in developing than in the developed countries. They attribute the disparity in cancer deaths among women in the developing countries to late health seeking action, such that they seek health care only when the cancer is at an advanced stage, whereas their counterparts in the developed countries start early to take actions to prevent breast cancer through Breast Cancer Self Examination (BSE), Clinical Examination (CE), among others.

In Nigeria, Nwaneri, Osuala, Okpala, Emesowam and Iheanachor (2017) posits that the number of women at risk of breast cancer has increased steadily from approximately 24.5 million in 1900 to approximately 40million in 2010 and is projected to rise to over 50 million in 2020. Nwaneri et al state, that the present scenario, roughly one in every 26 women are expected to be diagnosed with breast cancer, in their lifetime, majority of cases occurring in premenopausal women. Nwaneri et al (2017) also reported that cancer has been a major cause of morbidity and mortality globally and that in Nigeria from population based-based cancer registry in Abuja and Ibadan for a 2-year period (2009-2010), 3393 cancer cases were registered, whereas during the same period 1128 invasive cancers were reported. Breast and cervical cancer were the commonest among women. Based also on hospital records in Eastern Nigeria where this study conducted by Nwaneri and others is located, breast cancer comprised 30% of all patients with breast disease with male and female ratio of 1:67 out of this number 64% had advanced disease on presentation; only 7% of the women were presented within 1 month of detection of symptoms of breast cancer, whereas 7% waited longer than 1 year.

High mortality was reported for the women that presented themselves at advanced stage with poorer and pathological prognostic outcome of breast cancer.

Gudilla, (2017) states that breast cancer is a malignant neoplasm that mostly affect women all over the world and it is second to cervical cancer as a cause of death from cancer among women world over. The author listed age, exposure to environmental oestrogen due to pollution with Dichloro Diphenil Trichloroethane (DDT), use of oral contraceptives and hormonal therapy in post-menopausal treatment as a strong indicator for increased risk of breast cancer. Travis, Balkwill, Fenson, Appleby, Reeves, Wang and Green (2016) listed age, genetics, history of lump, dense breast tissue, oestrogen exposure and breast feeding, body weight and alcohol consumption as causes or risk factors that are most likely linked to breast cancer. The authors noted that those above 40 years are more likely to have breast cancer more than those below 30 years. Others include those that have higher breast density, women with high oestrogen level that is starting monthly periods earlier or entering menopause later than average, women who are overweight and obsessed with higher sugar intake after menopause, women who take too much alcohol (unhealthy lifestyle), women who are exposed to radiation hazards as a result of treatment for other cancers, women who are on hormonal treatment and oral birth control pills and women in plant have higher risk of breast cancer.

The same Travis et al (2016), Doumit, Fares and Arevian, (2016) listed the common signs and symptoms of breast cancer to include pain in the breast or armpit which does not change with monthly cycle, peeling or redness in the skin of the breast (like the skin of an orange), a rash around or on one of the nipples, discharge from the nipple possibly containing blood, a sunken or inverted nipple, a change in the size or shape of the breast, peeling, flaking or scaling of the skin, on the breast or nipple. Types of breast cancer according to Travis et al (2016) are: Ductal carcinoma (This type begins with the milk duct and most common type), Lobular carcinoma (This starts in the lobus), Invasive breast cancer (This is when the cancer cell break out from inside the lobus of duct and invade nearby tissue, increasing the chance of spreading to the other parts) and Non-invasive (when the cancer is still inside its place of origin and has not broken out. However, the cells can eventually develop into invasive cancer). Breast cancer can also affect men.

Ways of identifying breast cancer includes simple Breast Self-Examination (BSE), which involves the use of a Mammogram which is a type of x-ray commonly used for initial breast cancer screening. It produces images that can help detect any lump or abnormalities. Other ways of identifying breast cancer is use of ultrasound scan which helps differentiate between a solid mass or a fluid-filled cyst, an MRI scan which involves injecting a dye into the patient to find out how the cancer has spread and Biopsy which involves taking a sample of tissue surgically for laboratory analysis. This will show whether the cells are cancerous and if so which type of cancer it is (Travis et al, 2016).

According to Ilo, Omaka, Lios, Nwimo, and Onwunaka (2015) breast cancer knowledge possessed by women in Ebonyi State is on the average and differed significantly by education, age and location of women. They recommended that breast cancer education should be used to improve their knowledge of the disease, especially for those with non-formal education, older women and those in the rural areas through interventions by government and non-governmental agencies and through curriculum revision for schools.

Travis et al (2016) listed the following as preventive measure that could be taken against breast cancer. They are; avoid excess alcohol intake, healthy diet with plenty of fresh vegetables and fruits, maintaining healthy Body Mass Index(BMI) and having enough physical exercise. WHO, (2018) states that apart from early awareness creation on the signs and symptoms of breast cancer/ screening, Healthy lifestyles like healthy diets, control of alcohol intake, weight control measures and physical activity all contribute positively to breast cancer management. Advani and Moreno-Aspitia (2014) posited that apart from application of limiting dose of hormone therapy, exposure to radiation and environmental pollution, use of chemoprevention and chemoprophylaxis like oestrogen receptor modulators such as Tamoxifen, Raloxifene for prevention of breast cancer and surgical management for women with known hereditary history of breast cancer, healthy lifestyles like limiting alcohol intake, weight control, giving up on cigarette smoking, physical exercise are ways of preventing breast cancer. Siteman Cancer center (2018) listed 8 ways of preventing breast cancer which hinged on healthy lifestyle as keeping weight in check, eating fresh fruits and vegetables, not smoking, breast feeding if possible and physical exercise. It is instructive that previously documented studies on breast

cancer is mainly from the developed world and cannot be transplanted completely into the Nigerian context. A few who conducted research on the subject matter in Nigeria was outside Enugu state, especially University of Nigeria, Nsukka environment such as the study conducted in Ebonyi state by Ilo ,Omaka, Lios, Nwimo, and Onwunaka in 2015. Again, the University of Nigeria, Nsukka is an elitist environment and findings from any study conducted at UNN will assist Policy Makers in fashioning out policies that will help in preventing breast cancer spread and therefore mitigate the impact of breast cancer. These observable facts point to the need to ascertain the knowledge of breast cancer possessed by female non-academic staff of these great citadel of learning. This study is anchored on Health Belief Model.

### **Purpose of the Study**

The purpose of the study is to ascertain the knowledge of breast cancer possessed by female non-academic staff of University of Nigeria Nsukka.

Specifically, the study sought to determine the:

1. Level of knowledge of breast cancer possessed by female non-academic staff of University of Nigeria, Nsukka.
2. knowledge of breast cancer possessed by female non-academic staff of University of Nigeria, Nsukka based on age.
3. knowledge of breast cancer possessed by female non-academic staff of University of Nigeria, Nsukka based on educational level.

### **Research Questions**

To guide this study, the following research questions were posed:

1. What is the level of knowledge of Breast cancer possessed by female non-academic staff of University of Nigeria, Nsukka?
2. What is the knowledge of Breast cancer possessed by female non-academic staff of University of Nigeria, Nsukka based on age?
3. What is the knowledge of Breast cancer possessed by female non-academic staff of University of Nigeria, Nsukka based on educational level?

### **Hypotheses**

The following null hypotheses were postulated to give guide to the study at .05 level of significance.

1. There is no significant difference in the level of knowledge of Breast cancer possessed by female non-academic staff of University of Nigeria, Nsukka based on age.
2. There is no significant difference in the level of knowledge of Breast cancer possessed about by female non-academic staff of University of Nigeria, Nsukka based on educational qualification.

## ***Method***

### **Design of the Study:**

Descriptive research design was adopted in this study. Nworgu (2006) opined that descriptive research design is one in which a group of people or items are studied by collecting and analysing data from only a few people considered to be representative of the entire group. This design was successfully utilized by Nwoke and Onyeocha (2008) in a study on health promotion strategies among rural menopausal women in Isu LGA of Imo State. This design therefore is considered suitable for the present study. The area of study is University of Nigeria, Nsukka (UNN). UNN is a Federal University located in Enugu state, South East Nigeria. The University is located in the heart of Nsukka town. It is a co-educational community that hosts a good number of students from all over the country and beyond. UNN runs a variety of programmes with inhabitants predominantly students and staff (academic and non-academic). The campus was chosen as the location for the study because there are numerous female non-academic staff in UNN and no study has been conducted within the University community on knowledge of breast cancer. It is necessary to find out their knowledge of breast cancer and may be what they can do to prevent and treat it because having proper knowledge of

breast cancer will help them to be able to identify the disease and know how to effectively prevent; and should they notice any of the symptoms take appropriate measures in managing the breast cancer and also seek ways of coping with the disease.

The population for the study consisted of 821 senior female non-academic staff of UNN (University of Nigeria, Nsukka Staff Nominal Roll 2019). A sample size of 261 respondents were used for this study, which was drawn using a “Yaro Yamane’s formula”. Uzoagulu (1998), suggested that if the population is known, the sample can be gotten using Yaro Yamane formula which is adequate to represent the entire population. A multi-stage sampling procedure was applied. At stage one, purposive sampling technique was used to select three (3) faculties in the study area. This is to ensure that faculties with the highest number of female non-academic staff are selected. At stage two, simple random sampling technique of balloting without replacement was used to select three departments each from the selected faculties. This is to ensure that each of the departments in the sampled faculties have equal opportunities of being selected without bias. At stage three, purposive sampling technique was applied to select Twenty-Nine (29) subjects each from the sampled departments giving a total of 261 female non-academic staff of University of Nigeria, Nsukka, with one respondent refusing to return her questionnaire.

A researcher designed questionnaire known as Knowledge of Breast Cancer for Female Non-Academic Staff of University of Nigeria, Nsukka questionnaire (KOBCFNASUNN) was used to collect data from the respondents. The face validity of KOBCFNASUNN was established through the judgement of Five (5) experts from Human Kinetics and Health Education University of Nigeria, Nsukka.

The instrument was administered to 20 senior female administrative staff in UNN Enugu Campus (UNEC) and after the use of Cronbach alpha the reliability coefficient was .70 which is considered reliable for the study. The completed copies were collected with the help of two research assistants.

SPSS version 24 was used to analyze the data from the returned copies of the questionnaire. Frequencies and percentages were used to answer the research questions while chi-square ( $X^2$ ) statistics at 0.05 level of significance was used to test the hypotheses.

## *Results*

**Table 1**

Level of Knowledge of Breast cancer Possessed by Female Non-Academic Staff (n=260)

| S/N              | Item statement  | Correct Responses<br>f (%) | Incorrect Responses<br>f (%) |
|------------------|---|----------------------------|------------------------------|
| 1.               | Breast cancer is prevalent among women that use contraceptive pills and consume alcohol.  | 209 (80.4)                 | 51 (19.6)                    |
| 2.               | Breast self examination and weight control is Good for breast cancer prevention   | 168 (64.6)                 | 92 (35.4)                    |
| 3.               | Breast Cancer is more among women who consume alcohol   | 155 (59.6)                 | 105 (40.4)                   |
| 4.               | Breast cancer is not characterized by symptoms such as painful menstruation, excessive sleep, regular periods and are overweight. | 101 (38.8)                 | 159 (61.2)                   |
| <b>Overall %</b> |   | <b>60.9</b>                | <b>39.1</b>                  |

**Key:** 0-9% = Very low; 10-39% = Low; 40-59% = Moderate; 60-79% = High; 80% & above = Very high.

Data in Table 1 show that the overall percentage of female non-academic staff level of knowledge of breast cancer was high (60.9%). The Table further shows the level of knowledge of specific items as follows: very high knowledge (80.4%) of meaning breast cancer, high knowledge

(64.6%) of the average age at which breast cancer occurs, moderate knowledge (59.6%) of breast cancer causative factor. However, female non-academic staff had low knowledge (38.8%) of symptoms that characterize Breast cancer.

**Table 2**

Knowledge of Breast cancer Possessed by Female Non-Academic Staff Based on Age (n=260)

| S/N              | Item statement   | < 30years (n=72)        |                           | 30-49years (n=170)     |                           | 50years & above (n=18)  |                           |
|------------------|--|-------------------------|---------------------------|------------------------|---------------------------|-------------------------|---------------------------|
|                  |  | Correct Responses f (%) | Incorrect Responses f (%) | Correct Reponses f (%) | Incorrect Responses f (%) | Correct Responses f (%) | Incorrect Responses f (%) |
| 1.               | Breast cancer is prevalent among women that use Contraceptive pills and consume alcohol.   | 50 (69.4)               | 22 (30.6)                 | 143 (84.1)             | 27 (15.9)                 | 16 (88.9)               | 2 (11.1)                  |
| 2.               | Breast self examination and weight control is Good for breast cancer prevention  | 40 (55.6)               | 32 (44.4)                 | 115 (67.6)             | 55 (32.4)                 | 13 (72.2)               | 5 (27.8)                  |
| 3.               | Breast cancer is more among women who consume alcohol  | 42 (58.3)               | 30 (41.7)                 | 98 (57.6)              | 72 (42.4)                 | 15 (83.3)               | 3 (16.7)                  |
| 4.               | Breast cancer is not characterised by symptoms such as painful menstruation, excessive sleep, regular periods and are overweight | 27 (37.5)               | 45 (62.5)                 | 61 (35.9)              | 109 (64.1)                | 13 (72.2)               | 5 (27.8)                  |
| <b>Overall %</b> |  | <b>55.2</b>             | <b>44.8</b>               | <b>61.3</b>            | <b>38.7</b>               | <b>79.15</b>            | <b>20.85</b>              |

**Key:** 0-9% = Very low; 10-39% = Low; 40-59% = Moderate; 60-79% = High; 80% & above = Very high.

Data in Table 2 show that overall, female non-academic staff in age group 50years & above had high knowledge (79.15%) of breast cancer; female non-academic staff in age group 30-49years also had high knowledge (61.3%) while female non-academic staff in age group <30years had moderate knowledge (55.2%) of breast cancer. This implies that female non-academic staff in age group 50years & above had higher knowledge of breast cancer more than other age groups (50years & above = 79.15% > 30-49years = 61.3% > less than 30years = 55.2%)

**Table 3**

Level of Knowledge of Breast cancer Possessed by Female Non-Academic Staff Based on Educational Qualification (n=260)

| S/N              | Item statement  | NCE (n=39)              |                           | HND /B.Sc/ B.Ed (n=163) |                           | M.Ed / M.Sc/M.Eng & above |                           |
|------------------|---|-------------------------|---------------------------|-------------------------|---------------------------|---------------------------|---------------------------|
|                  |   | Correct Responses f (%) | Incorrect Responses f (%) | Correct Reponses f (%)  | Incorrect Responses f (%) | Correct Responses f (%)   | Incorrect Responses f (%) |
| 1.               | Breast cancer is prevalent among women that use Contraceptive pills and use alcohol.  | 23 (59.0)               | 16 (41.0)                 | 134 (82.2)              | 29 (17.8)                 | 52 (89.7)                 | 6 (10.3)                  |
| 2.               | Breast self-examination and weight control is25 Good for breast cancer prevention   | (64.1)                  | 14 (35.9)                 | 102 (62.6)              | 61 (37.4)                 | 41 (70.7)                 | 17 (29.3)                 |
| 3.               | Breast cancer is more among women who consume alcohol   | 19 (48.7)               | 20 (51.3)                 | 97 (59.5)               | 66 (40.5)                 | 39 (67.2)                 | 19 (32.8)                 |
| 4.               | Breast cancer is not characterized by symptoms such as painful menstruation, excessive sleep, regular periods and are overweight. | 16 (41.0)               | 23 (59.0)                 | 55 (33.7)               | 108 (66.3)                | 30 (51.7)                 | 28 (48.3)                 |
| <b>Overall %</b> |   | <b>55.3</b>             | <b>46.8</b>               | <b>59.5</b>             | <b>40.5</b>               | <b>69.8</b>               | <b>30.2</b>               |

**Key:** 0-9% = Very low; 10-39% = Low; 40-59% = Moderate; 60-79% = High; 80% & above = Very high.

Data in Table 3 show that overall, female non-academic staff with M.Ed/M.Sc./M.Eng& above had high knowledge (69.8%) of breast cancer; female non-academic staff with HND/B.Sc/B.Ed had moderate knowledge (59.5%) of breast cancer while female non-academic staff with NCE also had moderate knowledge (53.2%). This implies that female non academic staff with M.Ed/M.Sc./M.Eng & above had higher knowledge more than other categories (M.Ed/M.Sc./M.Eng& above = 69.8% > HND/B.Sc/B.Ed = 59.5% > NCE = 53.2%).

**Hypotheses one.**

There is no significant difference in the level of knowledge of breast cancer possessed by female non-academic staff of University of Nigeria, Nsukka based on age. Data testing this hypotheses are contained in Table 4.

**Table 4**

Summary of Chi-Square Analysis of No Significant Difference in the Level of Knowledge of Breast cancer Possessed by Female Non-Academic Staff Based on Age (n=260)

| Variable         | N   | Correct<br>O(E) | Incorrect<br>O(E) | $X^2$ -value | df | p. value. |
|------------------|-----|-----------------|-------------------|--------------|----|-----------|
| < 30years        | 72  | 26 (34.3)       | 46 (37.7)         |              |    |           |
| 30-40 years      | 170 | 84 (81.1)       | 86 (88.9)         | 10.603       | 2  | .005      |
| 50 years & above | 18  | 14(8.6)         | 4 (9.4)           |              |    |           |

**Key:** O = Observed frequency; E = Expected frequency; df = Degree of freedom; Sig. = significance.

The Chi-Square test for independence shows a significant difference ( $X^2 = 10.603$ ,  $df = 2$ ,  $p.value = .005 < .05$ ) in the level of knowledge of breast cancer possessed by female non-academic staff based on age. Since the p.value was less than the .05 level of significance at 2 degree of freedom, the null hypotheses of no significant difference was therefore rejected. This implies that female non academic staff differed in their knowledge of breast cancer based on age.

**Hypotheses Two.**

There is no significant difference in the level of knowledge of breast cancer possessed by female non-academic staff of University of Nigeria, Nsukka based on educational qualification. Data testing this hypothesis are contained in Table5.

**Table 5**

Summary of Chi-Square Analysis of No Significant Difference in the Level of Knowledge of Breast cancer Possessed by Female Non-Academic Staff Based on Educational Qualification (n=260)

| Variable                | N   | Correct<br>O (E) | Incorrect<br>O (E) | $X^2$ -value | df | p.value. |
|-------------------------|-----|------------------|--------------------|--------------|----|----------|
| NCE                     | 39  | 13 (18.6)        | 26 (20.4)          |              |    |          |
| HND/B.Sc/B.Ed           | 163 | 75 (77.7)        | 88 (85.5)          | 8.213        | 2  | .016     |
| M.Ed/M.Sc/M.Eng & above | 58  | 36 (27.7)        | 22 (30.3)          |              |    |          |

**Key:** O = Observed frequency; E = Expected frequency; df = Degree of freedom; Sig. = Significance.

The Chi-Square test for independence shows a significant difference ( $X^2 = 8.213$ ,  $df = 2$ ,  $p.value = .016 < .05$ ) in the level of knowledge of breast cancer possessed by female non-academic staff based on educational qualification. Since the p.value was less than .05 level of significance at 2 degree of freedom, the null hypothesis of no significant difference was therefore rejected. This implies that female non-academic staff differed in their knowledge of breast cancer based on educational qualification.

**Discussions**

Table 1 showed that generally, female non-academic staff possessed high knowledge of breast cancer. This could be attributed to the influence of being in an academic environment of higher

learning like such as obtainable in the location of the study and is therefore not surprising. This finding was in contrast with the findings of Noroozi, Kasiri, Eslami Hassanzadeh and Davari (2013); Hamid, Al-Ghufli, Raeesi, Al-Dliufarir, Al-Dhaheri, Al-Maskari, Blari& Shah (2014); and Eddy (2013) who reported that women had low knowledge of Breast cancer.

Age could also influence one's knowledge of a subject matter. The findings of Table 2 showed a difference in the knowledge of breast cancer possessed by female non-academic staff in age group 50years & above than those in age group 30-49 years while those in age group < 30years possessed moderate knowledge of breast cancer. Table 4 showed that there was a significant difference in the level of knowledge of breast cancer possessed by female non-academic staff based on age. This is in line with the findings of Ilo, Omaka-Lois, Nwimo and Onwunaka, (2015); Ikazeh and El-zeftawy, (2015) who found a significant difference in the total levels of knowledge of women aged (21-49) regarding health problems like breast cancer.

Findings of Table 3 indicated that female non-academic staff with M.Ed/M.Sc/M.Eng & above possessed high knowledge more than other categories. These finding is not surprising as one would expect female non-academic staff with higher educational qualification to have good knowledge of Breast cancer. This finding is in line with Daba, Bayene, Fekdu and Garoma (2013) and Ilo, Omaka-Lois, Nwimo and Onwunaka (2015); and Ibraheem, Oyewole and Olaseha (2015) who reported that women with high level of education had good knowledge of the symptoms of Breast cancer and other related women health problems.

Tables 5 showed that there was a significant difference in the level of knowledge of breast cancer possessed by female non-academic staff based on educational qualification. These finding is not surprising as no contrary related literature was reviewed. This finding is also in line with the assertion of Saima et al (2014) who found that knowledge about Breast cancer did vary significantly with education.

### **Conclusion**

Overall, level of knowledge of Breast cancer possessed by female non-academic staff was high irrespective of age and level of education. Also, there was significant difference in the level of knowledge of breast cancer possessed by female non-academic staff based on Age and educational qualification.

### **Recommendations**

Awareness programme on breast cancer should be conducted for women. This will help them to be aware of breast cancer causes, risk factors, preventive measures, signs and symptoms as well as knowing what action to take should any of them, their relative and friends have such a health challenge.

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