

EFFECTIVENESS OF A PLANNED TEACHING PROGRAM ON IMPROVING THE KNOWLEDGE ON WARNING SIGNS, RISK FACTORS AND EARLY DETECTION METHODS.

Sr. Daisy. PA^{1,*}, Anatha Naik Nagappa², N Udupa³,
Sr. Neethu Mathew⁴, Sr. Betty Carla⁵

^{1,4,5}St. Josephs College of Pharmacy, Cherthala, Kerala, India.

^{2,3}Manipal College of Pharmaceutical Sciences, Manipal University, Karnataka, India.

***Corresponding Author:**

E-mail: daisy.augustine007@gmail.com

ABSTRACT

Context: Presently more than 70% of breast cancer patients report and seek treatment in advanced stages of the disease in India.

Aims: The present study aimed at studying the knowledge gap of participants on breast cancer issues and assessing the effectiveness of planned teaching program on the topic in improving their knowledge.

Settings and Design: A pre test was conducted and then gave a class room teaching. At the end of the session a post test was conducted. The participants included 112 the staff and students in a pharmacy college of Kerala, India during November 2009.

Methods and Material: Structured questionnaire was developed and pre tested for assessing the knowledge of subjects on awareness of breast cancer, the risk factors, signs and symptoms, treatments and nutritional factors.

Statistics: paired t test, Chi square and Mann Whitney u tests were applied.

Results: The mean age of the participants was 21.22(SD=3.75), 85.5% of participants were females and 91.96% of them were D.Pharm students. The mean pre test score was 6.76 (SD=2.20) and the mean post test score was 10.3(SD=1.88). Only 15.2% of the participants scored above 60% knowledge in the pretest and after the workshop 76.8% of participants scored above 60% knowledge. The paired t test comparing the mean pre and post test score gave significant results. ($P < 0.001$). Chi square analysis of pre test score versus demographic variables was insignificant. ($P > 0.05$).

Conclusions: Imparting knowledge on breast cancer issues to the students will be promising in cancer control.

Key-words: Breast cancer, awareness, risk factors, warning signs

Key Messages: The women are unaware of breast cancer issues, signs, risk factors and nutrition/life style factors. Workshops of such are useful.

INTRODUCTION

Breast cancer is a major problem among women. According to the national cancer registries and Regional cancer centers, breast cancer is listed as the most common cancer among women in Delhi, Mumbai, Kolkata and Trivandrum.^[1]Urbanization, industrialization, changes in life styles, population growth and ageing, all contributes for epidemiological transition.^[2]As mammography will be difficult to implement in India for various reasons, efforts should be made to prevent/detect breast cancer at an early stage by educating the population about risk factors and through screening by physical examination or by self-breast

examination.^[1,3]According to World Health Organization, although cancers rates in India are lower than those in developed countries, there is a steady increase in the crude incidence rates of all cancers affecting both men and women in India last 15 years.^[4] Presently above 70% of patients report in later /advanced stages of cancer. Early breast cancer constitutes only 30% of what is reported in India, where as this constitute around 60-70% in developed countries. This directly have an impact on the survival rates. The high mortality rate is due to diagnosis in a later stage, due to lack of awareness among women .It is in this context a workshop and a study is planned on the topic with different aspects of breast cancer, warning signs, methods of early detection, and nutritional tips. The study aimed at assessing the pretest knowledge of respondent's on risk factors of breast cancer,

its early warning signs and nutritional factors and find effectiveness of teaching in improving knowledge. This study also aimed at associating the pretest knowledge and demographic variables.

MATERIALS AND METHODS

A pre and post workshop test was conducted among the staff and students of a pharmacy teaching institution to assess their present knowledge on different aspects of breast cancer and the effectiveness of teaching in improving the knowledge of the participants. Structured questionnaire was developed and validated for assessing the knowledge of subjects on awareness of breast cancer, the risk factors, signs and symptoms, treatments and nutrition. The questionnaire was pretested and the reliability of the study tool was established by Cronbach's alpha (0.83). The questionnaire consisted of 14 questions. Four questions were regarding the awareness on breast cancer and its treatment options and another 4 questions were on signs and symptoms of breast cancer and its detection methods. The remaining 4 questions were on healthy nutrition and two questions were about the risk factors of breast cancer. After pre test, a class room teaching was given and then, conducted post test to evaluate the effectiveness of teaching. The participants included staff and students (n=112) of St. Joseph's College of pharmacy, Cherthala, Alappuzha, Kerala. The workshop was conducted as part of pharmacy week celebration in the institution, on 21st November 2009.

ETHICAL ISSUES

Prior permission was obtained from the administration department of the institute and an oral informed consent obtained from the participants. All those willing to participate and those attended the full workshop were included in the study.

DATA ANALYSIS

Data were analyzed using statistical package for social sciences version 11.5. Chi square analysis /Mann Whitney U tests were applied to find any association between the pre test knowledge and the demographic variables such as age, education and professional status of the participant. The pre and post test scores were compared by paired t test. The statistical significance was set at $P < 0.05$.

RESULTS

The mean age of the participants was 21.22(SD=3.75). The mean overall pre test score was 6.76 (SD=2.20) and the mean overall post test score was 10.3(SD=1.88). Detailed knowledge scores are depicted in **table 1**. The paired t test applied for comparing the mean pre test and the mean post test score gave significant results. ($P < 0.001$, Table 2). Chi square analysis of pre test score versus age and education of the participants gave insignificant results ($P > 0.05$). Mann Whitney U test carried out for finding any association with the pre test score and the gender, marital and the professional status also was insignificant. (Table 2.)

Table 1: Frequency and percentage of knowledge score in pre and pos test (n=112)

Knowledge level	Pre test			Post test	
	Score	No	%	No	%
Minimum	0-4	22	19.6	0	0
Medium	5-8	73	65.2	26	23.2
High	9 & above	17	15.2	86*	76.8
Total	14	112	100	112	100

* $p < 0.001$ at 95%CI

Table 2: Paired Sample t test (n=112)

Pair 1	Paired differences			95% confidence interval		t	df
	Mean	S.D	Std Error mean	Lower	upper		
At-Bt	-3.7411	2.385	.2253	-4.187	3.29	-16.59	111
						<0.001	

Table 3 depicts the knowledge scores gained by the participants in different areas of

breast cancer. In all areas the knowledge score in the pre test was less in the pre test and it is significantly increased in post test.

Table 3: Pre and post test awareness scores on different areas of breast cancer

Knowledge areas	Pretest		Post test	
	Score	frequency	Score	frequency
Awareness	4	3 (2.7%)	4	49 (43.8%)
	3	25 (22.3%)	3	28 (25.0 %)
	2 & <	84 (75.1%)	2 & <	35 (31.37%)
Warning signs	4	1 (0.9 %)	4	18 (16%)
	3	27 (24.1%)	3	41(6.65)
	2 & <	84 (75.1%)	2 & <	53 (47.4%)
Risk factors	2	18 (16.1%)	2	52 (46.4%)
	1 & <	94 (83.9%)	1 & <	60 (53.06%)
Nutritional factors	4	6 (5.4%)	4	26(23.2%)
	3	33(29.5%)	3	74 (66%)
	2 & <	73 (65.2)	2 & <	12 (10.7%)

DISCUSSION

India is rapidly stepping towards industrialization vis-à-vis urbanization resulting in change of lifestyle factors. These factors contribute to a gradual increase in the incidence of breast and other cancers in the country. Cancer control campaigns conducted by health care team members are measures to cancer prevention and control and this should be given priority in national cancer control program.^[5] Even in literate areas of the country and other parts of the world, the women are unaware of many of the risk factors and warning signs and symptoms of breast and other cancers.^[6,7] Creating such awareness among the health care team members/health professionals can certainly be advantageous as they can impart their knowledge in the community set up in their service areas. In the present study the overall and the item wise knowledge score of the participants was increased greatly after the teaching program and thus the workshop was proved to be highly effective ($p < 0.05$).

Presently there is no national screening program for breast cancer

established in our country. In the present study, a good majority of the participants (80-85%) had very limited knowledge, minimum to medium level of knowledge on awareness about breast cancer and related issues. The result of this study is supporting the results of another study conducted among the suburban colony in Delhi by the public health personnel.^[1] The implication is that there should have more such attempts to improve the knowledge of rural and urban women about different aspects of cancer. Information on the protective effects of life style changes from different cancers and other diseases should be dispersed to the public. It should be an eye opener for the members of the health care team and the policy makers of our country for establishing ways and means to create awareness of breast cancer among the rural and urban women. There was no association between the pretest knowledge and the demographic variables such as age, education and professional status of the participants concerned. This may be because of the fact that there was not much difference among these subjects, as they were of almost same age and education. Breast cancer is a disease that has a promising prognosis of

long symptom free survival if diagnosed and treated in early stages of the disease. The late reporting and diagnosis at advanced stages of breast cancer, increases the mortality rate (5 year survival <60%) among Indian breast cancer victims, where this figure is (5 year survival 89%) among American women. [8]The high mortality rate is due to unavailability of screening methods at affordable cost and all the more due to the lack of awareness about the disease signs and symptoms.[1] When mammography remains an unattainable routine practice facility for cancer detection for Indian women, Breast Self-Examination (BSE) remains an easy and cheaper method of early detection of breast cancer and this could be encouraged among the rural and urban women resulting in early detection and reduction of mortality rate of breast cancer patient in the country. It is shocking that in this study 91.1% of the participants did not report BSE as an early detection method of breast cancer. It is a point for reflection and action for the Indian health policy makers and strategic planning team in the country. Our strategic plans for health care delivery should be developed in the Indian context making use of the available data. The average age of breast cancer diagnosis amongst the Indian women is reported as 47yrs, which is almost 10 years less than that of the West.[9,10,11] The

experience of a n Indian hospital reports, more than half (54.6%) of the breast cancer patient had stage III disease, indicating the extant of late presentation of breast cancer in many parts of India.[9] Creating awareness among the rural/urban women on breast self-examination and on symptoms and warning signs of breast cancer and other protective measures will be advantageous on early detection of the disease.

CONCLUSION

As the most accessible health care practitioner, pharmacists are in an invaluable position to promote the prevention and early detection of cancer, as well as encourage healthy lifestyle choices that in themselves make the likelihood of cancer less and less. The present study conducted during a workshop for the students and staff of a pharmacy teaching institution and concludes that the knowledge of participants on breast cancer, its risk factors, early warning signs and early detection methods were deficient. Conducting such awareness classes will be beneficial in improving the awareness and this in turn, an early detection and reporting of breast cancer which will reduce incidence/mortality ratio in breast cancer in India.

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