RESEARCH ARTICLE

Effect of a Training Programme on Knowledge of Nurses from a Missionary Hospital in India Regarding Breast Cancer and its Screening

Anita Khokhar

Abstract

   A cross-sectional study was conducted among nursing staff of a missionary hospital of Delhi in June 2009. All the nurses were invited to participate in the training programme on breast cancer and techniques of breast self examination (BSE). A questionnaire was administered to all 259 participants seeking information on their level of awareness regarding breast cancer and relevant screening guidelines. With the help of 5 training workshops all the nurses were imparted training regarding the most appropriate technique of doing breast self exams. The mean age of the participants was 35.8 years. Out of a total of 259 nursing staff members 77.2% correctly answered all the 10 questions regarding high risk factors for breast cancer and after the training programme this increased to 100% (p<0.05). Only 65.2% of the participants gave correct responses to all the 8 questions regarding correct technique of performing a BSE, which after the training programme increased to 99.3% (p<0.05). At the baseline only 56.8% knew all the three screening methods correctly and after the intervention 98.7% could correctly mark the responses regarding screening (p<0.05). The actual practice of following the screening guidelines amongst the nursing staff was poor. Only 26 (10.03%) had ever done a BSE, none performed it monthly, 58 (22.4%) had ever gone themselves for a CBE and 18 (6. 94%) had ever undergone mammography.

Keywords: Nurses - breast cancer - breast - screening - India

Introduction

   Everyday number of cases of breast cancer is increasing in the developing countries and it has come to be known as a disease of both the developing countries and the developed world. But most of the women in India seek medical help only when the disease is in fairly advanced i.e. stages III and IV (MOHFW, 2000).

   Routine screening for breast cancer is also not popular in India. Very few women actually know the correct method of doing a breast self-examination, significance of a clinical breast exam and screening mammography. Social factors make the matter more complex. Women often do not like to go to a male doctor with a breast problem. Breast self-examination is an important screening measure for detecting breast cancer. There is evidence that women who correctly practice BSE monthly are more likely to detect a lump in the early stage of its development, and early diagnosis has been reported to influence early treatment, to yield a better survival rate (Cretain, 1989; Petro-Nustas et al., 2002).In such a scenario if nurses are well trained in the method of Breast self-examination and teaching it to the women it can help in imparting gender sensitive information to the women in an appropriate manner.

Materials and Methods

   The present cross-sectional study was conducted amongst nursing staff of a missionary hospital of Delhi. Prior permission was taken from the administrative head of the nursing department of the hospital. A self-administered questionnaire was used. The questionnaire contained several alternatives, some of which were correct and some others not.

   The study was conducted in June 2009 amongst nursing staff to study their demographic profile, knowledge about breast cancer, its high risk factors and screening guidelines. Each of the correct responses was given a score of one and incorrect response or blank responses, a score of zero. This missionary hospital has approximate nursing staff strength of 300. All the nurses were invited to participate in the study. A total of 259 nurses participated and a total of 5 sessions of training programmes were conducted in which examination (BSE) technique on the breast models was explained followed by a video show on the same. After that back demonstration of BSE technique was done by some of the participants till the steps of the self-examination became clear to each one of them and they were confident of doing it on their own. The vertical strip method of BSE was explained (Murray, 1998).

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Each of the programmes lasted for about 90 minutes to 2 hours duration. A pretest and a posttest questionnaire was administered to elicit information regarding breast cancer .There was a question and answer session followed by filling of the Performa regarding personal details of the participants. Pamphlets were distributed as well. Data was entered in MS Excel and analysis was done using Epiinfo version 6. Appropriate tables were made and tests of significance applied.

Results

A total of 259 nursing staff from a missionary hospital of Delhi participated in the current study. The mean age of the participants was 35.76 years. In a study conducted in Ahemdabad the mean age (standard deviation) of female registered nurses was 40.65± 9.8 years (Jaydip, 2011). In a similar study conducted in Turkey amongst nurses and midwives the mean age was 33 years (Ertem, 2009). Mean age in years (Mean±1 SD) in a study conducted amongst nurses from Nigeria was 42.6±8.3. 211 (81.46%) of the participants were married in the current study, 38 (14.67%) were unmarried, 4 (1.54%) were divorced or separated and 6 (2.31%) were widows whereas in a study from Turkey majority (60%) were married (1.94%, 74.90%) were Hindus, (52%, 20.07%) Christians, 6 (2.31%) Muslim, 5 (1.93%) Sikhs and 2 (0.77%) were Buddhist. Almost all 98.7% belonged to the middle income group. 65 (25.09%) had been in service for less than 10 years, 98 (37.83%) for 11-20 years, 87 (33.59%) for 21-30 years and 9 (3.47%) for >31 years. The nursing staff works on rotational basis in all the clinical departments of the hospital. Working experience (years) in terms of mean±SD amongst Nigerian nurses was. 19.5±7.5 (Olumuyiwa, 2001).

Out of a total of 259 nursing staff members 87.88% knew about all the seven signs and symptoms correctly before the training programme. After the training programme 99% nurses gave correct responses to all the seven questions regarding signs and symptoms. The lowest correct score was for the question that pain in the breast is a symptom of breast cancer. Only 44.01% correctly answered that pain was not a symptom of breast cancer. Similar result was also seen amongst nurses from Nigeria in which up to 75% incorrectly regarded breast pain as a symptom of breast cancer (Ertem, 2009). 77.16% correctly answered all the 10 questions regarding high risk factors for breast cancer and after the training programme this increased to 100% p<0.05 and the difference was statistically significant. Menopause after 55 years of age, consumption of red meat and menarche below 12 years of age were identified as high risk factors by less than 50% of the participants (Table 1) (49.2%) whereas nurses from Ahemdabad believed that they were exposed to one or another risk factor for breast cancer such as radiation (42.85%), age (40.66%), obesity (39.66%) (Jaydip et al., 2011). In a similar study amongst Nigerian nurses none knew of all risk factors and 27% understood upto 3 or 4 risk factors.

Regarding the correct technique of performing a breast self-exam 8 questions were asked. Only 65.15% gave correct responses to all the 8 questions which after

the training programme increase to 99.27% and the difference is statistically significant (p<0.05). Lowest correct responses (47.87%) were received for the question regarding age at which BSE practice should be started and maximum correct score was (92.27%) to the question BSE should be done while standing in front of the mirror. (Table 2). In a similar study conducted amongst school teachers in India only 13.4% knew the correct frequency of once a month, only 7.3% the correct position and only 1.36% participants the correct time (Khokhar, 2010). Knowledge regarding how to conduct a BSE was only 40% in Nigerian nurses (Olumuyiwa, 2001).

Regarding awareness about screening guidelines for breast cancer at the baseline only 56.75% knew of all the three methods correctly and after the intervention 98.71% of the participants could correctly mark the responses regarding the screening and this difference is also statistically significant (p<0.05, Table 3) (Khokhar, 2010). In Ahemdabad study, almost 40% of the nurses had knowledge about mammography, as a method of early detection of breast cancer while very few were knowing about self-breast examination (31.4%) (Jaydip et al., 2011). This shows that planned and structures teaching programmes help not only in increasing knowledge of the participants about breast cancer but also improve the skill of doing a breast self exam. Similar results were also obtained from a study conducted amongst GNM students from India (Chatterji, 2002).

The actual practice of following the screening guidelines amongst the nursing staff was poor. Only 26 (10.03%) had ever done a BSE, none performed it monthly, 58 (22.39%) ever gone themselves for a CBE and 18 (6.94%) ever undergone mammography. In a similar study from Turkey higher proportion of 32% performed

Table 1. Participants According to their Awareness about Signs, Symptoms and High Risk Factors of Breast Cancer (N=259)

	n	%	n	%
Signs and symptoms:				
Lump in the breast	259	100	259	100
Swelling in the armpit	218	84.16	257	99.22
Pain in the breast	114	44.01	243	93.82
Discharge	240	92.66	259	100
Changes in shape	256	98.84	259	100
Skin changes	250	96.52	259	100
Inversion of nipple	251	96.91	259	100
High risk factor:				
Women who do not breast feed	249	96.13	259	100
Family history	254	98.06	259	100
Late age at first child bearing	234	90.34	259	100
Obesity	198	76.44	259	100
Menarche before 12 years	135	52.12	259	100
Menopause after 55 years	76	29.34	259	100
HRT	221	85.32	259	100
Oral contraceptives	234	90.34	259	100
Red meat consumption	158	46.62	259	100
Smoking and alcohol consumption	255	98.45	259	100

*Before the training programme, 1588, (87.58%) knew of all the sign sand symptoms correctly which increased to 1795(99%), after the training, **77.16% knew of all the high risk factors before the training after 100% knew of all the high risk factors after the training workshop and the difference is statistically significant<0.05

Table 2. Distribution of the Participants According to Awareness about Breast Self-Examination Before and After the Training Programme (N=259)

	Before		After	
	n	%	n	%
Age when BSE should be started	124	47.9	259	100
Frequency	178	68.7	259	100
Time	174	67.2	254	98.1
Standing in front of the mirror	239	92.3	259	100
Lying down with pillow under the shoulder	156	60.2	257	99.3
Using pads of fingers	147	56.8	255	98.5
Pattern to be followed	165	63.7	259	100
Examination of the armpit	167	64.5	255	98.5

*At the baseline 65.15% knew all the correct responses to BSE related questions which increased to 99.27% after the training programme and this difference is statistically significant<0.05

Table 3. Distribution of Nurses as per their Awareness about Screening Guidelines for Breast Cancer Before and After the Training Programme (N=259)

	Before		After	
	n	%	n	%
BSE monthly starting at 20 yrs	174	67.2	259	100
CBE once three yrs between 20 and 39 yrs and annually thereafter	68	26.3	249	96.1
Mammogram screening annually 40 years onwards	199	76.8	259	100

*Before the training 56.75% knew of all the three screening methods correctly and after training 98.71% knew of all and this difference is statistically signinficant.p<0.05

a regular BSE and 52% had performed a BSE. In another study, by Budden 46% of the participants were observed to have had practiced BSE every month (Budden, 1998). Lee in his study has reported that, 40% of the Korean nurses had performed BSE (Lee, 2003). Haji-Mahmoodi et al. (2002) from Tehran reported that only 6% of nurses performed BSE regularly. A total of 130 (64%) participants made use of at least one method while only 13 (6%) made use of all three methods of screening. Compliance with the screening guidelines is also poor in Nigeria where one quarter of the participants over the age of 50 years did not get the screening mammogram done. It is very alarming to know that none of the participants in our study complied with age appropriate screening guidelines correctly. No statistically significant difference was found between years of service and level of awareness.

Discussion

In conclusion, this relevance of the results of this study cannot ever be over emphasized for a country like India, where the socio cultural milieu plays an important role in deciding whether the women seek health care services and that too from a gender specific doctor. In such a scenario, nurses, ANMs ASHA, and other female para medical staff can guide the women for screening and diagnosis of breast cancer along with raising awareness about breast cancer. But for this to materialize it has to be made sure that the nurses themselves are trained in an effective manner to perform breast cancer screening regularly. On the job training programmes and regular CMEs can help aid better delivery of breast care to the women.

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