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A Study to Assess the Effectiveness of Self Instructional Module Regarding Knowledge on Prevention of Breast Cancer among the Adolescent Girls in Selected Higher Secondary School at Udaipur, Rajasthan

Anuradha Parashar[1]* and Jitendra Pujari[2]*

[1]M. Sc. Nursing Student, Venkteshwar College of Nursing, Ambua Road, Udaipur, Rajasthan, India

2Associate Professor, Medical Surgical Nursing, Venkteshwar College of Nursing, Udaipur, Rajasthan, India

ABSTRACT

Breast cancer is the second most common cancer in the world and the most common cancer among women. Lifetime risk of developing breast cancer in every woman in the United States is 12.4% or one in eight women. In 2016, 1.67 million new cases of breast cancer were identified worldwide, accounting for 25% of all cancers. Although cancer exists anywhere in the world, its incidence rate is higher in developed countries, and the incidence rate of breast cancer varies greatly with race and ethnicity. The incidence rate of breast cancer varies among different parts of the world, varying from 27 per 100,000 in Middle Africa and East Asia to 92 per 100,000 in Northern America. The incidence rate of breast cancer is estimated to reach 3.2 million by 2050. With increasing population age in developed countries, the incidence rate of breast cancer among older people is increasing. A pre-experimental design with 100 adolescent girls was selected by convenience sampling method. The self-instructional module was administered to adolescent girls in selected higher secondary schools in Udaipur for 40-45 minutes. Post-test assessment was conducted using the same questionnaire. The collected data were analyzed using descriptive and inferential statistics. The result revealed that before providing self instructional module 58% found to have inadequate knowledge, followed by 22% had moderate and 20% had adequate knowledge. After providing self instructional module 87% were found have adequate knowledge and 11% been having moderate knowledge and 2% found to have inadequate knowledge. The studies concluded that self-instruction module was effective and increase the level of knowledge among adolescent girls.

KEYWORDS

Effectiveness; Self-instructional Module, Breast cancer, Knowledge, Adolescent Girls

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INTRODUCTION

Cancer refers to diseases in which abnormal cells divide out of control and are able to invade other tissues. Cancer cells can spread to other parts of the body through the blood and lymph systems, which help the body, get rid of toxins. Some kinds of cancer (like breast, cervical, and colorectal) can be caught early through screening. Other kinds can be prevented—for example, cervical cancer through vaccination and colorectal cancer through removal of abnormal growths in the colon and rectum before they turn into cancer. Leading risk factors for preventable cancers are smoking, getting too much UV radiation from the sun or tanning beds, being overweight or having obesity, and drinking too much alcohol[1].

Breast cancer is a kind of cancer beginning from breast tissue, most ordinarily from the inward covering of the milk pipes or the lobules that supply the channels with milk. The breast is comprised of flaps and conduits. It is the most common cancer among women and one of the most important causes of death among them[2]. Furthermore, it has been depicted as a multi-factorial disease and various factors contribute to its occurrence. Although the disease occurs all over the world, its incidence, mortality, and survival rates vary considerably among different parts of the world, which could be due to many factors such as population structure, lifestyle, genetic factors, and environment[3]. Changes in risk factors have led to an increase in the prevalence of breast cancer, which is increasing every day. Although screening people can reduce the burden of breast cancer, side effects, over-diagnosis, and increased costs are the disadvantages of this method. Classification of women based on risk factors for breast cancer can be effective in improving risk-free methods and designing targeted breast cancer screening programs[4].

NEED FOR STUDY

According to GLOBOCAN 2020, worldwide an estimated 19.3 million new cancer cases (18.1 million excluding non-melanoma skin cancer) and almost 10.0 million cancer deaths (9.9 million excluding non-melanoma skin cancers) occurred in 2020. Female breast cancer has surpassed lung cancer as the most commonly diagnosed cancer, with an estimated 2.3 million new cases (11.7%), followed by lung (11.4%), colorectal (10.0%), prostate (7.3%), and stomach (5.6%) cancers. Lung cancer remained the leading cause of cancer death, with an estimated 1.8 million deaths (18%), followed by colorectal (9.4%), liver (8.3%), stomach (7.7%), and female breast

(6.9%) cancers[5]. Overall incidence was from 2-fold to 3-fold higher in transitioned versus transitioning countries for both sexes, whereas mortality varied <2-fold for men and little for women. Death rates for female breast and cervical cancers, however, were considerably higher in transitioning versus transitioned countries (15.0 vs 12.8 per 100,000 and 12.4 vs 5.2 per 100,000, respectively)[6].

As per a survey conducted among the Indian females, it was observed that breast cancer has ranked number one cancer among Indian females with age adjusted rate as high as 25.8 per 100,000 women and mortality 12.7 per 100,000 women. Data reports from various latest national cancer registries were compared for incidence, mortality rates. The age adjusted incidence rate of carcinoma of the breast was found as high as 41 per 100,000 women for Delhi, followed by Chennai (37.9), Bangalore (34.4) and Thiruvananthapuram District (33.7). A statistically significant increase in age adjusted rate over time (1982-2014) in all the PBCRs namely Bangalore (annual percentage change: 2.84%), Barshi (1.87%), Bhopal (2.00%), Chennai (2.44%), Delhi (1.44%) and Mumbai (1.42%) was observed. Mortality-to- incidence ratio was found to be as high as 66 in rural registries whereas as low as 8 in urban registries. Besides this young age has been found as a major risk factor for breast cancer in Indian women[7].

In India, breast cancer falls in second after cervical cancer in terms of prevalence. Breast cancer is associated with general health of the female, age at menarche, lifestyle pattern and genetic makeup. There are also many other factors associated with the occurrence and recurrence of breast cancer[8]. It can occur at any age among reproductive age group (15-45 years). It can also occur in adolescents. Adolescence is a defining period for future. Globalization and its influence on lifestyle of adolescents have led to unhealthy lifestyle choices, such as increased intake of fast food, decreased intake of fruits and vegetables, sedentary behaviors. Lifestyle choices have long been recognized as risk factor for non-communicable disease such as breast cancer[9].

PROBLEM STATEMENT

"A Study To Assess The Effectiveness Of Self Instructional Module Regarding Knowledge On Prevention Of Breast Cancer Among The Adolescent Girls In Selected Higher Secondary School At Udaipur, Rajasthan"

OBJECTIVES

- To assess the pre test knowledge score regarding prevention of breast cancer among the adolescent girls in selected higher secondary school at Udaipur.

- To assess the post test knowledge score regarding prevention of breast cancer among the adolescent girls in selected higher secondary school at Udaipur.
- To compare the pre and post test knowledge level regarding prevention of breast cancer among the adolescent girls in selected higher secondary school at Udaipur.
- To find out the association between pre test knowledge score with the selected demographic variable.

HYPOTHESIS

H_1: There will be significant difference between pre-test and post-test knowledge score regarding prevention of breast cancer among adolescent girls at the level of $P \leq 0.05$

H_2: There will be a significant association of pre-test knowledge score with selected demographical variables at the level of $P \leq 0.05$.

MATERIALS AND METHODS

Research Approach: A quantitative research approach will be used in the study.

Research Design: The pre-experimental, one group pre-test post-test research design used to getting information from the sample.

Sample: In the present study the sample comprises of 100 adolescents girls.

Sampling Technique: In present study the samples were selected through a non-probability convenience sampling technique.

Setting: In present study the setting was selected higher secondary school in Udaipur city.

Population: In the present study, the target population comprises of all the adolescent girls studying in the selected higher secondary school at Udaipur city.

Description of tool: Structured questionnaire to assess the knowledge regarding prevention of breast cancer. It consisted of two parts:

Section A: 8 Demographic data, it includes age, religion, educational status, type of living, type of family, dietary pattern, previous knowledge regarding prevention of breast cancer and sources of health information.

Section B: 20 structured questionnaires, in these self-structured multiple choice questions was considered appropriate for assessing knowledge score. The maximum total score of the

knowledge questionnaire was 20 (for each correct response 1 mark will be given and 0 mark for incorrect answer).

Ethical consideration

- Approval from ethical committee of Venkteshwar College of Nursing Udaipur.
- Prior to data collection, written permission was obtained from the concerned authority of higher secondary school, at Udaipur.
- Anonymity and confidentiality of subjects was maintained.
- Informed consent was obtained from the subjects.

Plan for data analysis

The data analysis will be done according to study objectives by using descriptive and inferential statistics. The plan of data analysis would be as follows:

- Frequency, percentage, mean and standard deviation will be calculated.
- Paired t test will be used to test the hypothesis.
- Chi-square test will be used for association with demographic variables.

RESULTS AND DISCUSSION

The data's obtained are divided into certain sections for easy and accurate interpretation of data. The data finding has been organized under the following sections:

Section A: Analysis of demographic characteristics of the participants.

Section B: Assessment of the level of knowledge regarding prevention of breast cancer

Section C: Assess the effectiveness of self instructional module on knowledge and attitude regarding prevention of breast cancer among adolescent girls

Section D: Association of knowledge score and attitude score with demographic variables.

Section A: Analysis of demographic characteristics of the participants.

Age: It was seen that among 100 participants 45% were found in the age group of 17.1-18 years, followed by 20% each were found in the age group of 18.1-19 years and 16.1-17 years, lastly 15% were belongs to age group of 15-16 years.

Religion: It was seen that among 100 participants 76% were belongs to Hindu family, 18% were worshiping Muslim tradition, 2% found to follow christiniatiy, 4% found to follow Jainism, sindhi and other religion.

Educational status: It was seen that 40% were in 10th session, 23% were studying in the 11th class, 25% were in 12th session and 12% found to be 9th standard.

Type of living: It was seen that 45% were living in urban area, 31% were in rural area and 24% were in semi-urban area

Type of Family: It was seen that among 100 respondents 51% were living in nuclear family, 34% found to living joint family and 15% were living in extended family.

Dietary Pattern: It was seen that among 100 respondents most of girls 76% included veges in their diet, 21% found to follow non-vegetarian diet and 3% had eggtarian diet.

Previous knowledge: It was observed that among 100 respondents 64% girls does not have enough knowledge and 36% had knowledge regarding prevention of breast cancer.

Source of information: It was observed that among 100 respondents 41% had knowledge through classroom teaching, 33.36 % had information through mass media, 13.83% had knowledge through friends and 11.11% got education through health professionals.

Section B: Assessment of the level of knowledge regarding prevention of breast cancer

Assessment of the level of knowledge regarding prevention of breast cancer

The result revealed that in the pre-test 58% had inadequate knowledge, 22% had moderate knowledge and 20% had adequate knowledge regarding prevention of breast cancer. Whereas in the post-test 87% had adequate knowledge, 11% had moderate knowledge and 2% of had inadequate knowledge regarding prevention of breast cancer after administer self instructional module (figure-1).

N=100

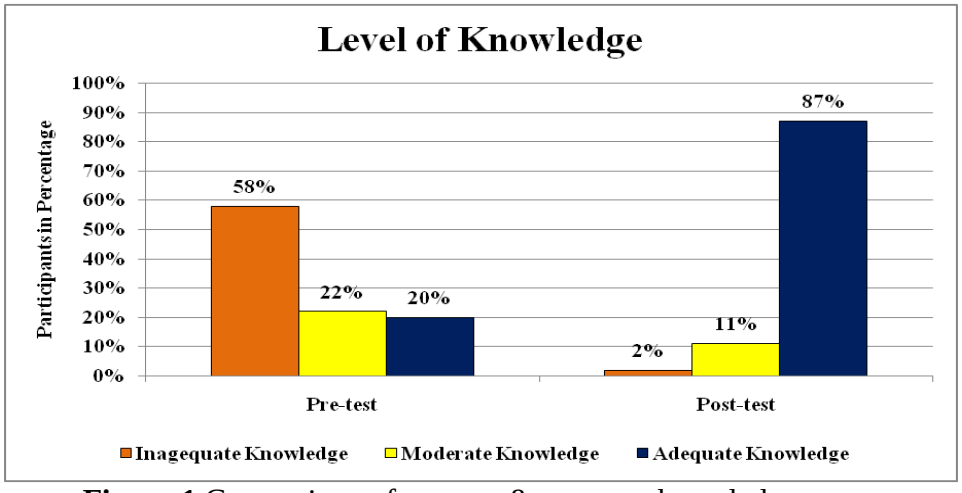

Figure 1 Comparison of pre-test & post-test knowledge score

Section C: Assess the effectiveness of self instructional module on the knowledge regarding prevention of breast cancer among adolescent girls N=100

Table 1 Effectiveness of self instructional module by calculating Mean, SD, Mean Difference and 't' Value of pretest and posttest knowledge score

Test	Mean	SD	Mean Difference	df	t- value	Inference
Pretest	8.70	4.67	8.14	99	18.9223	1.98* (0.05 Level)
Posttest	16.84	2.11				

Significant*

The table-1 revealed that in the pretest knowledge score mean and SD was 8.70±4.67 and posttest knowledge score mean and SD was 16.84±2.11 with mean difference of 8.14. The mean pretest and posttest was compared and tested using paired t test (t value=18.92, df=99 and p-value=0.05) was highly significant at p-value <0.05 level of significance. The study findings showed that self instructional module was effective in improving the knowledge of adolescent girls regarding the prevention of breast cancer. Hence $\mathbf{H_1}$ is proved and accepted

Section D: Association of the pre-test knowledge score with demographic variables.

There was significant association between the level of knowledge and demographic variables such as includes age ($\chi 2$=16.51), religion ($\chi 2$=16.96), educational status ($\chi 2$=24.20), type of family ($\chi 2$=20.96), and previous knowledge regarding prevention of breast cancer ($\chi 2$=6.16) and no significant association with variables such as type of living ($\chi 2$=0.7901), dietary pattern ($\chi 2$=4.20), sources of health information ($\chi 2$=0.254). Hence $\mathbf{H_2}$ accepted and proved that there was a significant association between the knowledge score with demographic variables.

CONCLUSION

From the above findings conclusion can be drawn the knowledge score in pretest 58% had inadequate knowledge, 22% had moderate knowledge and 20% had adequate knowledge regarding prevention of breast cancer. Whereas in the posttest 87% had adequate knowledge, 11% had moderate knowledge and 2% of had inadequate knowledge regarding prevention of breast cancer after administer self instructional module. There was significant association between the level of knowledge and demographic variables such as includes age ($\chi 2$=16.51), religion ($\chi 2$=16.96), educational status ($\chi 2$=24.20), type of family ($\chi 2$=20.96), and previous

knowledge regarding prevention of breast cancer ($\chi 2=6.16$) and no significant association with variables such as type of living ($\chi 2=0.7901$), dietary pattern ($\chi 2=4.20$), sources of health information ($\chi 2=0.254$).The study suggests that it is essential for the adolescent girls to have knowledge and alternatives about prevention of breast cancer

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