

## PRACTICE OF SELF BREAST EXAMINATION AMONG FEMALE TEACHERS IN ENUGU SOUTH LOCAL GOVERNMENT AREA, ENUGU STATE

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### Abstract

*Self breast examination (SBE) is a most cost-effective screening-tool for early-detection of breast cancer. The study investigated practices of SBE among female teachers in Enugu South LGA of Enugu State. The aim of the study was to investigate practices of SBE among female teachers in Enugu South LGA of Enugu State. Three objectives with three corresponding research questions and two hypotheses guided the study. A descriptive cross-sectional survey research design was used for the study. The population comprised 360 female secondary school teachers in public secondary schools in Enugu South LGA of Enugu State. A sample of 252 female secondary school teachers in Enugu south was drawn using multi-stage sampling procedure. The instrument used to collect data was structured questionnaire titled Practice of Self Breast Examination Questionnaire (PSBEQ). Frequencies and percentages were used to answer the research questions while Chi-square ( $\chi^2$ ) was used to test the null hypotheses at 0.5 level of significance. The findings revealed that 64.5 percent of the respondents had poor practice of self breast examination, 26.1percent had fair practice of self breast examination and 93 percent had good practice of self breast examination. Generally, practice of SBE among female teachers in Enugu South was poor. The researchers recommended among others that planned integrated-educational program by policy-makers, health care-providers and mass-media are necessary to promote SBE for early detection and management of breast cancer.*

**Keyword:** Breast Cancer, Self Breast Examination Practices, Female Teachers.

### Introduction

Breast cancer is a debilitating public health problem across the globe, which occurs mostly in women, but men can also be affected. Worldwide, breast cancer is the second most frequent cancer incidence and the fifth cause of cancer-related mortality (American Cancer Society, 2014). About 1.7 million women were diagnosed with breast cancer in 2012 (International Agency for Research on Cancer [IARC], 2012). It was responsible for approximately half a million deaths in women worldwide in 2012, affecting both developed and developing countries. This represented a marked increase of 20 percent incidence and 14 percent in mortality compared to 2008 estimates (World Health Organization [WHO], 2015)

In low and middle income countries, it remains a significant public health challenge as incidence rates have been shown to increase yearly by 5 percent with over 1 million projected new cases annually by 2020 (American Cancer Society, 2015). Breast cancer attacks women in their most productive years of life, it can be cured with limited resources if detected early, but management of advanced stage of the disease is expensive and outcome is often poor (Muhammed, 2014). The emergence of breast disease and subsequent development of cancer appears to be more aggressive in young women compared to its progression in older women (Federal Democratic Republic of Ethiopia Ministry of Health, 2015; International Agency for Research on Cancer, 2013).

Breast cancer is a malignant tumor that originates from the cells of the breast; it is caused by an uncontrolled or excessive growth of breast cells. Breast cancer is most commonly formed from the inner lining of milk ducts (ductal carcinoma) or the lobules that supply the ducts with milk (lobular carcinoma). There are different forms of breast cancer namely; ductal carcinoma, lobular carcinoma and metastatic breast cancer, so the survival and prognosis of breast cancer rate vary greatly in function of the type involved, as well as the stage and treatment (Awoyemi, 2012). Breast cancer is a disease that is progressive, in that it gradually develops into its dangerous and fatal form from a very small lesion, hence early detection and subsequently, early treatment leads to a better prognosis therefore reducing mortality and morbidity (Alharbi, Alshammari, Almutairi, Makboul, & El-Shazly, 2012). contextually, breast cancer is a life-threatening disease which affects women not only physically and psychologically but affects a part of her body which is associated with her sense of femininity exposing her to huge emotional trauma. There are some common sign of breast cancer.

The most common sign of breast cancer is a new lump or mass in the breast. In addition, the following are possible signs of breast cancer; nipple discharge or redness, breast or nipple pain, swelling of part of the breast or dimpling, an inverted nipple and skin dimpling (American Cancer Society, 2015). The first noticeable symptom of breast cancer is typically a lump that feels different from the rest of the breast tissue. More than 80 percent of breast cancer cases are discovered when the woman feels lump (Global Burden of Disease Cancer Collaboration, 2015). This is the very reason why self breast examination is conceived to enable detection of breast cancer in its earliest curable state. Sometimes it can be tender, soft and rounded (Bhurgri, Bhurgri, & Nishter, 2006). The high morbidity and mortality due to breast cancer can be in-part reduced if the lesion is detected early enough (American Cancer society, 2018). The value of early detection and diagnosis of breast cancer is further evidenced by the fact that the relative survival rate of breast cancer is higher in younger women provided they are able to identify anomalous breast changes that may be malignant (Mohammad, Bayoumi, & Megahed, 2013). Some factors are responsible for breast cancer.

Various factors have been adduced to be associated with breast cancer. These include: age, geographical variation, race (White women have a higher risk of developing breast cancer, but African women, when they do develop breast cancer tend to have more aggressive tumours), reproductive factors, older primigravida, inherited risk, previous breast disease, exposure to radiation, poor lifestyle, weight, hormones, hormone replacement therapy (HRT); using combined hormone therapy after menopause increases the risk of breast cancer (Santoro, DeSoto, & HongLee, 2009). Exercise seems to lower the risk of breast cancer (Yoo, Choi, Jung, & Jun, 2012). Family history has long been known to be a risk factor for breast cancer under genetic causes. Both maternal and paternal relatives are important, about 5 to 10 percent of breast cancers are believed to be hereditary, as a result of mutations, or changes, in certain genes that are passed along in families (Gage, Wattendorf, & Henry, 2012).

Breast cancer type 1 (*BRCA1*) and Breast cancer type 2 (*BRCA2*) are the two main types of breast cancer. Breast cancer type 1 (*BRCA1*) and Breast cancer type 2 (*BRCA2*) are abnormal genes, when inherited; markedly increase the risk of breast cancer for a lifetime (Ahuja, & Chakrabarti, 2009). Women who have the *BRCA1* gene tend to develop breast cancer at an early age. Having relatives with both breast and ovarian cancer also increases a woman's risk of developing breast cancer (Gage, Wattendorf, & Henry, 2012). The rising trend has been linked to factors surrounding lifestyle changes such as high fat diet, lack of early detection programmes resulting in a high proportion of late-stage disease presentation and lack of adequate diagnosis and treatment facilities. Self Breast Examination (SBE) still has an important role to play in the early detection of breast cancer in resource-constraint settings where routine clinical breast examination and mammography may not be feasible. In such settings, SBE is recommended because it is free, private, painless, easy, safe, and requires no specific equipment. It has also been shown to improve breast health awareness and thus potentially allow for early detection of breast anomalies (Nde, Assob, Kwenti, Njunda, & Tainenbe 2015).

Self- Breast examination (SBE) is a simple, very low-cost, non-invasive early detection method used to detect early breast cancer, which involves the woman herself looking at and feeling for any change in their breast as early as possible, which yield a better survival rate. Dorsay (2017) defined self breast -examination as a method whereby a woman examines her breasts regularly and at specific intervals. When performing breast self-examination, premenopausal women should examine their breasts 5- 7 days after the beginning of their periods while as menopausal women should perform SBE at the same date each month. Contextually, SBE refers to a situation where a woman herself will look at and feel for any change in her breast as early as possible, performing it rightly using the three middle finger to form a pad to check for abnormality at the 7<sup>th</sup> day after menstruation. SBE also helps women to be familiar with how their breast look and feel so they can alert health care professionals if there is any change. According to Kayode and Akande (2005), Self

breast -examination, carried out once monthly, between the 7th and 10th day of the menstrual cycle, goes a long way in detecting breast cancer at the early stages of growth when there is low risk of spread, ensuring a better prognosis when treated. Early diagnosis has a positive effect on the prognosis and limits the development of complications and disability. Furthermore, it increases life quality and survival (Nade, AssobJules, Kwenti,& Emmanuel, 2015). Hence, the outstanding issue is to detect cancer early in order to avert dangers associated with it via practice of self breast examination.

Practice is the act of engaging in an activity again and again, for the purpose of improving or mastering it, as in the phrase "practice makes perfect" underscores. According to Jafari, Rafiei, Nassehi, Soleimani, & Noormohammadi (2015), medicine cannot cure all diseases and it is evidenced that practice of SBE benefits women to detect any changes in their breasts as early as possible. Practice of SBE is a screening method that enables one to detect lump or mass in the breast as early as possible, if practiced frequently and correctly. Self breast practices are those techniques that enable one to identify any change on breast region, as is apply to this present study some of the practices are; First, lie flat on ones back, With the right hand behind the head, With the middle fingers of ones left hand, gently yet firmly press down using small motions to examine the entire right breast, while sitting or standing, examine your armpit (commonly skipped) because breast tissue extends to that area. Gently squeeze the nipple, checking for discharge, Repeat the process on the left breast. Contextually, practice of SBE is a process whereby women including female teachers in secondary school examine their breasts regularly to detect any abnormal swelling, lumps or any abnormality in order to seek prompt medical attention.

Teachers, play essential role in information dissemination. School teachers play an important and unique role in health education by helping students to develop healthy practices including SBE. Through health education in school, students are able to gain an understanding and appreciation of healthy lifestyles that promote lifelong wellbeing. Female secondary school teachers in Enugu south LGA are the population to study because the prevalence of breast cancer is common among female. The practice of SBE is capable of being influenced by some socio demographic factors such as age, level of education, marital status, religion, parity, occupation, belief and culture (Hahn &Payne, 2014). However, this study considered; age and marital status of the female secondary school teachers in Enugu South LGA.

Age could be a factor to determine the practice of SBE among female secondary school teachers. Among Nigerian women, the peak age of breast cancer presentation is about 10-15 years later than what is observed in Caucasian women, where it occurs between the ages of 35-45 years and 70 percent of Nigerian women present with advanced staged disease while the 5-year survival rate is less than 10 percent compared with over 70 percent in Western Europe and North America (Okobia, Bunker, Okonofua,& Osime, 2006). In Nigeria, about two thirds of women

with breast cancer are diagnosed at an advanced stage, with the possibility of metastatic spread (Akarolo-Anthony, Ogundiran, & Adebamowo, 2010). Higher level of education and years of service were not significant determinants of SBE practice and age was significantly related to SBE practice and practice of SBE increased significantly with age from among those who were 20-29 years to those who were 40 years and above (Ojewusi & Arulogun, 2016).

Minasie, Hinsermu, and Abraham (2017) stated that younger women in age category of 19-24 years have lower breast self-examination practice when compare with the older ones.

Ojewusi and Arulogun (2016) revealed that majority of the respondents that participated in SBE practice 79.8 per cent were married. Also Gwarzo, Sabitu, and Idris (2017) in their study among undergraduate students found, that only 57 per cent who were married, practice SBE. Furthermore, Nnebue et al. (2018) declared that majority of the respondents who practiced SBE were the currently married 159(75%) and there is a statistically significant association between practice of BSE and marital status. However, this study focused on determining the practice of SBE by female secondary school based on age and marital status.

Breast cancer was second to cancer of the cervix in the North- Western geopolitical zone of Nigeria while at University College Hospital (UCH) in Ibadan which is situated in the South-Western geopolitical zone of Nigeria; breast cancer was the leading malignancy among women (Ogunbiyi, Fabowale, & Ladipo, 2010), but the situation in Enugu south not yet known. Even though incidence rates of breast cancer are still highest in more developed nations, mortality is greater in less developed countries, owing to lack of access to treatment as well as early detection of the disease (International Agency for Research on Cancer [IARC], 2012). Hence practice of SBE becomes eminent since it will aid in reducing the morbidity and mortality rate of BC. Therefore, this study aimed at finding out whether female secondary school teachers in Enugu South LGA, Enugu State, practice SBE

### **Purpose to the Study**

The purpose of the study was to investigate practice of SBE among female secondary school teachers in Enugu South LGA of Enugu State. Specifically, the study determined:

1. practice of SBE among female teachers in Enugu South LGA of Enugu South.
2. practice of SBE among female teachers in Enugu South LGA based on age, and
3. practice of SBE among female teachers in Enugu South LGA based on marital status.

### **Research Questions**

The following research questions were posed to guide the study:

1. What are the SBE practices adopted by female teachers in Enugu South LGA, Enugu State?
2. What are the SBE practices adopted by female teachers in Enugu South LGA, Enugu State based on age?
3. What are the SBE practices adopted by female teachers in Enugu south LGA, Enugu State based on marital status?

### Hypotheses

The following null hypotheses were tested at 0.5 level of significance:

1. There is no significant difference in the SBE practices adopted by female teachers in Enugu South LGA, Enugu State based on age.
2. There is no significant difference in the SBE practices adopted by female teachers in Enugu South LGA, Enugu State based on marital status.

### Methods

A descriptive cross-sectional survey research design was used for the study. The population comprised 360 female secondary school teachers in public secondary schools in Enugu South LGA, Enugu State. A sample of 252 female secondary school teachers in Enugu South was used drawn using the multi-stage sampling procedure. The instrument used to collect data was a structured questionnaire titled "Practice of Self Breast Examination Questionnaire" (PSBEQ). The face validity of the instrument was obtained through the judgments of five experts in Health Education. The reliability of the instrument was established using Split half method (Spearman's Brown coefficient), and a reliability coefficient of 0.96 was obtained thus, the instrument was adjudged reliable. Copies of questionnaire were administered by the researchers and three researcher assistants. Out of two hundred and fifty-two copies of questionnaires administered 242 copies were returned; the return rate was 96 per cent. Frequencies and percentages were used to answer the research questions which the null hypotheses were tested using chi square ( $\chi^2$ ) statistics at 0.05 level of significance.

Total score for each item in practice of SBE question is 10, having 8 yes and 2 no. In practice questions, scores 0-3 was interpreted as poor practice, scores 4-6 was interpreted as fair practice, and scores 7- 10 was interpreted as good practice.

### Results

**Table 1: Socio-demographic Characteristics of Female Secondary School Teachers in Enugu South LGA, Enugu State (n=242)**

	Variable	Frequency	Percent (%)
Age (years)	20-29	23	9.50

	30-39	101	41.73
	40-49	89	36.77
	50 above	29	12.00
Marital Status	Single	39	16.12
	Married	192	79.34
	Divorce	7	2.89
	Widow	4	1.65

Table 1 show that the female secondary school teachers' age 30-39years (41.73%) had the highest respondents, while those married (79.34%) has the highest respondents.

**Table 2: Practice of SBE among female teachers in Enugu South LGA, Enugu State (n=242)**

Breast self examination practice	Yes (%)	No (%)
Looking through the mirror at the breast for any change	158(65.3)	84(34.7)
Palpation with finger pad formed by three middle finger	114(47.1)	128(52.9)
Examine the breast while bathing	165(68.2)	77(31.8)
Lying down while examining the breast	170(70.2)	72(29.8)
Standing while examining the breast before a mirror	137(56.6)	105(43.4)
Palpate the breast one after the other once a month	101(41.7)	141(58.3)
Examining the inner half, lower outer quarter breast	118(48.8)	124(51.2)
Using vertical strip and circle pattern to examine the breast	98(40.5)	144(59.5)
Examining the breast while breastfeeding baby	146(60.3)	96(39.7)
Examining the before menstrual period	150(62.0)	92(38.0)

Table 2 shows that majority of the respondents; look through the mirror at the breast for any change (65.3%), examined their breast while bathing (68.2%), lying down while examining the breast (70.2%). Most of the respondents did not do it at the right time, before menstrual period (62%), most of them did it while breastfeeding (60.3), many of the respondents did not do it with the finger pad (47.1%), many did not practice SBE using vertical strip and circle pattern (40.5%), also only few (48.8%) examined the inner half and lower quarter. Overall, the Table further indicates that majority 64.5 per cent had poor practice, 26.4 per cent had fair practice while

9.1 per cent had good practice.

**Table 2.1: Level of Practice of SBE among Secondary School Teachers in Enugu South LGA, Enugu State**

Level of practice (0-10)	Frequency	Percent (%)
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Poor (0-3)	156	64.5
Fair (4-7)	64	26.4
Good (8-10)	22	9.1
Total	242	100

**Table 3: Practice of SBE among Female Secondary School Teachers in Enugu South LGA, Enugu State Based on Age (n=242)**

Age	Poor practice	Fair practice	Good practice	f (%)
20-29	15(9.6)	5(7.8)	3(13.6)	23
30-39	76(48.7)	17(26.6)	8(36.4)	101
40-49	53(34)	27(42.2)	9(40.9)	89
50 above	12(7.7)	15(23.4)	2(9.1)	29
Overall	156(64.5)	64(26.4)	22(9.1)	242

Table 3 showed that female secondary school teachers had poor practice of SBE (64.5%). The table also indicated that the age group that has the highest responses on good practice was 40-49years (40.9%). The table further showed that the age groups 30-39years had the highest response on poor practice (48.7%) and also age group 50years and above had lowest number with good practice of SBE (9.1%).

**Table 4: Practice of SBE among Female Secondary School Teachers in Enugu South LGA, Based on Marital status (n=242)**

Marital Status	Poor practice	Fair practice	Good practice	f (%)
Single	20(12.8)	15(23.3)	4 (18.2)	39 (16.1)
Married	131(84.0)	46(71.8)	15 (68.2)	192 (79.3)
Divorce	3(1.9)	3(4.7)	1(4.5)	7(2.9)
Widow	2 (1.3)	1(0.6)	1(4.5)	4 (1.7)
Overall	156(64.5)	4(26.4)	22(9.1)	242(100)

Table 4 shows that out of 192(79.3%) female secondary school teachers that are married, 131(84%) respondents had poor practice. The table also indicates that out 39(16.1%) respondent that were single 15(23.3%) had fair practice. The table further indicates that overall, the respondents in all the marital status had greater number of their respondents in poor practice of SBE 156(64.5%).

**Table 5: Summary of Chi-square ( $\chi^2$ ) Test of difference on SBE practices adopted by Female Secondary School Teachers in Enugu South LGA, Enugu State based on Age.**



Age	20-29yrs	30-39yrs	40-49yrs	50yrs- above	Cal $\chi^2$	df	Crit $\chi^2$
Poor practice	15(14.8)	76(65.1)	53(57.4)	12(18.7)	12.374	6	12.592
Fair practice	5(6.1)	17(26.7)	27(23.5)	15(7.7)			
Good practice	3(2.1)	8(9.2)	9(8.1)	2(2.6)			

Table 5 shows the Chi-square ( $\chi^2$ ) test of difference on SBE practice adopted by female secondary school teachers in Enugu state based on age. The result shows that there was no significant difference in SBE practices adopted by female secondary school teachers in Enugu South LGA, Enugu State based on age (Cal $\chi^2$  = 12.374, Crit $\chi^2$  = 12.592, df = 6). Since the critical value at 0.05 level of significance was greater than the calculated chi-square value, the null hypothesis was therefore not rejected. This implies that there was no significant difference in the SBE practices adopted by female secondary school teachers in Enugu South LGA, Enugu State based on age.

**Table 6: Summary of Chi-square ( $\chi^2$ ) Test of difference on SBE practices adopted by Female Secondary School Teachers in Enugu South LGA, Enugu State based marital status**

Marital status	Single	Married	Divorce	Widow	Cal $\chi^2$	df	Crit $\chi^2$
Poor practice	20(25.1)	131(123.7)	3(4.5)	2(2.6)	9.3342	6	12.592
Fair practice	15(10.3)	46(50.8)	2(1.9)	1(1.1)			
Good practice	4(3.5)	15(17.5)	2(0.6)	1(0.4)			

Table 6 shows the Chi-square ( $\chi^2$ ) test of difference on SBE practice adopted by female secondary school teachers in Enugu state based on marital status. The result shows that there was no significant difference in the SBE practices adopted by female secondary school teachers in Enugu South LGA, Enugu State based on marital status (Cal $\chi^2$  = 9.3342, Crit $\chi^2$  = 12.592, df = 6). Since the critical value at 0.05 level of significance was greater than the calculated chi-square value, the null hypothesis was therefore not rejected. This implies that there was no significant difference in the SBE practices adopted by female secondary school teachers in Enugu South LGA, Enugu State based on marital status.

### Discussion

The result of the major findings shows that practice of SBE among female teachers in Enugu south was poor, probably due to lack of awareness in the area of SBE. There was no significant difference in the SBE practices adopted by female secondary school teachers in Enugu South LGA, Enugu State based on age and marital status. Since SBE practices adopted by female secondary school teachers in Enugu South LGA were not dependent on their age and marital status, it may be an indication that practices of SBE is based on individuals' exposure and conviction. These findings

confirmed the findings of Minasie, Hinsermu and Abraham (2017) on their study showed low prevalence of breast self-examination practice among HEW in Wolaita Zone implicating a great negative impact on early detection of breast cancer and breast problems.

The findings showed no significant difference in the SBE practices adopted by female secondary school teachers in Enugu South LGA, Enugu State based on age. This finding concurs with the findings of Iranian, India, Jordan, in Kuwait, in Iraq and among women in the eastern part of Nigeria, who reported that women who practiced BSE were older than women who did not practice BSE. This similar finding may be due to elderly women may be aware that age is a significant factor of breast cancer and may perceive the role of BSE in the early diagnosis of breast cancer as relevant. Contrary to this present study, the study by Roy and Abdus, (2016) a very good number (92%) of teachers start practicing SBE at younger ages, although their frequency, timing and technique were poor compared to their knowledge. This implies that they do not practice what they know. The practice of SBE seems to empower women and especially female teachers by taking the responsibility for their own health and educate young girls under their care (WHO, 2016). So, it enables teachers to raise breast cancer awareness and educate women about breast cancer.

The result also showed no significant difference in the SBE practices adopted by female secondary school teachers in Enugu South LGA, Enugu State based on marital status. This finding was surprising as one may think that married one may practice SBE more due to the present of their spouse who may encourage them to practice SBE for early detection and in some cases notice the abnormality themselves. Nevertheless, more than 90% of cases of cancers of the breast are detected by women themselves, which still implies on the importance of breast self-examination (Rosemary, Bassey, Nicholas, Irurhe, Modele, Olowoyeye, Adekunle, Adeyomoye, Adebayo & Onajole 2011). Poor SBE performance among secondary school teachers, underscores the need for intensive health education among the teachers because it is when teachers are knowledgeable enough and can perform it well that they will properly guide students under their care.

## **Conclusions**

The findings have shown that practice on SBE among female secondary school teachers in Enugu State was poor. By knowing how to do thorough SBE, teachers and women in general will be able to identify breast cancer at the initial stages. This in turn may help to eventually decrease the number of premature breast cancer deaths in developing countries such as Nigeria. These data imply that female secondary school teachers in Enugu South LGA need more educational intervention on breast cancer and its early detection through practice of SBE.

### **Recommendations**

Following from the findings of the study, the following recommendations were made:

1. Breast cancer burden can be decreased by running different awareness campaigns and health education by health care personnel to educate the female teachers. Sufficient knowledge can also help the women to overcome their fear about breast cancer and increase their practice of SBE as regular screening procedures thereby decreasing the mortality and morbidity of breast cancer
2. Practice of self breast examination and Breast cancer awareness campaign programs targeted at younger women should be encouraged, as a strategy to remove fear and misperceptions on SBE, thereby leading to breast cancer prevention.
3. Policymakers and healthcare professionals should implement integrated breast cancer and SBE awareness campaign to promote SBE as an early and cost-effective breast cancer screening tool.

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