Full Length Research Article

KNOWLEDGE AND PERCEPTION OF WOMEN OF CHILD BEARING AGE IN IBADAN NORTH LOCAL GOVERNMENT AREA ABOUT BREAST CANCER

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ABSTRACT

Background: Breast cancer is the most common cancer in women both in the developed and less developed countries. Adequate information about the disease could promote early detection and prompt intervention. However, despite the various awareness campaign instituted by governmental and non-governmental bodies, its incidence continues to increase. Therefore, the study assessed the knowledge of child-bearing women in Ibadan North Local Government (IBNLG) Nigeria concerning breast cancer.

Aim: To assess knowledge and perception of women of child bearing age IBNLG, Nigeria, about breast cancer.

Methods: A descriptive cross-sectional design was used to collect from 150 women using simple random sampling technique.

Results: Result demonstrated that participants who had poor knowledge reported high in susceptibility to breast cancer (20.8%), while those who are knowledgeable reported low in susceptibility to breast cancer (17.4%) (X^2=4.67;df=1p<0.5). It was equally revealed that there was no significant relationship between knowledge and protective measures of breast cancer (r=1.19; df=149; P<0.5). Majority had poor knowledge of risk factors and treatment options.

Conclusions: Women of childbearing age in Ibadan North Local Government Area had poor knowledge of breast cancer, and its treatment measures. Hence, there is need for intervention through regular educational program on breast cancer and its management.

INTRODUCTION

Cancer is one of the world's deadliest diseases that is becoming more prevalent especially among women irrespective the age (Lewis *et al*., 2011). Breast cancer is a type of cancer that develops from breast cells and usually starts from the inner lining of milk ducts or lobules that supply the breast with milk (http://www.cancer.gov/types/breast). When it originates from the lobules, it is known as lobular carcinoma, while one that develops from the ducts is called ductal carcinoma. It has been revealed that the dense nature of the breast in a young woman could obscure detection of a lump in her breast, which might ultimately lead to diagnosis at an advanced stage (http://www.mdpi.com/2072-6694/7/2/0815/pdf).

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Hence there is need to have a good knowledge of risk factors, clinical manifestations and treatment options to breast cancer, Studies have isolated that while some risk factors are preventable, others are not. The primary factors that increase risk of breast cancer in women include; inherited genetic mutations, personal or family history of breast cancer, and biopsy-confirmed hyperplasia [4]. Other associated factors are ; a long menstrual history, obesity after menopause, recent use of oral contraceptives, postmenopausal hormone therapy, nulliparity or having the first child after age of 30, ethnicity characteristics, exposure to radiation, or consumption of one or more alcoholic beverages per day (http://www.cancer.Org.What_causes-breast-cancer; http://www.ncbi.nlm.nih.gov/ pmc/PMC468678/). On the other hand, risk reducing factors are breastfeeding, increase in physical activity, and the maintenance of a healthy body weight (http://www.ncbi.nlm.nih.gov/pmc/PMC468678/; Sadler, 2001). Unfortunately, many women of childbearing age don't have adequate information on how to prevent or detect breast cancer at early

stage when it can be controlled. Findings of a study revealed that Mammography, Clinical breast examination (CBE) and breast self-examination (BSE) are the secondary preventive methods used for investigation in the early detection of breast cancer (Elomore *et al.*, 2015). Cancer detection investigations therefore play a vital role in reducing breast cancer related mortalities (Tang *et al.*, 2015). The CBE and mammography are recommended in the early detection of breast cancer (http://www.onlinelibrary.wiley.com/doi/10.3322/ canjclin.53 .3.141/ pdf&sa). Despite all the sophisticated instruments and other available measures to prevent or detect breast cancer, the incidence is still high in the world at large.

Majority of breast cancer cases, occur in females and is the most common invasive cancer in females worldwide. 232,340 female breast cancer and 2,240 male breast cancers are reported in the United State of America each year, as well as about 36, 620 deaths caused by the disease (http://www.cancer.gov/types/breast). Breast cancer is the most common cancer in women both in the developed and less developed countries. It is estimated that worldwide over 508 000 women died in 2011 due to breast cancer (http://www.who.int/cancer/detection/breastcancer/en/index1.h tm/). Although breast cancer is thought to be a disease of the developed world, almost 50% of breast cancer cases and 58% of deaths occur in less developed countries (http://www.iarc.fr/ en/media-centre/iarcnews/2010/globocan 2008.php). It is recommended that, women should know how their breasts normally feel and report any breast changes promptly to their health care providers (http://www.cancer. Org.What_ causes-breast-cancer). BSE is an option for women starting from the early 20s. Findings of current studies by American cancer society (ACS) no longer recommends BSE as there is reliable data for breast cancer detection .However, in a developing and resource-constrained country like Uganda and Nigeria, BSE is an important substitute, where access to CBE and most importantly mammography is extremely difficult (http://www.ncbi.nlm.nih.gov/ m/ pubmed/ 11986766/). The author added that BSE might still detect breast cancer early enough for treatment which can prolong women´s lives and reduce suffering. Women in their 20s and 30s should have a CBE as part of a periodic health examination by health professionals preferably every 3 years (http://www.cancer. Org.What_causes-breast-cancer). After the age of 40, women should have a CBE and a mammogram every year, as recommended by the ACS (http://www.cancer. Org.What_causes-breast-cancer). Hence, early detection of breast lumps could go a long way in reducing mortality associated with breast cancer.

Breast cancer mortality rates are higher in developing countries like Nigeria, as a result of late detection and diagnosis. Several contributory factors include genetics, cultural and social factors such as poverty, unequal access to prompt high quality treatment, lack of screening facilities, or lack of awareness and knowledge of the disease. Breast cancer ranks second in cancer incidence and is still the second principal cause of cancer mortality among women globally. Therefore the study assessed the knowledge and perception of women of child bearing age about breast cancer. It is hoped that result from the study might generate issues that will

necessitate instituting programs make breast cancer management more effective and economical.

Aim

To assess the knowledge and perception of women of child bearing age in Ibadan north local government area about breast cancer.

Research questions

- What is the knowledge of women of child bearing age about breast cancer?
- What is the perception of women of child bearing age about the protective measures to breast cancer?
- What is the knowledge of women of child bearing age on the treatment measures for breast cancer?
- Is there any relationship between knowledge and perceived susceptibility/ protective measures?

MATERIALS AND METHODS

This descriptive study utilized a cross-sectional design to assess knowledge and perception of women of child bearing age about breast cancer at selected Primary Health Centers (PHC) in Ibadan North Local Government Area. These included; Barika PHC, Bodija PHC and Agbowo PHC. This selected area is one of the Local Government Authorities in Oyo State, Nigeria. Its head quarter is in Agodi. It has an area of 27km2 and a population of 306,795 at the 2006 census. The postal code of the area is 200. It is bounded in the west by Ido and Ibadan North West Local Government, east by Lagelu, Egbeda, and Ibadan South Local Government, while Akinyele LGA is on the north. It is dominated by Yorubas and various other ethnic groups including Ibos, Edos, Ibibios, Itsekiris, Idomas, and Hausas. The multicultural population conferred on the participants diverse characteristics seen in Nigerian women.

Using the sample size determination for descriptive cross-sectional study (12), 150 women were adjudged adequate and generated data that answered the research questions. Thereafter, the number of women from each school were proportionately selected 38, 37 and 75 from Barika, Bodija and Agbowo PHCs respectively using simple random technique. Inclusion criteria included women in child bearing age, who consented to participate in the study. A 30- item self-administered questionnaire was used to elicit information from respondents. The questionnaire was developed after an extensive literature review and was divided into five sections: Section A, addressed demographic data, section B was on knowledge of breast cancer, section C was on susceptibility to breast cancer, section D was on breast cancer protective measures and section E was on the treatment of breast cancer. The face and content validity of the questionnaire was ensured. The reliability was also ascertained and a Cronbach Alpha score of $r = 0.802$ was obtained. The data collection lasted a month because of the number and willingness of the participants.

Table 1.   Respondents' Perception of susceptibility to breast cancer   N = 148

Variable	Strongly Agree (%)	Agree (%)	Uncertain (%)	Disagree (%)	Strongly Disagree (%)
Older age	18 (12)	43(28.7)	46(30.7)	32(21.3)	9(6)
Having children at a late age	9(6)	30(20)	47(31)	49(32.6)	13(8.6)
Not breastfeeding	10(6.6)	43(28.7)	51(34)	31(20.7)	13(8.6)
Family history of breast cancer can render a woman susceptible to breast cancer	21(14)	32(21.30)	52(34.6)	34(22.7)	9(6)
Obesity cannot render a woman susceptible to breast cancer	15(10)	37(24.7)	57(38)	36(24)	3(2)

Table 2. Respondents' knowledge of breast cancer protective measures: n = 148

Variable	Yes (%)	No (%)	Don't know (%)
Regular exercise is not a protective	61(40.7)	44 (29.3)	43(28.7)
Regular breast self-examination is a not preventive measure	95 (63.3)	28(18.7)	25 (16.6)
Mammography is not a protective	48 (32)	43 (28.7)	57(38)
Breast feeding does not protect a woman	62 (41.3)	48 (32)	48(32)

The researcher moved from one PHC to the other at different times to reach sample size of 148 from the three PHCs. The questionnaires were completed and retrieved within 30 minutes and the participants were assisted whenever the need arose.   Ethical issues were considered. The proposal was approved by the institutional review board. Also due permission was obtained from the chairman of Ibadan North local government after presenting of the approved proposal to him. Thereafter, the Chief Medical Director of the Primary Health Centers was equally approached. Informed decision was ensured by explaining the purpose of the study and its benefits to the participants. Subsequently, the consent was signed. They were equally made to understand that they could withdraw from the study at with no negative consequence on their care.   Data analysis was done through the use of SPSS version 16, using descriptive and inferential statistics

RESULTS

Out of the 150 participants selected for the study, two did not fill the questionnaire for personal reasons, while 148 fully participated. All the returned instruments were sorted and pruned and found to have been fit for analysis. On the whole, the return rate 98.7%. The result are presented in text and tables

Socio-Demographic characteristics of respondents

The respondents' ages were between 16 and 45 years, with a mean age of 29.2 years ± 7.5. Majority of the respondents were Christians (50%) while the minority were Traditionalists (1.4%) and most of them were Yoruba (71.1%). Majority of them (72.3%) were married. Most of them were business women (64.9%) and only 7.4% were housewives. Only 31% of had tertiary education, while many (50%) had secondary/ high school education.

Respondents' Knowledge on breast cancer

Majority of the respondents (88.0%), reported that early detection measures of breast cancer can increase client's

chance of survival, while only few of them (5.3 %) disagreed. Most of the respondents (54.7%) reported that they were uncertain on the cause of breast cancer. Furthermore, (64.7%) of the respondents disagreed that delayed first pregnancy predisposes a woman to developing breast cancer. A good number of the respondents (55.3%), agreed that infertility does not predispose a woman to developing breast cancer, while (25.3%) disagreed.

Furthermore, while 26.7% claimed uncertainty on the issue of obesity being a predisposing factor in   breast cancer, 45.5% agreed. Similarly, majority of the respondents (33.3%) reported that they were uncertain whether painless lump or mass in the armpit or breast is/not symptom of breast cancer, while 34 % agreed. Again, 41.3% agreed that breast pain, enlargement, or discomfort on one side only are symptoms of breast cancer, while 35% of the respondents disagreed. In the same vein, 48% agreed that breast discharge when not feeding was a symptom of breast cancer while (26.7%) of the respondents disagreed. Finally, result indicated that majority of the respondents (41.3%) agreed that a change in the appearance or sensation of the nipple was a symptom of breast cancer, while, (32%) disagreed. (Table 1).

Respondent's view on treatment modalities

On the treatment modalities, majority of the respondents (62.7%) agreed that chemotherapy is a treatment for breast cancer, while only (26%), agreed that surgery is a treatment method.   Similarly (58%), reported that radiotherapy was a treatment option, (40.7%) opined that they were uncertain about the use of biological therapy as a treatment for breast cancer. Finally, (37.3%) of the participants reported that they were not certain whether hormone therapy is the most effective treatment, while   only 33.3%, agreed.

Relationship between knowledge and Susceptibility

Result also revealed that women who had poor knowledge about breast cancer reported high in susceptibility to breast cancer, while those who had good knowledge reported low in

susceptibility at $X^2=4.67$; df=1, p<0.5. Also, (73.0%) representing majority reported that early detection measures of breast cancer can increase client's chance of survival while (2.7%) representing the minority disagreed on that. Finally, women who had a good knowledge about breast cancer were more likely to take protective measures against it. (r=023; df: 149, P<0.1)

DISCUSSION OF FINDINGS

Overview of findings

An overview of the findings indicates that majority of the respondents were aware that early detection measures could reduce mortality, but the knowledge of early symptoms and some risk factors were low. Similarly they demonstrated poor knowledge on protective factors as only breast self-examination was identified, while others like breastfeeding and exercise were low. Overtly vague and inconsistent were the knowledge on treatment options as only chemotherapy (62.7%) was identified, while surgery (26%) and radiotherapy (20.7%) were poorly seen.

Knowledge of breast cancer; risk factors and clinical manifestations

The poor knowledge on risk factors is in line with the findings of earlier studies. Obesity (35.1%) and having children at late age (26%) were poorly identified. The findings of a study in United kingdom on women's knowledge and beliefs regarding breast cancer opined that women had limited knowledge of their relative risk of developing breast cancer and of associated risk factors (http://www.ncbi.nlm.nih.gov/m/pubmed/ 11986766/). Similar findings were also seen in Malaysia (Khan *et al*., 2015) and Nigeria studies (Oluwatosin and Oladepo, 2006; Azubuike *et al*., 2013). This low level of awareness among Nigerian participants for over a decade is suggestive of the fact that most of the campaigns by various agencies and media are superficial and have minimal influence on the population at risk. Well, this could also be attributed to the erratic electricity supply in the country that is seriously affecting effective information transmission through the electronic media. This calls for the need of finding other ways of intensifying awareness program and continuously evaluating their outcome. Result demonstrated that most women of childbearing age had poor knowledge of clinical manifestations of breast cancer. Only few 31.1% and 30.7% identified painless lump and change in shape and size respectively as positive symptoms. The findings correlates with that of similar study conducted at Benin (Southern part of Nigeria) where the authors observed that few women had limited knowledge of the diversity of potential breast cancer-related symptoms. This could be associated with part of the reason for late presentation by observed in the Nigerian breast cancer clients (Azubuike *et al*., 2013). In contrast, the revelation from the United States points to an improvement of understanding and recognition of symptoms among those women (Darrow *et al*., 2015). The variations between their findings and that of the present study may be related to differences in settings. The latter, being a developed country, with availability of basic infrastructure, creates an enabling environment, which facilitates learning. The relationship between a therapeutic environment and learning has been emphasized by scholars (Ohaeri,Vidal and Bossuoni, 2010). It there implies that both the federal and state government in Nigeria should work towards provision of basic environment needs in order to facilitate effective communication. This will improve communication, reduce late presentation, thereby reducing mortality.

Protective measures

That respondents mostly highlighted breast self- examination (63.3%) and regular exercise as being proactive processes in the prevention of breast cancer has been documented (Azubuike and Okwuokei, 2013). In the same vein, mammography being undermined by the group is also a usual finding among the less privileged population (Azubuike and Okwuokei, 2013). In contrast, another study carried out among post- graduate students in a federal institution where only 11.4% of the respondents exhibited good knowledge of BSE (Aluko *et al*., 2015). The result is also consistent with the findings of a study conducted on knowledge about breast cancer and negative influences affecting breast cancer screening among women in Jordan; which revealed insufficient knowledge and cultural misconceptions about breast cancer and screening (Kawar, 2015).

View on treatment modalities

The respondents knowledge of treatment was limited as only chemotherapy (62%) was chiefly identified, while surgery (26%), radiotherapy (20%) and others were poorly recognized. This was affirmed by a Nigerian study among rural women, in which the participants had poor knowledge on treatment method, and the authors attributed it to the pattern of health management in the country, where physicians dominate decisions concerning treatment options (Azubuike and Okwuokei, 2013). Similar observations were made two decades ago, by a New York study (Darrow *et al*., 2015). Apart from the complacent role played by the client in the decision making tree of treatment options, our participants could have been affected by the level of their education. Majority (50%) had secondary/ high school education as only, which could have limited their understanding. The fact of educational level influencing understanding of issues related to breast cancer and its management has been highlighted (Azubuike and Okwuokei, 2013). This calls for the need to empower women, in other to reduce ignorance and create an enabling force to reduce breast cancer. Moreover, that the women who had more knowledge about breast cancer reported low to perceived susceptibility, and were more likely to appreciate protective measures further reiterates the need for expanding the awareness and knowledge among the studied population. This will go a long way in ameliorating the health seeking behavior of women to presentation at an earlier stage, when the treatment is more effective, thereby reducing the mortality rate.

Conclusion

The findings of the study revealed that most women of childbearing age don't have adequate knowledge about breast cancer, its risks factors, and management options. Moreover, knowledge was significantly correlated with perceived

susceptibility to breast cancer. In other words, those women who are high in knowledge about breast cancer are less susceptible to develop it and vice-versa. Hence, there is the need for an intervention program consisting of health information targeted at women of bearing age on breast cancer generally, on clinical manifestations, risk factors, protective factors, and management at the three levels of health care.

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