A Study to Evaluate the Effectiveness of Structured Educational Programme on Knowledge and Practice Regarding Breast Cancer and Breast Self-Examination among the B.Ed. Students Studying in Shivaji College of Education, Karwar, Karnataka

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Abstract: Background: Breast cancer is the second leading cause of cancer death in women (only lung cancer kills more women each year). The chance that a woman will die from breast cancer is about 1 in 38 (about 2.6%). Aim: To evaluate the effectiveness of structured educational programme on knowledge and practice regarding breast cancer and breast self-examination among the B.Ed. students studying in Shivaji College of Education, Karwar. Method: An evaluative approach with pre experimental pre-test-post-test design was used for the study. Forty two B.Ed. students were selected by purposive non probability sampling method based on inclusion criteria. The structured knowledge questionnaire is prepared to assess the knowledge related to breast cancer and breast self-examination and an observation checklist is prepared to evaluate the practice of breast self-examination. The questionnaire consists of eight items to obtain socio demographic data, and forty items to assess the level of knowledge regarding breast cancer and breast self-examination. A structured educational programme was prepared and administered regarding breast cancer and breast self-examination after conducting pre-test to the students. Post-test was conducted after six days of administration of structured educational programme. The data collected was analysed using descriptive and inferential statistics. Result: The findings revealed that the pre-test knowledge scores of B.Ed. students were 54% (average knowledge) and 46% (poor knowledge) and the post-test knowledge scores were 17% (good knowledge), 79% (average knowledge) and 4% (poor knowledge) respectively. The distribution of practice scores for B.Ed. students includes pre-test practice scores i.e. 4% (average practice) and 96% (poor practice knowledge) and the post-test practice scores were 11% (good practice), 75% (average practice) and 14% (poor practice) respectively. Conclusion: The study findings revealed that there was significant increase in knowledge and practice level of B.Ed. students after administration of the structured educational programme. Keywords: Structured Educational Programme, B.Ed. students, breast cancer and breast self-examination.

Introduction
Breast cancer is one of the most frequent cancer among women, which impact 2.1 million women each year, and causes the greatest number of cancer-related deaths among women. It is estimated that, in 2018, 627,000 women died from breast cancer-that is approximately 15% of all cancer deaths among women [1]. Breast cancer is the cancer that develops in breast tissue. Signs of breast cancer includes, lump in the breast, change in breast shape, dimpling of the skin, fluid or blood expressing...
from the nipple, newly-inverted nipple, or red or scaly patch of skin. The clinical features may include bone pain, swollen lymph nodes, shortness of breath, or yellow skin [2].

Risk for developing breast cancer include being female, obesity, lack of physical exercise, alcoholism, hormone replacement therapy during menopause, ionizing radiation, an early age menarche, delay in conceiving and delivery or not having a child, older age, having a prior history of breast cancer, and a family history of breast cancer. About 5–10% of breast cancer cases are the result of genetic predisposition inherited from a person's parents, including BRCA1 and BRCA2 among others [2]. Breast cancer develops in different parts of the breast. A breast consist of three main parts: lobules, ducts, and connective tissue. The lobules are the glands that produce milk. The ducts are tubes that carry milk to the nipple. The connective tissue (which consists of fibrous and fatty tissue) surrounds and holds everything together [3]. Breast cancer usually develops in cells from the lining of milk ducts and the lobules that supply these ducts with milk. Cancers developing from the ducts are known as ductal carcinomas, while those developing from lobules are known as lobular carcinomas [2].

Outcomes for breast cancer vary depending on the type of cancer, the extent of disease, and the person's age. The five-year survival rates in England and the United States are between 80 and 90%. In developing countries, compared to the developed countries five-year survival rates are lower. Worldwide, breast cancer is the leading type of cancer in women, accounting for 25% of all cases. In 2018 it resulted in 2 million new cases and 627,000 deaths. It is more common in developed countries in comparison with developing countries and is common in women than in men [2]. In order to improve breast cancer outcomes and survival, early detection is critical. There are two early detection strategies for breast cancer: early diagnosis and screening [1]. Breast self-examination (BSE) is the technique which allows an individual to examine his/her breast tissue for any physical or visual changes. It is often used as an early detection method for breast cancer. Both men and women should perform a BSE at least once each month beginning at age 18 to identify changes in breast tissue [4].

Despite being an old technique, BSE is not frequently practiced or has been practiced incorrectly for many reasons. Previous studies show that the primary barriers for the poor practicing of BSE were forgetfulness, lack of time, ignorance, fear/anxiety, and low level of education. It is therefore important to determine the level of knowledge regarding breast cancer and BSE, as well as the practice among women in our community to recognize their acceptance, belief, and the magnitude of current practice [5]. The researcher felt need to conduct the present study by observing the incidence in mortality and morbidity of breast cancer as well as by understanding the decrease in practice of breast self-examination among the women in reproductive age.

Materials and Method
The Pre Experimental one group pre-test post-test design was used to evaluate the effectiveness of structured educational programme on knowledge and practice regarding breast cancer and breast self-examination among the B.Ed. students studying in Shivaji College of Education, Karwar. The present study was conducted on 42 B.Ed. students. The need and importance of the study was explained to the subjects and written consent was obtained. The subjects were selected by purposive non probability sampling method based on inclusion criteria. The structured knowledge questionnaire is prepared to assess the knowledge related to breast cancer and breast self-examination and an observation checklist is prepared to evaluate the practice of breast self-examination. The questionnaire consists of eight items to obtain socio demographic data, and forty items to assess the level of knowledge regarding breast cancer and breast self-examination. The observation checklist consist of 25 items to evaluate the practice of breast self-examination. The tool was validated by experts in field of Public health and Medical health. Pre-test was conducted followed by administration of structured educational programme on same day of pre-test. The post
test was conducted on seventh day of pre-test. The collected data was organized and analysed based on the objectives by using descriptive and inferential statistics.

Statistical Method
The reliability and validity of the tool was established before data collection. The demographic data collected were analysed and categorized into groups according to the frequency and percentage. Analysis and interpretation of level of knowledge and attitude scores were done by calculating mean, median, standard deviation. Paired ‘t’ test established at 0.05 level of significance denotes the effectiveness of structured educational programme on knowledge and practice of B.Ed. students regarding breast cancer and breast self-examination. Chi-square established at 0.05 levels of significance denotes association between the pre-test knowledge and demographic variables like age, religion, marital status, number of children, monthly income, knowledge and practice of breast cancer and breast self-examination and source of information.

Results
A total of 42 B.Ed. students took part in the study. The level of knowledge and practice regarding breast cancer and breast self-examination were assessed by using structured questionnaire and observation checklist. The data analysed using frequency and percentage.

Section A: Demographic Variables
The study shows that 85% of the B.Ed. students are in the age group of 20 to 25 years and 61% of B.Ed. students are in the age group of 25 to 30 years. Maximum of B.Ed. students (80%) were single. The study showed that 30(71%) were Hindus. Among the married B.Ed. students, 7% were having one child and 2% were having 2 children. Thirty (71%) B.Ed. students were having monthly income of 10000-20000/- rupees. Everyone were having basic knowledge about breast cancer and they obtained knowledge through friends (50%), internet (26%), television (15%) and magazines (9%). It showed that only 2% of B.Ed. students were preforming breast self-examination and 98% were not knowing about breast self-examination.

Section B: Description of Knowledge and Practice Scores
The pre-test knowledge scores of B.Ed. students were 54% (average knowledge) and 46% (poor knowledge) and the post-test knowledge scores were 17% (good knowledge), 79% (average knowledge) and 4% (poor knowledge) respectively. The distribution of practice scores for B.Ed. students includes pre-test practice scores i.e. 4% (average practice) and 96% (poor practice) and the post-test practice scores were 11% (good practice), 75% (average practice) and 14% (poor practice) respectively.

![Figure 1. Comparison of pre-test and post-test knowledge scores](image)
Section C: Effectiveness of Structured Educational Package
Paired ‘t’ test established at 0.05 level of significance denotes the effectiveness of structured educational programme on knowledge and practice of breast cancer and breast self-examination. The statistical analysis demonstrated an increase in knowledge and practice level of B.Ed. students’ breast cancer and breast self-examination and it was significant with ‘t’ calculated value 10.9 which is greater than ‘t’ tabulated value. There is a significant difference in the pre-test and post-test practice scores (t=9.88, p< 0.05). So the structured educational programme was effective in improving the knowledge and practice level among B.Ed. students regarding breast cancer and breast self-examination.

Section D: Association between the Pre–test Scores (Knowledge and Practice) and Demographic Variables
Chi-square established at 0.05 levels of significance denotes the association between the pre-test knowledge and practice scores and demographic variables like age, religion, marital status, number of children, monthly income, knowledge and practice of breast cancer and breast self-examination and source of information. The pre-test knowledge and practice scores were independent of all the demographic variables such as age, religion, marital status, number of children, monthly income, knowledge and practice of breast cancer and breast self-examination and source of information.

Discussion
Non-communicable diseases (NCDs) are responsible for the majority of global deaths and cancer is expected to rank as the leading cause of death. It is the single most important barrier to increase life expectancy in every country of the world in the 21st century [6]. Breast cancer is the most common invasive cancer in women and the second leading cause of cancer death in women after lung cancer. In 2018 it resulted in 2 million new cases and 627,000 deaths. It is more common in developed countries and is more than 100 times more common in women than in men [1].

The present study was conducted to evaluate the effectiveness of structured educational programme on knowledge and practice regarding breast cancer and breast self-examination among the B.Ed. students studying in Shivaji College of Education, Karwar.

The study shows that 85% of the B.Ed. students are in the age group of 20 to 25 years and 61% of B.Ed. students are in the age group of 25 to 30 years. Maximum of B.Ed. students (80%) were single. The study showed that 30(71%) were Hindus. Among the married B.Ed. students, 7% were having one child and 2% were having 2 children. Thirty (71%) B.Ed. students were having monthly income
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The investigator found that there is gain in level of knowledge and practice among the B.Ed. students. The pre-test knowledge and practice scores were independent of all the demographic variables.

The present study is supported by study conducted by Madhukumar et al. [7] their article titled, a study on awareness about breast carcinoma and practice of breast self-examination among basic sciences' college students, Bangalore revealed that: Pretest and posttest were collected from 1030 students. The age of the study participants was ranged between 18 and 23 years. Most of them were aware of breast carcinoma, but half of them thought breast cancer affects the elderly. Regarding different aspects studied, 58% had knowledge of at least one of the symptoms and 59% knew at least one of the risk factors for breast carcinoma. Only 185 (18%) knew about breast self-examination and 107 practice it. The study also concluded that the awareness of the breast cancer was good but the knowledge of signs and breast self-examination was poor, which is utmost important for early detection and in reduction of mortality [7].

**Conclusion**

The study concluded stating an increase in level of knowledge and practice regarding breast cancer and breast self-examination among the B.Ed. students studying in Shivaji College of Education, Karwar. Hence research hypothesis was accepted and null hypothesis was rejected. The study suggest to conduct mass education programme to increase the awareness about breast cancer and breast self-examination. The study also suggest to conduct behaviour change communication to increase the practice of breast self-examination.

**Conflict of interest**

The authors declare no conflicts of interest.

**References**


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