

# **KNOWLEDGE AND BENEFITS OF BREAST SELF-AWARENESS AS AGAINST BREAST SELF-EXAMINATION AMONG FEMALE UNDERGRADUATES IN UNIVERSITY OF BENIN**

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## **Abstract**

*Breast cancer is recognized as a major cause of morbidity and mortality among women which could be attributed to the late diagnosis of the disease. This study was carried out to assess the knowledge and practice of breast self-awareness as against breast self-examination for early breast cancer detection. The population of the study was 4115 undergraduates in university of Benin, Edo state Nigeria and a sample size of 210 was selected. The descriptive survey research design was used. Four research questions were raised to guide the study. The research instrument used was the questionnaire to elicit information from respondents. Data obtained was analysed using sample percentage and frequency count. The findings of this research revealed low knowledge of breast self-awareness but a high perception of its benefits among the female students. The low level of knowledge is attributed to the recent adoption and recommendation of the concept for breast cancer detection by world Health Organisations. Results also revealed a low knowledge of breast self-examination. Based on the findings of the study, the researcher recommends that proper health education should be provided for the students by trained health educators to equip them with adequate knowledge and understanding of breast self-awareness and its benefits in breast cancer detection. Students should also be properly enlightened that the compulsory practice of breast self-examination for breast cancer detection is no longer recommended by health organisations and should therefore be discouraged therefore a new concept of breast self-awareness has been developed for early breast cancer detection*

## **Introduction**

The breast is either of the pair of mammary glands extending from the chest in mammals found in both sexes though it is rudimentary in the males and well developed in the human female after puberty (Chaurasia, 2017). Cancer of the breast is a major public health issue globally. In 2019, the World Health Organization (WHO) revealed that it is the most common cancer that affects women, affecting about 2.1 million women each year (WHO, 2019). In 2018, there were about 2.09 million cases of breast cancer and 627,000 deaths worldwide (WHO, 2019). According to the National Breast Cancer Foundation, 1 in 8 women will be diagnosed with breast cancer in their lifetime. The American Cancer Society estimated an average of 93,600 new cases of breast cancer annually in Africa with about 50,000 deaths. The Global Cancer Project, GLOBOCAN in

2012, revealed that the incidence of breast cancer is higher in the developed countries while relative mortality is greatest in less developed countries where the majority of cases are diagnosed in the late stages. This observation demands that cancer control should be of increasing priority in the health care programmes of developing countries.

In Nigeria, breast cancer is recognized as a major cause of morbidity and mortality. The high mortality rate in the country is attributed to the late diagnosis of the disease as a result of inaccessible healthcare facilities, diagnostic services, fear of mastectomy, preference for spiritual healing houses, herbal therapy and economic reasons (WHO, 2019). In order to improve breast cancer outcomes and survival rates, early detection of the disease is important. Early diagnostic programmes based on the awareness and identification of the early signs and symptoms and immediate referral, should be prioritised especially by limited resource settings with weak health systems. Diagnosis of breast cancer at an early stage allows women more treatment choices and greater chance of long term survival (Krishnan, 2010).

Interestingly, the concept of Breast Self-Examination was widely accepted and promoted as a method of early detection of breast cancer. *Breast Self-Examination (B.S.E)* as the name implies, is a technique which allows an individual to examine the breast tissues for any physical or visual changes carried out by the woman herself (Maurer, 2009). This method involves the woman looking at the breast for any visual changes and feeling the breast for distortions, Lumps or swellings. Breast Self-Examination is practised worldwide and has recorded some successes, especially being cost, patient centred and non-invasive but recent studies and health providers now recommend against Breast Self-Examination (Mayo clinic, 2011; Gaskie, Nashelsky, 2005)

According to a meta-analysis in the Cochrane Collaboration, two large trials carried out in Russia and Shanghai from October 1989 to October 1991 found no beneficial effects of screening by breast self-examination but suggested potential harm in terms of increased numbers of benign lumps identified and an increased number of biopsies performed. They concluded, "At present, screening by breast self-examination or physical examination cannot be recommended" although it seemed promising when it was first introduced, studies have shown that breast self-examination does not offer the early detection and survival benefits of other screening tests as such, it is no longer recommended as a screening test for breast cancer (Komen, 2017).

*The National Breast Cancer Coalition, (NBCC) 2013*, studies have shown an increase in potential harm from monthly regimented breast self-examination including elevated anxiety, more frequent physical visits and unnecessary biopsies of benign lumps and in reality, there is no scientific evidence to prove that breast self-examination saves lives. Breast self-examinations are based on an incorrect theory of cancer development which assumes steady growth of the tumour,

apparently, breast cancer does not grow like that, the woman could examine herself every day and suddenly discover a walnut (Love, Olson and Stuart, 2002). Since Breast self-examination is advised to be carried out only once a month, certain changes may occur in the breast that may go undiscovered by the woman between each period of examination, thereby, will not be attended to leading to prolonged health issues. Because Breast self-examination is not proven to save lives, it is no longer routinely recommended by health authorities for general use including the *World Health Organization (WHO)*, the Canadian Task Force on Preventive Health Care, the American Cancer society, National Cancer Institute, American congress of obstetricians and gynaecologists (ACOG) amongst others (Wikipedia, 2019; ACOG, 2017).

Based on the fact that breast self-examination is no longer routinely recommended, a new concept of Breast Self-Awareness has been developed for early breast cancer detection. Breast Self-Awareness is a broader concept which entails the woman becoming aware and familiar with her breasts, knowing how her breasts normally look or feels so as to easily identify any small changes in the breasts. Unlike Breast self-examination which is performed in a systematic way, as a routine, Breast self-awareness is encouraged as a habit, there are no schedules for becoming familiar with the breasts (ACOG, 2017). National Health Institute (NHI 2014) was of the view that breast changes are very common and most breast changes are not cancer (NHI, 2014). Throughout a woman's life, the breast tissue remains sensitive to hormonal changes including those that occur during menstruation, pregnancy, and lactation (Redhwan, 2014). Other breast changes can be caused by the normal aging process (NHI, 2014). Such changes when discovered suddenly may be assumed cancerous by any woman and raise anxiety, but as the woman becomes more aware of and familiar with her breasts, she is able to know what changes are normal and are to be expected at different times. It also includes breast self-examination for breast awareness, i.e., examination of the breast carried out for breast awareness, not strictly for cancer detection. Breast self-awareness enables the women detect small changes in her Breast at any point in time and reduces anxiety that comes with Breast self-examination. With proper education, the woman is able to understand that not all breast changes are cancer.

The signs of breast cancer are not the same for all women. It is important to know how your breasts normally look or feel (Komen, 2016). The risk of developing breast cancer increases with age, but it is important to be breast aware no matter how old you are (Hull University Teaching Hospitals, 2018). Breast self-awareness has replaced the monthly breast self-exam says Vanessa Raymond, 2018. According to recent studies, breast self-exam was not only ineffective at finding cancers early but it also triggered a lot of false alarms. Raymond also explained that Breast self-awareness is meant to give women a different way to think about their breast health; to focus more on knowing how the breasts normally look and feel than to examine them on a regular schedule looking for specific

changes. It is vital that the woman is breast aware and knows what is normal for her as not all breast cancers can be identified on screening; some develop rapidly within the years in between screening appointments (Hull University Teaching Hospitals, 2018).

According to Dr Adrian Raby, in the past, it was recommended that women check their breasts each month, by feeling every part of the breast using their hands but now, doctors do not recommend any set way to check the breasts. The woman is encouraged to look at and feel her breasts in any way that is comfortable and convenient; she could check her breasts in the shower or bath, when getting dressed or when in bed. Unlike breast self-examination which is a regular, repetitive, monthly palpation to a rigorous set method performed by the woman at the same time each month and must be done with proper training, breast self-awareness is not about following a set method or schedule but as is comfortable by the woman, there is no right or wrong way to check the breasts (Thornton and Pillarisetti, 2008). The woman just needs to try and get used to feeling and looking at them regularly, ensures that she checks all parts of her breasts, right up to the collarbone, as well as the armpits and she can easily fit the practice into her daily routine.

The Department of Health has issued a 5-point checklist for being breast aware which can help the woman spot any changes in her breasts.

- . Know what is normal for you.
- . Check both the look and feel of your breasts.
- . Know what changes to look and feel for.
- . Report any changes to your health care provider without delay.
- . Attend routine breast screening if you're 50 or over.

*Breast Self-Examination (BSE)* have been taught to women worldwide, but despite the practice, research has shown that there has been no particular change in survival rates. According to Baxter (2001), although BSE was the most frequent method of detection, less than half of the women found the cancer during breast self-examination compare with finding a breast lump.

The concept of BSE therefore shifted towards a new theory of Breast Self-Awareness (BSA) for early cancer detection since there is no evidence on the effect of screening through BSE (WHO, 2019). Komen (2019), explained that the signs of breast cancer are not the same for all women as such, it remains important for women to know how their breasts look or feels in order to recognise and report any abnormalities. This study access the knowledge and practise of BSE as against BSA.

### Research Questions

The following research questions are raised to guide the study.

1. What is the level of knowledge of female undergraduates in the University of Benin about Breast self-examination.
2. What is the level of knowledge about Breast self-awareness among University of Benin female undergraduates?
3. To what extent is Breast self-awareness practiced among University of Benin female undergraduates?
4. What are the benefits of Breast self-awareness as against Breast self-examination?

### Methodology

The survey research design was adopted for this study. The population of the study consist of 4115 female undergraduate of the University of Benin, Benin City, Edo state resident in the school hostels- Hall 1, hall 2, hall 5, hall 6, NDDC hostel, clinical hostel and keystone hostel (Student Affairs Division, University of Benin, 2019).

**Table 1: Population of the Study**

S/N	Name of Hostel	Total Number of students
1	Queen Idia (Hall 1)	1,200
2	Madam Tinubu (Hall 2)	1920
3	Hall 5	120
4	NDDC Hostel	388
5	Clinical Hostel	136
6	Keystone Hostel	51
7	Hall 6	300
	<b>Total</b>	<b>4115</b>

*(Students Affairs Division, University of Benin 2019)*

The sample size for the study was 210 respondents within the area of study which was drawn using the multi-stage sampling technique. Firstly, the simple random sampling technique was used to select two hostels from the seven female hostels; Hall1 and Hall2 were chosen. In the second stage simple random sampling technique was used to select the blocks in the hostels. Each hostel consists of 6 blocks and 3 blocks were selected from each. The systematic sampling technique was then used in the selection of the rooms used for the study. A total of 90 students were used from hall 1 and 120 students from hall 2.

The instrument that was used for data collection was a questionnaire designed by the researcher.

### Results and discussion of findings

**Research Question 1:** What is the level of knowledge of female undergraduates in the University of Benin about breast self-examination

**Table 2: level of knowledge of Breast self-examination**

S/N	Test Items	Frequency of Respondents			Total
		(a)	(b)	(c)	
1	Breast self-examination is recommended for a) Detecting breast cancer b) Getting familiar with the breast c) No idea	144 (69%)	51 (24%)	15 (7%)	100%
2	When is the right time to perform breast self-examination? a) Before menstruation b) During menstruation c) After menstruation	81 (39%)	69 (33%)	60 (28%)	100%
3	How often must breast self-examination be performed? a) Weekly b) Monthly c) Yearly	111 (53%)	84 (40%)	15 (7%)	100%
4	What is the direction of the hand when performing breast self-examination? a) Clockwise only b) Random c) No idea	114 (54%)	27 (13%)	69 (33%)	100%

**Source:** Field survey, 2019.

The table 2 above shows the level of knowledge of breast self-examination among the respondents.

**Research question 2:** What is the level of knowledge about breast self-awareness among University of Benin female undergraduates.

**Table 3: Knowledge of Breast Self-Awareness**

S/N	Test Items	Frequency of Respondents			Total
		(a)	(b)	(c)	
1	The recommended concept for the early detection of breast cancer is known as; a) Breast self-awareness b) Breast self-examination c) No idea	45 (21%)	102 (49%)	63 (30%)	100%
2	The concept of breast self-awareness is about? a) Detecting breast lump for breast cancer b) Understanding all changes in the breast c) No idea	69 (33%)	93 (44%)	48 (23%)	100%
3	In breast self-awareness, the woman is encouraged to touch and feel her breasts a) According to a systematic procedure b) Randomly, anyhow the woman wants c) No idea	126 (60%)	45 (21%)	39 (19%)	100%
4	The woman is encouraged to be breast self-aware by touching and feeling her breast a) During menstruation b) Anytime c) After menstruation	51 (24%)	75 (36%)	84 (40%)	100%

**Source:** Field survey, 2019.

The table 3 above shows the level of knowledge of breast self-awareness among University of Benin female undergraduates.

**Research Question 3:** To what extent is breast self-awareness practised among University of Benin female undergraduates.

**Table 4: Practise of Breast Self-Awareness**

S/N	Test Items	Frequency of respondents		Total
		Yes	No	
1	I observe/ check my breasts regularly to detect changes	135 (64%)	75 (36%)	100%
2	I have observed that my breasts change in size and feel at different times in the month	132 (63%)	78 (37%)	100%
3	I know the normal changes to expect in my breasts	114 (54%)	96 (46%)	100%
4	Have you observed any abnormal change in your breasts before?	63 (30%)	147 (70%)	100%

**Source:** Field survey, 2019

The table 4 above shows the level of practise of breast self-awareness among University of Benin female undergraduates.

**Research Question 4:** What are the benefits of breast self-awareness as against breasts self-examination?

**Table 5: Benefits of Breast Self-Awareness**

S/N	Test Items	Frequency of respondents		Total
		Yes	No	
1	Touching of the breasts to detect lumps should be performed anyhow the woman wants	126 (60%)	84 (40%)	100%
2	The breasts should be touched and observed to detect changes at any time	174 (83%)	36 (17%)	100%
3	I know that my habits and lifestyle can affect my breast health	165 (79%)	45 (21%)	100%
4	I can easily report abnormal changes in my breast to a doctor	156 (74%)	54 (26%)	100%

**Source:** Field survey, 2019

The table 5 above shows the perceived benefits of self-awareness among University of Benin female undergraduates.

This study sought to assess the knowledge and benefits of breast self-awareness as against breast self-examination as a prediction for early breast cancer detection among female undergraduates of the university of Benin. The respondents were aged 16-30, many of which were single (only 7% were married). The questionnaire was utilised with a reliability of 0.7. The findings of this study revealed a low level of knowledge of breast self-examination among female

respondents. This contrasted with the results of the study carried out by Adeyemo, Amiegheme, Adeniran and Ade-Aworetan, (2016) which revealed a high level of knowledge of breast self-examination among the female nursing students, which the researchers believe is as a result of their disposition as nursing students. Results also contrast with another study carried out by Gwarzo, Sabitu and Idris (2009) which also revealed a high level of knowledge of breast self-examination among female students in universities; this was attributed to their exposure to health information provided consistently by the mass media, health personnel, or family relations respectively. Findings of this study were consistent with the research carried out by Birhane, Alemaye, Anawte, Gebremariyam, Daniel, Addis, Worke, *et al* (2017) in Debre Berhan University, Ethiopia, and another study by Getu, Kassaw and Tlaye (2016) in Addis Ababa University, Addis Ababa, Ethiopia which also revealed low knowledge of breast self-examination.

Knowledge of the dangers of breast self-examination was also quite low, though findings of the study were consistent with a study carried out by Persson *et al* (1997) study conducted in Haramaya University, Ethiopia revealed that a major factor influencing the respondents' practise of breast self-examination was anxiety/fear of discovering a breast lump. The finding is also consistent with the work of Shreshta, Chhetri and Napit (2016) whose results revealed that women found breast self-examination confusing to practise. This is in contrast to the study by Twable and Mekuria (2016) in which the major reasons discovered for women not performing breast self-examination was negligence, forgetfulness, and lack of knowledge.

The knowledge of breast self-awareness was found to be low among the respondents; this low awareness can be attributed to its recent adoption and recommendation by notable health agencies as the World Health organisation (WHO) and the American Cancer Society (ACS) amongst others, more health education is needed to popularise the concept among the female community. Also, there are still arguments and controversies about the benefits of breast self-awareness over breast self-examination.

Findings of this study reveal that female undergraduate practice breast self-awareness. The respondents engage in this practice although they are not aware of the concept. Similarly, the findings also show that perceived benefits of breast self-awareness among the respondents is high. This result is consistent with the benefits stated by Komen (2017) and Thornton and Pillarisetti (2008) who explained that there is no right or wrong way to touch the breasts but as is comfortable and convenient for the woman, she is at liberty to touch and observe her breast any way, any time to become familiar with how they look and feel and detect any abnormal changes.

### Conclusion and recommendations

This study was carried out to assess the knowledge and practice of breast self-awareness as against breast self-examination for early breast cancer detection. The study revealed that there is a low level of knowledge on breast self-examination as it pertains to how and when it should be performed. Many students agree that breast self-examination is used strictly for the detection of breast lumps and can lead to anxiety/ worrying about breast cancer but still agrees that it is a good practise. The respondents practice breast self-awareness although not aware of the concept. Respondents are unaware of the discouragement of breast self-examination and of the development of a new concept of breast self-awareness as the replacement though majority agree with its benefits. Based on findings of this research using the conceptual framework, the following are considered necessary by the researcher;

- i. The female students should be encouraged to practise breast self-awareness not only for breast cancer detection but also for general breast health.
- ii. The female students should be well educated on the risks and disadvantages of breast self-examination which led to its discouragement by health organisations.
- iii. Health education is also necessary to educate the women on the new concept of breast self-awareness and adequate information should be provided for its practise.
- iv. Proper education should be provided to ensure clarity on the difference between the two concepts (i.e. breast self-examination and breast self-awareness) with emphasis on the benefits of breast self-awareness which outweighs the barriers to performing breast self-examination.
- v. Constant reminders should be provided for the students to practise breast self-awareness through posters, online publications, etc.
- vi. Female students and women generally should be enlightened that breast self-examination is no longer compulsory, but optional, if she chooses to.

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