Full Length Research Papers

Breast self examination among female undergraduates in Enugu, Southeast, Nigeria

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This study was a cross sectional descriptive survey that assessed the knowledge, attitude and practice of breast self examination (BSE) among university female nursing undergraduates. It also identified the factors that affected their practice of BSE. The total population of the female students (200) was used. The instrument used for data collection was the questionnaire and descriptive statistics were used to summarize the data. Fifty-eight percent of the respondents were between the ages of 21-25 years, 29% between 16-20 years while only 13% were between 26-30 years. Majority of them were Christians and single (88 and 85% respectively. Majority of the respondents had good knowledge of breast cancer and BSE as 84% knew that it has familial tendencies and 77% knew it can be caused by oral contraceptives. They also knew the symptoms such as discharge from the nipple (92%), change in the skin of the breast (80%), pain in the breast (80%) and swelling in the breast (68%). Majority (90%) knew about mammography and BSE (90%) as detection methods. Majority of the respondents (95%) knew how to do BSE, while 5% did not know how to do BSE. The respondents had a positive attitude towards BSE (Overall Mean ≥ 2.5). Most of the respondents (32%) affirmed that they examine their breasts after menstruation and (68%) anytime they felt like. Respondents identified forgetfulness, procrastination, laziness, lack of time, fear of discovering a lump, no trust in their practice ability as factors affecting their practice of BSE.

Key words: Breast cancer, breast self examination, knowledge, Practice, female nursing undergraduates

INTRODUCTION

Breast cancer is a malignant tumor that has developed from cells of the breast. During the last four decades, with the introduction of screening programmes that efficiently detect cervical cancer in early stage, breast cancer has overtaken cervical cancer in incidence and has become number one neoplasm among women (Fletcher, 2000). Breast cancer is a worldwide major health problem. At present, there is no cure. It is estimated that more than 212,000 women and 1,700 men develop the disease and more than 41,000 die of it annually (WHO, 2006).

Breast cancer causes 376,000 deaths a year; about 900,000 women world over are diagnosed every year with the disease (WHO, 1997). Breast cancer is the commonest malignancy in Nigerian women (Mbanaso et al., 2005; Adebamowo and Ajayi, 2000) and represents 23 – 28% of all cancers (Shattuch et al., 1995). Breast cancer is now a manageable disease, thanks to early diagnosis and advances in surgical techniques,

chemotherapy and radiation. The main thrust has been towards early diagnosis. The patient has a role to play in diagnosis by performing monthly breast self examination (BSE), obtaining routine screening, mammography and seeing a physician for regular examinations (Rosato et al., 1991). Despite the advent of modern screening methods, more than 90% of cases of cancers of the breast are detected by women themselves, thus stressing the importance of BSE (Kayode et al., 2005).

Breast self-examination (BSE) is a screening method used in an attempt to detect early breast cancer and involves the woman herself looking at and feeling each breast for possible lumps, distortions or swelling. BSE is a simple, inexpensive, non-invasive and non-hazardous practice which enables a woman get acquainted with the topography of her breast and allows her notice changes to detect breast masses or lumps. BSE has been defined as a preventive health behavior, that is, "an activity

undertaken by a person, who believes [herself] to be healthy, for the purpose of preventing disease or detecting disease in an asymptomatic state" (Rutledge, 1987). Although BSE is a simple, quick and cost-free procedure, it appears that many women either perform it erratically or not at all. The most undesirable aspect of breast cancer in Africa is that it is already advanced at presentation. This is partly because of the failure by women to appreciate the importance of early detection of the disease. The result is greater fatality rate for breast cancer in developing than in developed countries (Miller et al., 1991).

The health belief model (HBM) originally introduced in the 1950s has been widely used in health behavior applications including breast cancer investigations (|Lagerlund, 2000; Petro-Nustus and Mikhail, 2002). The model stipulates that health-related behavior is influenced by a person's perception of the threat posed by a health problem and by the value associated with his or her action to reduce that threat. According to this therefore, a woman who perceives that she is susceptible to breast cancer and that breast cancer is a serious disease would be more likely to perform regular breast examinations (Nyström, 2000).

Despite the awareness that has been created on radio, television, newspapers, magazines etc on the benefits of BSE for early detection of breast cancer, late presentation of cases at advanced stage when little or no benefit can be derived from any form of therapy has remained the hallmark of breast cancer in Nigerian women. For health workers to be effective as educators they must posses the appropriate knowledge, attitude and beliefs concerning the health behavior being promoted (Bastani et al., 1994). Being on the frontline of patient care, nurses are in a unique position as they have a supportive role in educating and motivating patients on breast cancer screening in the primary health care setting. Due to their key role in patient education, it would be interesting to explore nurses' knowledge and practice on breast cancer screening which may indirectly influence their patients' understanding and practice of breast cancer and screening (Chong et al., 2002). If this knowledge and practice is poor among those who should teach others, there will be difficulty promoting this life saving method.

MATERIALS AND METHODS

A cross sectional descriptive survey design was used for this study on 200 female undergraduates of the Department of Nursing Sciences, University of Nigeria Enugu Campus between June and September 2011. The Department of Nursing Sciences came into existence in 1982/83 academic session of the University of Nigeria and now awards the bachelor of nursing science (B.N. Sc.) Degree The instrument used for data collection was the questionnaire which had two sections: (A and B). Section A contained the demographic data and section B contained the main research questions which were three open ended and twenty closed ended

questions. Informed consent of each student was sought and obtained, and they were assured of the confidentiality of their responses. For efficiency and reliability of the instrument, a pilot study was carried out to pretest the questionnaire on twenty female students in Ebonyi State University. Four research assistants were trained and the students were instructed to answer all the questions freely and return to the researcher or her assistants. Statistical Package for the Social Sciences (SPSS) computer software was used for data analysis. The data were summarized into frequencies and percentages and presented in tables.

RESULTS

Demographic data showed that 58% of the respondents were between the ages of 21-25 years; 29% between 16-20 years and 13% between 26-30 years. Eight-eight percent were christians, 12%, African traditionalists, 90.5% were single while 9.5% were married, 96.5% did not have children, 2% had 5-7 number of children, while 1.5% had 1-3 number of children.

Most of the respondents; 51.5% were 400 level students while 48.5% were 300 level students (Table 1).

Two hundred (100%) of the respondents had heard about breast cancer and BSE. Findings from Table 2 also showed that 76.53% thought breast cancer was caused by oral contraceptives, 83.69% said it runs in the blood, 45.92% felt it was caused by smoking, 44.39% opted for obesity, 33.67% sexual promiscuity, 25.51% for alcohol, 23.98% for putting money in the bra, 21.94% for blow to the breast. 25.51% attributed it to spiritual causes, 6.12% to germs and 76.53% gave other reasons like exposure to radiation, idiopathic, e.t.c. Findings also revealed that breast cancer manifest as change or discharge from the nipple (91.84%), 80.10% as change in the skin of the breast, 79.59%, as pain in the breast, 68.37% as swelling of the breast, 63.78% as ulcers of the breast, 17.86% as fever, 4.08% as headache, 2.04% as cough and 9.69% said it can manifest with symptoms like peau 'd range, retraction, fixed tender lump in the skin, e.t.c

Majority, 91.84% knew about mammography as detection method, 90.31% opted for BSE, 64.80%, clinical examination, etc.

Majority of the respondents (95%) believed they knew how to do BSE, while 15% admitted not knowing how to do BSE. With an Overall Mean of 2.6335, which was greater than 2.5, the respondents had a positive attitude towards BSE as shown in Table 3. Table 4 revealed that majority (92.35%) of the respondents had examined their breasts, while 7.65% had never examined their breasts. Among those that had never examined their breasts, 60% did not feel it is necessary, while 40% said they did not have time.

Sixty-two percent of the respondents examined their breasts some days after menstruation, 32.14% did not have any particular time for examining their breasts, 4.08% examined their breasts during menstruation and 3.57% before menstruation. Majority (54.60%) examined their breast anytime they felt like, 33.67%, once a month

Table 1. Frequency distribution of demographic data of respondents.

Variable		Frequency	Percent
Age (years)	16 – 20	58	29.0
	21 -25	116	58.0
	26 – 30	26	13.0
	Total	200	100.0
Religion	Christianity	176	88.0
	Moslem	0	0.0
	African traditional religion	24	12.0
	Total	200	100.0
Marital status	Single	181	90.5
	Married	19	9.5
	Divorced	0	0.0
	Separate	0	0.0
	Widow	0	0.0
	Total	200	100.0
Number of children	1 – 3	3	1.5
	5 – 7	4	2.0
	6 – 9	0	0.0
	None	193	96.5
	Total	200	100.0
Educational level	300	97	48.5
	400	103	51.5
	Total	200	100.0

and 11.73% twice a month and so many other responses. Respondents gave factors that affect their practice of BSE as 68.37%, forgetfulness; 52.04%, procrastination; 37.76%, laziness; 36.22%, time; 16.33%, fear of discovering a lump; 15.82% as lack of trust in their ability to perform BSE and 8.16%, anxiety (Table 5).

DISCUSSION

Breast cancer and breast self-examination awareness among the respondents were relatively high. This was expected as they have had series of lectures on oncology. This finding was also discovered by other researchers in their studies; viz: (Odusanya and Tayo, 2001 Chong et al., 2002; Kayode et al., 2005; Aniebue and Aniebue (2008); Odeyemi and Oyediran (2001); Bassey et al., (2011). The finding was however in contrast to studies by other researchers; Balogun and Owoaje (2005), Parsa and Kandiah (2005), Akhigbe and Omuemu (2009), Kiguli-Malwadde et al, (2010), Alkhasawneh (2007). In assessing the practice of BSE by the respondents, it was shown that even though many agreed that they practice it, faulty methods of practice

were detected in their responses. They asserted that they examined their breasts anytime they felt like. This was erroneous because BSE even though it requires little time, can only be practiced with the right attitude and precision to sustain it and achieve the desired goal. It should be done at the same stage of the woman's menstrual cycle, because the normal hormone fluctuations can cause changes in the breasts. The most commonly recommended time is just after the end of menstruation, because the breasts are least likely to be swollen and tender at this time.

It was however surprising, following the nature of their training, that some of the nursing students (8%) claimed they had never practiced breast self-examination. A similar study in Singapore showed that there is no association however between having been taught breast-self-examination and practice of breast cancer screening (Chong et al., 2002 in Bassey et al, 2011). This is rather worrisome for aspiring nurses who are expected to teach others in the community. About 15% of students said they use the tip of their hands to examine the breast while lying down. This is also erroneous because the ability to detect breast lumps depends on correct BSE procedure, using the finger pads, keeping the fingers flat together

Table 2. Respondents level of knowledge about breast cancer and BSE.

Variable		Frequency	Percent
Have you heard of breast cancer and breast self exam?	Yes	200	100.0
	No	0	0
	Total	200	100.0
Which of the following do you think are the causes of breast cancer?	Alcohol	50	25.51
	Oral contraceptives	150	76.53
	Smoking	90	45.92
	Obesity	87	44.39
	Blow to the breast	43	21.94
	Runs in the family	164	83.67
	Putting money in the bra	47	23.98
	Germs	12	6.12
	Sexual promiscuity	66	33.67
	Spiritual	24	25.51
	Other reasons	11	76.53
Which of the following do you think are the symptoms of breast cancer?	Pain in the breast	156	79.59
	Change or discharge from the nipple	180	91.84
	Swelling of the breast	134	68.37
	Ulcers of the breast	125	63.78
	Change in the skin of the breast	157	80.10
	Cough	4	2.04
	Fever	35	17.86
	Headache	8	4.08
	Other reasons	19	9.69
Which method of breast cancer detection do you know?	Mammography	180	90.0
	Clinical examination	127	64.80
	Breast self Exam	177	90.31
	Aspiration cytology	66	33.67
	X-Ray	48	24.49
	Ultrasound	57	29.08
	Other methods	4	2.04
Do you know how to do BSE?	Yes	187	93.5
	No	13	6.5
What methods of BSE do you know?	Looking for changes in the front of the mirror	162	82.65
	Feeling for changes during shower	154	78.57
	Feeling for changes while lying down	169	86.22
	Others	8	4.08

and using a circular motion. This ensures that no portion of the breast is left out unexamined. The findings from this study are in consonance with those of other researchers (Guleser et al., 2009, Aniebue and Aniebue, 2008; Bassey et al., 2011) However, the findings were in contrast with those of other researchers (Tavafian et al., 2009, Chong et al., 2002).

Majority (68.37%) of the respondents could not practice BSE as a result forgetfulness. This is in line with a study done on nurses which reported that 56.4% do not

Table 3. Respondents attitude towards Bse

	SA	A	SD	D	Total	Mean	Std. Dev.
BSE is not necessary	19	11	132	38	200	2.9235	0.78398
The practice of BSE is strenuous and time wasting	8	9	88	9	200	3.3367	0.75030
The practice of BSE should be encouraged	141	47	12	0	200	1.3214	0.54889
BSE is against my cultural belief and practice	4	0	142	54	200	3.2143	0.54065
I will advice my friends to practice BSE even though I may not be practicing it	57	97	22	24	200	2.0255	0.90262
It does not matter whether I practice it or not	16	39	74	71	200	2.9796	0.93348
Overall Mean						2.6335	0.74332

SA. Strongly agree,; A, agree; SD, strongly disagree; D, disagree.
If Overall Mean ≥ 2.5, the respondents have a positive attitude towards BSE.
If overall Mean < 2.5, the respondents have a negative attitude towards BSE.

Table 4. Respondents practice of BSE (n = 200).

Variable		Frequency	Percent
Have you ever examined your breast?	Yes	181	92.35
	No	15	7.65
If no, why?	I do not have time for it	6	60
	I do not feel it is necessary	9	40
	Total	*15*	*100*
At what time of your menstrual cycle do you examine your breast?	Before menstruation	7	3.57
	During menstruation	8	4.08
	Some days after menstruation	122	62.24
	No particular time	63	32.14
	Others	0	0
how often do you do BSE?	once a month	66	33.67
	twice a month	23	11.73
	anytime I feel like	107	54.60
Which of these methods do you practice often?	In front of the mirror	139	70.91837
	During shower	85	43.36735
	Lying down	66	33.67347
If in front of the mirror, what other steps do you follow?	Stand or sit with arms at sides	131	66.83673
	Raise the arm above or behind the head	112	57.14286
	Place hand on hip, press down and make the chest muscle tense	76	38.77551
	Squeeze each nipple gently for any discharge	106	54.08163
	Others	16	8.163265
If during shower, what other steps do you follow?	Start by raising an arm behind your head	68	34.69388
	Use soapy hand to press firmly on the breast against the chest wall	82	41.83673
	Use the pad of the hand to examine the breast	54	
	others	85	27.55102
If while lying down, what other steps do you follow?	Lie down on the back and be comfortable	57	29.08163
	place a pillow under the shoulder of the side to be examined	63	32.14286
	use the pad of the hand to examine the breast	65	33.16327
	use the lip of the hand to examine the breast	29	14.79592
	Others	66	33.67347

Table 4. Contd.

What type of motion do you use in examining your breasts?	circular	173	88.271
	wedge	14	7.14
	strip	9	4.59

Table 5. Factors that affect respondents practice of BSE.

Variable		Frequency	Percent
What are the factors affecting your practice of BSE?	Time	71	36.22
	Procrastination	102	52.04
	Forgetfulness	134	68.37
	Laziness	74	37.76
	Fear of Discovering Lump	32	16.33
	No trust in my ability to perform it	31	15.82
	No available specific training programmes	8	4.08
	Anxiety	16	8.16
	Others	0	0

practice BSE as a result of forgetfulness (Fatma et al., 2007) and inconsistent with the report on a group of working women who do not practice BSE as a result of lack of knowledge (Kiguli-Malwadde et al., 2010). Other identified factors were laziness, procrastination, fear of discovering lumps, anxiety, etc. This could be as a result of stress of the day's work in class or in the wards and could also be attributed to the erroneous concepts some of them might believe in and lack of confidence in their ability to perform BSE.

Conclusion

Majority of the respondents have heard about breast cancer and BSE and think breast cancer is caused mainly by oral contraceptives, manifest mainly with change or discharge from the nipple. The respondents have a positive attitude towards BSE and majority of them have examined their breasts, some days before or after menstruation and some, anytime they felt like. Most of them engage in faulty practices of BSE and they identified forgetfulness, procrastination, laziness, time, fear of discovering lump, no trust in their ability to perform it and anxiety as reasons for not practicing BSE as they should. Despite the positive knowledge and attitude towards BSE, its practice was faulty among these undergraduates. In order to function as effective promoters of breast cancer control through early detection, they must possess not only the relevant knowledge but the appropriate attitude and practice concerning the disease and its early detection. They should adopt such preventive screening procedures and act as role models for the public.

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