

## KNOWLEDGE OF BREAST CANCER AS A DETERMINANT FOR SCREENING AMONG WOMEN OF CHILD BEARING AGE IN SOUTH-WEST ZONE, NIGERIA

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**How to cite this article:** Daniel, N.O., Abdulfatah, H.A., Amana, S.A., & Baba, A.U. (September 2020). Knowledge of breast cancer as a determinant for screening among women of child bearing age in south-west zone, Nigeria. Journal of Physical Education Research, Volume 7, Issue III, 27-31.

**Received:** May 13, 2020

**Accepted:** September 24, 2020

### ABSTRACT

*This study was conducted to assess the knowledge of breast cancer determinants of breast cancer screening among women of child bearing age in South west zone of Nigeria. To achieve this purpose, ex-post facto research design was used. A total sample of 768 women of child bearing age south west zone of Nigeria were selected through multi-stage sampling procedures. The instrument used for the study was self-developed questionnaire which was pilot tested using Cronbach Alpha reliability test which was 0.798. Out of the 768 copies of questionnaire distributed, 762 were valid for analyses. Inferential statistics of one sample t-test was used to test the data collected at 0.05 level of significance. The results revealed that knowledge of breast cancer screening among women of child bearing age in south-west zone, Nigeria was significant ( $t = 3.207, p = 0.001$ ). Based on the results, conclusions were drawn that women of child bearing age in south-west zone, Nigeria have knowledge of breast cancer screening. Based on the conclusion, it is recommended that among others since the findings shows that there is knowledge, government and governmental organizations should double effort in ensuring that knowledge of breast cancer screening is maintain through mass media and community campaign.*

**Keywords:** Knowledge, determinant, breast cancer screening, women of child bearing age.

### 1. INTRODUCTION

Cancer can be described as an abnormal mass growth of tissue which exceeds and is uncoordinated with that of the normal tissues. It persists in the same excessive manner after cessation of the stimuli which evoked the change. Breast cancer is the most common malignancy affecting women and globally, it accounts for 18.4% of female cancers (Kumar, Abbas, Faust, Charles, & Douglas, 2012). Early breast cancer detection through mammogram, clinical breast examination (CBE), and Breast SELF examination (BSE) is critical to reducing breast cancer-related morbidity and mortality. The American Cancer Society (ACS) recommends mammograms and CBE every year for women aged 40 years and above for early breast cancer detection. Monthly BSE is now recommended as an option for females between 20-40 years. Although the efficacy of BSE as a breast cancer screening method is controversial, research suggests that the BSE is an efficient method of detecting cancerous lesions at an earlier stage, which leads to better outcomes, such as lower breast cancer-related mortality and morbidity (Forbes et al., 2011).

Many African women may not know that they should obtain an intervallic breast cancer screening. Misconception on breast cancer reasons and expectations from screening program is also a big issue among them. A study showed that misconception on breast cancer was highest among Pakistani women. Several studies demonstrated that lower screening rate among Asian women is associated with their knowledge of preventive health measures (Chua, 2005; Bener et al., 2001, Nissan, 2012). Park et al., (2011) have also found that older women have less knowledge about the importance of mammography. Studies in Korea (Joun et al., 2014) showed knowledge of breast cancer screening guidelines was a major predictor of regular screening. Women who had knowledge of mammography guidelines were ten times more likely of having regular mammograms. The results of some studies carried out in Korea (Lee et al., 2010; Im et al., 2014), Singapore (Straughn and Seow, 2010), Iran (Jarvandi et al., 2017) showed that women had poor information on breast cancer and screening test. Knowledge is one important influencing factor in mammography use and breasts self-exam (Jarvandi et al., 2017). Alternatively, Schuler (2017) has found that there is no correlation between breast cancer knowledge and screening behavior. As argued by Reddy and Alagna (2016), the relationship between knowledge and participation in mammography as a trial exam is not simple. Electronic media and TV were noted as the most important sources of getting information on breast cancer in Iran, while health care providers were ranked last (Thomas et al., 2012). Relatives and friends also were the most common sources for getting information among less educated women (Harris, Yeatts, & Kinsinger, 2011).

Knowledge is one important influencing factor in mammography use and breasts self-exam (Sepideh, 2011; Miller & Brinkman, 2014). Alternatively, Schuler (2017) has found that there is no correlation between breast cancer knowledge and their determinants. Lack of basic knowledge and an effective information delivery system for breast cancer further threatens the life and well-being of women. Breast cancer is silently killing women – mainly those who have no knowledge and continue to be ignorant about breast cancer and breast diagnostic screening methods for early detection (Straughan & Seow, 2014). Knowledge is a necessary component but it is insufficient unless the cultural relevance is assured by the health professional providing direct healthcare (Dow, Meneses, & Yarbrow, 2007). Omotara et al. (2014) also reported lack of information regarding breast cancer to the rural and urban populace of Nigeria, saying that it is responsible for the negative perception of the curability of a cancer detected early and the efficacy of screening tests.

The main purpose of this study was to find out whether knowledge of breast cancer is a determinant for screening among women of child bearing age in south-west zone, Nigeria.

## **2. METHODS AND MATERIALS**

### **2.1 Research Design and Sample**

The research design adopted for this study was ex post facto research design. The sample size of this study was seven hundred and sixty-eight (768) women of child bearing age between the ages of 18 - 49 years as suggested by Research Advisor (2006) that in a population of 1,000,000 and above, a sample size of 384 can be used in a study. However, the researcher doubled the figure to have a wider coverage of respondents for the purpose of generalization of findings to the target population.

A multi-stage sampling technique that involves a simple random sampling, proportionate sampling and systematic sampling techniques was used for this study. The first stage involved the use of simple random sampling technique to select five (5) states from six (6) existing states which are Ekiti, Lagos, Ondo, Osun and Oyo by writing all the name of States on a pieces of paper, folded and dropped in a container, shuffled it, and the selection was made in order to get equal chance of selection.

## 2.2 Data Collection and Analysis

The instrument that was used in collecting data for this research was a researchers' structured questionnaire. In order to establish the face and content validity of the instrument, the questionnaire was vetted by five (5) jurors from Departments of Human Kinetics and Health Education and Nursing Sciences, Ahmadu Bello University, Zaria. The comments, observations, corrections and suggestions were incorporated and a final draft of the questionnaire was prepared and used for pilot study. Descriptive statistics of means and standard deviation was used to answer the research questions, thus, any response that has a mean aggregate of 2.5 and above was accepted as positive and any response that has a mean score of less than 2.5 was negative or not accepted. One sample t-test was used to test the formulated hypotheses at 0.05 alpha level of significance.

## 3. RESULTS

**Table 1: Mean scores of responses on the knowledge of breast cancer screening**

SN.	Item	Mean	Standard Deviation
1	Breast self examination help to detect breast cancer.	3.7894	1.57957
2	Clinical breast examination help to detect breast cancer	3.1713	0.90132
3	I know how to perform breast self examination	3.6815	1.53648
4	I know that looking at the breast in the mirror with shoulders straight and arms on your lips help to detect breast cancer	3.7707	1.97334
5	Breast cancer can be examined by raising my arms and looking for the changes in my breasts	3.1204	0.9997
6	I know that feeling of the breasts while lying down using right hand to feel the left breast and then left hand to feel the right breast help to detect breast cancer.	3.3519	1.08977
7	Mammography is one of the method that help to detect cancer	2.5333	0.94991
8	I know that breast cancer screening can detect nipple discharge, lump and thickening of breast tissue	3.5593	0.83382
9	Genetic screening help to detect breast cancer	3.5815	1.58638
10	Magnetic resonance imaging is one of the method that help to detect breast cancer	1.6991	0.55089
<b>Aggregate Mean</b>		<b>3.2258</b>	<b>1.2001</b>

Table 1 shows the mean scores of the responses on the knowledge of breast cancer screening among women of child bearing age. The responses for each item were computed and item 1 had the highest mean score of 3.7894 and standard deviation of 1.57957 indicating that the majority of the respondents know that breast self-examination help to detect breast cancer, clinical breast examination help to detect breast cancer has a mean score of 3.1713 and standard deviation of 0.90132, how to perform breast self-examination has a mean score of 3.6815 and standard deviation of 1.5365, I know that looking at the breast in the mirror with shoulders straight and arms on your lips help to detect breast cancer has a mean score of 3.7707 and standard deviation of 1.9733, breast cancer can be examined by raising my arms and looking for the changes in my breasts has a mean of 3.1204 and standard deviation of 0.9997, I know that feeling of the breasts while lying down using right hand to feel the left breast and then left hand to feel the right breast help to detect breast cancer has a mean score of 3.3519 and standard deviation of 1.0898, mammography is one of the method that help to detect cancer has a mean score of 2.5333 and standard deviation of 0.9499, I know that breast cancer screening can detect nipple discharge, lump and thickening of breast tissue has a mean of 3.5593 and standard deviation of 0.83382, genetic screening help to detect breast cancer has a mean of 3.5815 and standard deviation of 1.5864 while item 10 have the lowest mean score of 1.6991 indicating that majority did not know that magnetic resonance imaging is one of the

method that help to detect breast cancer. Furthermore, the table shows that all the remaining items from the responses indicated that respondents have knowledge of breast cancer screening. The aggregate mean score of 3.2258 is greater than the constant mean of 2.5. This implies that women of child bearing age have knowledge of breast cancer screening and is a determinant for breast cancer screening.

**Table 2: One sample *t* test on knowledge of breast cancer screening among women of child bearing age**

	Mean	Std. Deviation	t-value	df	p-value
Aggregate mean	3.2258	1.2001	3.207	761	0.001
Constant mean	2.50	0.00			

$t(761) = 1.972, p < 0.05$

Table 2 reveals that the respondents were knowledgeable about breast cancer screening. This is because the one-sample *t*-test calculated value is 3.207 greater than the *t*-critical is 1.972 at degree of freedom 761 with probability value 0.001 is less than 0.05 level of significance. Thus, this result shows that the sub-hypothesis (null) which states that “Knowledge of breast cancer screening among women of child bearing age in south-west zone, Nigeria is not significant determinant for breast cancer screening” is therefore rejected.

#### 4. DISCUSSION

Concerning the knowledge of breast cancer screening, the result of the study revealed that knowledge of breast cancer screening among women of child bearing age is significant with *t* value of 3.207, *t*-critical of 1.972 and *P* value  $0.001 < 0.05$ . This means that the women of child bearing age know about breast cancer screening and is a determinant for breast cancer screening. The finding of this study disagreed with the study of Makanjuola, Amoo, Ajibade and Makinde (2013) suggested that almost 60% of women in their studies were not aware of breast cancer self-examination. Akhigbe and Omoemu (2014) reported that Nigerian women have very poor knowledge of symptoms and signs of breast cancer and screening methods. Schulter (2017) found that there is no correlation between breast cancer knowledge and socio-cultural determinants. As argued by Reddy and Alagna (2016), the relationship between knowledge and participation in mammography as a trial exam is not simple. Okobia, Bunker, Okonofua and Osime (2015) found that Nigerian women who have acquired education above high school as well as those who are gainfully employed in skilled jobs like nursing and teaching had greater knowledge of breast cancer than those who do not have high school education and do not have professional jobs. Inadequate knowledge about symptoms of breast cancer and the various types of screening methods available have equally been reported by many studies (Akhigbe & Omuemu, 2014).

#### 5. CONCLUSION

Based on the results of this findings, it was concluded that women of child bearing age in south-west zone, Nigeria have knowledge on some of the breast cancer screening. Based on the conclusions of this study, it was recommended that since the findings shows that there is knowledge, government and governmental organizations should double effort in ensuring that knowledge of breast cancer screening is maintain through mass media and community campaign.

## 6. REFERENCES

- Bener, A., Honein, G., Carter, A., & Da'ar, Z. (2001). *The determinants of breast cancer screening behavior: A focus group study of women in the United Arab Emirates. Oncology Nursing Forum*, 29, 91-98
- Chua, M., Franzcr, M., & Mok, T. (2014). Knowledge, perceptions and attitudes of Hong Kong Chinese women on screening mammography and early breast cancer management. *Breast Journal*, 11, 52-56.
- Dow, M. K. & Yarbrow, C.H. (2007). Cultural perspectives of international breast health and breast cancer education. *Journal of Nursing Scholarship* 39(2), 105-112.
- Forbes, W.B.M., Schiffman, T., Neumayer, L., Khuri, S., & Henderson, W., (2011). Morbidity and mortality following breast cancer surgery in women: National benchmarks for standards of care” *Annals of Surgery*, 254(5), 665-671.
- Harris, R., Yeatts, J., & Kinsinger, L. (2011). Breast cancer screening for women ages 50 to 69 years a systematic review of observational evidence. *Preventive Medicine*. 53(3), 108-114.
- Im, E.O., Park, Y.S., & Lee, E.O. (2014). Korean women's attitudes toward breast cancer screening tests. *International Journal of Nursing Studies*, 41, 583-589.
- Javandi, S., Montazeri, A., Harirchi, I., & Kazemnejad, A. (2017). Beliefs and behaviors of Iranian teachers towards early detection of breast cancer and breast self-examination. *Public Health*, 116(4), 245-249.
- Juon, H.S., Kim, M., & Shankar, S. (2014). Predictors of adherence to screening mammography among Korean American women. *Preventive Medicine*, 39, 474-481.
- Kumar, A., Faust, C.E.A., & Douglas, C. (2012). *Neoplasm; Robbins and Cotran Pathologic basis of Disease*; (7<sup>th</sup> ed.); 270.
- Lee, C., Kim, H.S., & Ham, O. (2010). Knowledge, practice, and risk of breast cancer among rural women in Korea. *Nursing Health Science*, 2, 225-30.
- Nissan, A., Spira M., & Hamburger, T. (2012). Clinical profile of breast cancer in Arab and Jewish women in the Jerusalem area. *American Journal of Surgery*, 188, 62-7.
- Omotara, B.A., Padonu, M.O., & Yahya, S.J. (2014). Assessment of the impact of community-based medical education of the University of Maiduguri on communities in three local government areas of Borno State, Nigeria: Community leaders' perspectives. *Educ Health (Abingdon)*, 17, 6-16.
- Park, M.J., Park, E., Choi, K.S., Jun, J.K., & Lee, H. (2011). Socio-demographic gradients in breast and cervical cancer screening in Korea: The Korean National Cancer Screening Survey (KNCSS) 2005-2014. *Bio Medical Central Cancer*, 11, 257.
- Reddy, D. & Alagna, S.A. (2016). *Psychological aspects of cancer prevention and early detection among women*. In: B.L. Andersen, Editor, *Women with cancer: Psychological perspectives*, Springer-Verlag, New York (2016), pp. 93-137.
- Schulter, L.A. (2017). Knowledge and beliefs about breast cancer and breast self-examination among athletic and non-athletic women. *Nursing Research*, 31, 348-353.
- Straughan, I. & Seow, O. (2014). *Study of the role of breast self-examination in the reduction of mortality from breast cancer*. The Russian Federation/World Health Organisation Study. *European Journal Cancer* 29A:2039-2046.
- Thomas, D.B., Gao, D.L., Self, S.G., Allison, C.J., Tao, Y., & Mahloch, J. (2012). Randomized trial of breast self examination in shanghai: methodol. preliminary results. *Journal of National Cancer Institute*, 89, 355-365.