

ORIGINAL ARTICLE

Impact of health education on knowledge and attitude of self-breast examination among female nursing students

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Citation

Pathak P, Bajpai PK, Jaiswal K, Kumar S, Chauhan M, Agarwal T, Srivastava DK. Impact of health education on knowledge and attitude of self-breast examination among female nursing students. Indian J Comm Health. 2022;34(3):348-351. <https://doi.org/10.47203/IJCH.2022.v34i03.005>

Source of Funding: Nil Conflict of Interest: None declared

Article Cycle

Received: 05/04/2022; Revision: 23/07/2022; Accepted: 03/09/2022; Published: 30/09/2022

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Abstract

Background: Breast cancer is the most common cancer among women and a leading cause of death worldwide, including in India. Breast cancer usually shows a slow development rate, and when recognized in the early stages, successful treatment results can be achieved. Breast self-examination is a screening option for young women. **Objective:** To assess the impact of health education on knowledge and attitude of self-breast examination among nursing students. **Study Design:** The present interventional study was conducted between September and October 2019. **Setting:** This study was done among 79 nursing students of a tertiary care hospital situated in a central district of Uttar Pradesh. **Main Outcome Measures:** The self-reported pre-designed and structured questionnaire was used. It included three sections Sociodemographic profile Knowledge regarding self-breast examination (SBE) 3. Attitude regarding self-breast examination (SBE). Knowledge and attitude scores were calculated and divided into the poor, average, and good categories. **Results:** There were 87.3% of girls had prior knowledge of the self-breast examination, while 12.7% of girls were not aware of the self-breast examination. Post-intervention, there was a significant increase ($p < 0.05$) in their knowledge about self-breast examination. **Conclusion:** Planned teaching intervention had a significant impact on the knowledge and attitude of self-breast examination.

Keywords

Nursing Students; Breast Cancer; Self-Breast Examination.

Introduction

According to GLOBOCAN2018, breast cancer comprises 24.7% of total fresh cancer cases among females world wide(1). Out of these cancers, 13.4% mortality has been observed worldwide among females (2). There are three major tools for early detection of breast cancer: 1. Self-breast examination (SBE), 2. Fine needle aspiration cytology, and 3. Mammography (3). It includes inspection

and palpation of the breast to detect any changes in breast tissue(4). SBE is a simple examination of the breast that anyone can perform without any need for specific training. Performing SBE helps rule out the growing neoplasms in early stages where surgical and other treatment increases the life expectancy of the diseased (5-8). Many studies have shown that performing SBE has a positive effect on detecting the early stages of neoplasms, especially in the younger group of females. Nursing

students already have some knowledge of SBE(9). As they will be the heart of the clinical setup in the future, they will be more exposed to various risk factors due to working conditions. Because of the increase in the prevalence of breast cancer, this is more important to give them periodic educational sensitization for a better knowledge, attitude, and practices among them(9).

Aims & Objectives

To assess the impact of health education on knowledge and attitude of self-breast examination among nursing students.

Material & Methods

This interventional study was done in the Nursing college of a state-run University in the Etawah district. The nursing college of the University has got three courses, B.Sc. nursing (60 seats), General Nurse Midwifery (GNM, 60 seats), and Auxiliary Nurse Midwifery (ANM, 50 seats). In this study, the census method was used for the recruitment of the study participants. All students of the nursing college were included except those who did not want to take part in this or were absent on the day of baseline data collection. A total of 158 students were available at baseline data collection. The rest of the students were not available because of the ongoing examinations and due to the ongoing COVID19 pandemic. After the ethical clearance, prior permission was taken from the principal of the nursing college to conduct the study. A small discussion was done with the class teachers of all three courses, and they scheduled the time and venue to collect the baseline data and planned teaching intervention. Both the data (baseline and post-intervention) were collected with the help of a pre-designed and structured questionnaire. The questionnaire included three sections, 1. sociodemographic profile 2. Knowledge regarding self-breast examination (SBE) 3. Attitude regarding self-breast examination (SBE). 2 teaching interventions were given after one week on baseline data collection to the students of every course, with the help of lectures, PowerPoint presentations, and demonstrations regarding SBE. Post-intervention data were collected with the help of the same questionnaire. The validity of the questionnaire was achieved by pilot testing.

Data Analysis: All collected data were entered in the excel sheet, and analysis was done with the help of SPSS v.24, IBM Corp., USA. Student t-test were applied to analyze the data. Each question for knowledge and attitude was given '10' marks for the correct answer and '0' marks for the incorrect answers. Total scores were 100 for knowledge and attitude scoring. Before and after the intervention, knowledge, and attitude scores were calculated, and a t-test was applied to test the significance of both the scores, pre-and post-intervention. P-value <0.05 was considered the significant value.

Results

A total of 158 students were enrolled in the study; out of them, 72 (45.5%), 32 (20.0%), and 54 (34.1%) were from the Auxiliary Nurse Midwifery (ANM), General Nurse Midwifery (GNM), and B. Sc. Nursing, respectively. Most of them (138, 87.3%) were from the 20-30 years age group, and the rest of them (20, 12.7%) were from the age group <20 years. Almost 33% were from the lower socio-economic status [Table 1]. At baseline data collection, 31.6% of students had poor knowledge, 59.5% of students had average, and only 8.9% of students had good knowledge about self-breast examination. After the planned teaching intervention, there was a rise in the students in the category of average knowledge and good knowledge about self-breast examination. More of the students had good knowledge, 59.5% and 34.2% students had average knowledge [Figure 1]. Before the educational intervention, most of the students had average and good attitudes towards self-breast examination, after intervention, number of students in the good attitude category showed slight increase [Figure 2]. Paired t-test was applied for both the knowledge and attitude scores; it was found to be significant (p-value < 0.001). After the intervention, knowledge scores showed a significant difference with a p-value < 0.001 [Table 2].

Discussion

As breast cancer is the leading cause of death worldwide, many studies have been done to assess the effectiveness of preventive methods, like Self breast examination awareness. In this study, participants had poor knowledge, poor attitude, and low SBE practice score at the start. Similar results have been seen in a study done in southwest Saudi Arabia, where participants had poor knowledge about SBE(10). One more study was done in Bogota, Colombia, with similar poor participants' knowledge(11). In the present study, participants had poor knowledge and poor attitude at the start, but both have been a significant increase in all three parameters after the intervention. A study done on female teachers by Almeer A et al. had similar results; the knowledge scores were increased in the intervention group post-intervention with the odds ratio of 29.5 [At 95% CI](12). Similarly, a study by Masso-Calderon A.M. et al(10)., showed that there had been a significant increase in SBE knowledge and practice post-intervention, 33%, 38%, and 56%, 1 month, 3 months, and 6 months, respectively. Abera H et al had done a study on female midwifery students and found that there had been a significant increase in knowledge scores and practice scores, 57.4 %, and 70.5%, respectively. Similar results had been seen in the study done by Rabia H et al, in which, after training, the rate of correct answers increased to between 79.1% and 96.7%.

Conclusion

Although nursing students were having some knowledge about self-breast examination and its role in early detection of breast cancer, health education intervention had uplifted their knowledge about SBE.

Recommendation

SBE is a simple examination of the breast that anyone can perform without any need for specific training. Performing SBE helps rule out the growing neoplasms in early stages where surgical and other treatment increases the life expectancy of the diseased.

Limitation of the study

Short-term health education sessions, lack of follow-up to check the SBE regular practice, and unavailability of the students at the time of data collection and health education sessions due to university examinations were the main limitations of this study. This study was conducted on nursing students; therefore, the results cannot be generalized to the general population.

Relevance of the study

Although nursing students were having some knowledge about self-breast examination and its role in early detection of breast cancer, health education intervention had uplifted their knowledge about SBE.

Authors Contribution

All authors contributed equally.

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Tables

TABLE 1 DEMOGRAPHIC PROFILE OF THE STUDENTS (N=158)

Demographic variables		Frequency/ Percentage (%)
Age	<20 years	20 (12.7)
	20-30 years	138 (87.3)
Course	ANM	72 (45.5)
	GNM	32 (20.2)
	B.Sc. Nursing	54 (34.1)
Socio-economic status	Lower class	52 (32.9)
	Upper lower class	36 (22.8)
	Lower middle class	30 (19.0)
	Upper middle class	28 (17.7)
	Upper class	12 (7.6)

TABLE 2 COMPARISON OF THE IMPACT OF EDUCATIONAL INTERVENTION ON KNOWLEDGE AND ATTITUDE BEFORE AND AFTER THE INTERVENTION (N=158)

Variables	Mean ± S.D.		p-Value [#]
	Before Intervention	After Intervention	
Knowledge Score	8.09 ± 1.99	10.46 ± 1.67	0.000**
Attitude score	7.57 ± 0.98	7.90 ± 0.91	0.000**

** p < 0.001 (Highly significant); [#] Paired t-test applied

Figures

FIGURE 1 KNOWLEDGE SCORES OF NURSING STUDENTS ABOUT SELF-BREAST EXAMINATION (SBE), BEFORE AND AFTER EDUCATIONAL INTERVENTION (N=158)

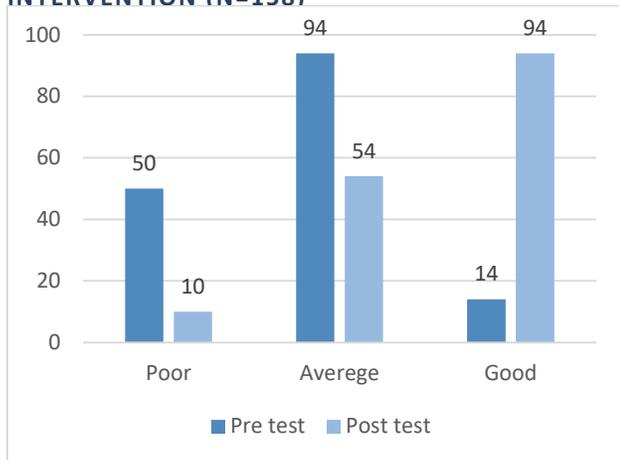
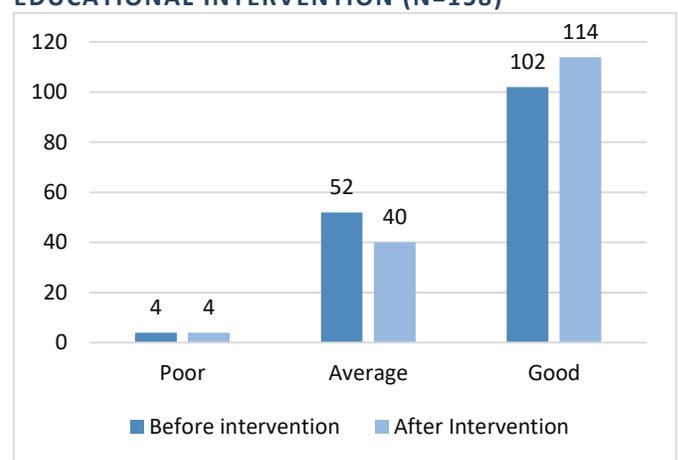


FIGURE 2 ATTITUDE SCORES OF NURSING STUDENTS ABOUT SELF-BREAST EXAMINATION(SBE) BEFORE AND AFTER EDUCATIONAL INTERVENTION (N=158)



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