

# EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE REGARDING RISK FACTORS, EARLY IDENTIFICATION AND PREVENTIVE MEASURES OF BREAST CANCER AMONG COLLEGE STUDENTS

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## Abstract

A Pre experimental study was conducted to assess the effectiveness of structured teaching programme on knowledge regarding risk factors, early identification and preventive measures of breast cancer among college students in a selected college at Alappuzha District. The objectives of the study were to assess the pretest and posttest level of knowledge regarding breast cancer among college students, to find out the association between pretest level of knowledge with selected socio demographic variables. Conceptual frame work was based on Nola J Pender's Health promotion Model (1996). The study was conducted at Sree Buddha college of Engineering Pattor. The samples were 60 college students, who were selected by stratified random sampling technique. The pretest level of knowledge was assessed using structured knowledge questionnaire and structured teaching programme given. The posttest was conducted on the 7<sup>th</sup> day using the same tool. The result showed that the mean posttest score 16.75 with SD 2.321 was significantly higher than the mean pretest score 11.48 with SD 3.14 with a mean difference of 5.27. Since the calculated 't' value 18.96 which was greater than the table value (2.66) with degree of freedom 59 at 0.01 level of significance. Hence we can conclude that the educational programme was effective in improving the knowledge level of college students. The association between pretest and selected socio demographic variables showed that have you heard about breast self-examination had significant relationship with pretest knowledge at 0.05 level of significance, so the knowledge is also influenced by have you heard about breast self-examination.

**Keywords:** Effectiveness; structured teaching programme; knowledge; risk factors; early identification; preventive measures;

## Introduction

"Attitude is a little thing that makes a big difference".<sup>1</sup>  
(Winston Churchill)

"Our relationship with the world starts from mother's breast milk. Breasts are very important organs for every woman as these are the symbols of motherhood and womanhood. So any diseases affecting breasts particularly breast cancer is important".<sup>2</sup>

Cancer is the uncontrolled growth of abnormal cells in the body. Cancer develops when the body's normal control mechanism stops working. Old cells do not die and instead grow out of control, forming new, abnormal cells. These extra cells may form a mass of tissue, called a tumor. Cancer may occur anywhere in the body. In women, breast cancer is one of the most common. A tumor can be benign (not dangerous to health) or malignant (has the potential to be dangerous).<sup>2</sup>

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.<sup>3</sup>

## Background of the problem

The health of families and communities are tied to the health of women, the illness or death of a woman has serious and far reaching consequences for the health of her children, family and community. The slogan, "Healthy Women, Healthy World" embodies the fact that as custodians of family health, women play a critical role in maintaining the health and wellbeing of their communities.<sup>4</sup>

A woman's journey in life is punctuated by many milestones; childhood, puberty, matrimony, pregnancy,

childbirth, motherhood and each milestone special in its own way. The female reproductive system includes the external genital organs and the internal reproductive organs and breast is one of the external genital organs.<sup>5</sup>The female breast is made up mainly of lobules, ducts, fibrous tissues and mammary glands, which secrete milk. Although the primary function of the breasts is production of milk, the female breasts play an important part in female sexual behavior.<sup>6</sup>

## Need and significance of study

Breast cancer, a dreaded disease has got deadlier for the modern woman who is becoming vulnerable to the illness.<sup>7</sup> In 2008, an estimated 182,460 new cases of invasive breast cancer are expected to be diagnosed in women in the U.S along with 67,770 new cases of non-invasive breast cancer.<sup>8</sup>The incidence of breast cancer in united states is 101.1 per 100,000 population and deaths due to the same is 19 per 100,000 population whereas in china it is 18.7 per 100,000 population and deaths due to the same is 5.5 per 100,000 population and in India it is 19 per 100,000 population and deaths due to the same is 14.1 per 100,000 population.<sup>9</sup>

According to ICMR, the number of breast cancer cases in India is about 100,000 women each year and there will be approximately 2,50,000 new cases of breast cancer in India by 2015. Cancer rates could further increase by 50 per cent to 15 million new cases in the year 2020, according to the World Cancer Report, the most comprehensive global examination of the disease to date. The report also reveals the developing world is expected to account for more than half of all cancer cases in the world by 2020.

**Statement of the problem**

A study to assess the effectiveness of structured teaching programme on knowledge regarding risk factors, early identification and preventive measures of breast cancer among college students in a selected college at Alappuzha district.

**Objectives**

1. To assess the pretest and posttest level of knowledge regarding risk factors, early identification and preventive measures of breast cancer among college students.
2. To find out the effectiveness of structured teaching programme regarding risk factors, early identification and preventive measures of breast cancer among college students.
3. To find out the association between pretest level of knowledge regarding risk factors, early identification and preventive measures of breast cancer among college students with selected socio demographic variables.

**Assumptions**

- The college students may have some knowledge regarding risk factors, early identification and preventive measures of breast cancer.
- Structured teaching programme may improve the knowledge of college students regarding risk factors, early identification and preventive measures of breast cancer.

**Hypotheses**

**H<sub>1</sub>**-There will be a significant difference in mean pretest and posttest level of knowledge regarding breast cancer among college students.

**H<sub>2</sub>**- There will be a significant association with pretest level of knowledge and selected socio demographic variables.

**Variables****Demographic variables**

In this study, the demographic variables were age, type of family, religion, area of residence, educational status of father, educational status of mother, occupational status of father, occupational status of mother, monthly family income, previous educational status, present year of study, dietary pattern, marital status, family history of breast cancer, breast self examination, practice of breast self examination and main source of information regarding breast cancer.

**Dependent variable :** Knowledge regarding risk factors, early identification and preventive measures of breast cancer.

**Independent variable :** Structured teaching programme

**Methodology**

**Research approach :** Quantitative research approach

**Research design :** Pre experimental one group pretest posttest design

**Population****Target population**

College students

**Accessible population**

College students studying in 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> year from civil engineering branch.

**Sample size :** 60 samples

**Sampling technique :** Probability Disproportionate Stratified Random Sampling

**Setting :** Sree Buddha college of Engineering

**Tools and technique****Tool 1: Structured questionnaire**

**Section A –** Socio demographic proforma to collect the demographic data.

**Section B–** Self administered structured questionnaire.

**Technique:** Data collection by Self administered structured knowledge questionnaire.

**Tool 2:** Structured self administered knowledge questionnaire.

**Technique:** Self administered questionnaire

**Development of tool :** The sources for the tool construction were:

- ♦ Review of literature.
- ♦ Discussion with doctors and experts in the field of obstetrics and pediatrics.
- ♦ Discussion with nursing experts which includes the guide and others.
- ♦ Review of the standardized tool and related tools developed by others.

**Validation of tool**

In order to infer the content validity of the tools, the prepared instruments along with the problem statement, objectives, hypothesis, operational definitions, lesson plan were submitted to ten experts.

**Reliability of tool**

Split half method was used to estimate the homogeneity. The scores of the items were first divided into two equal halves with odd and even numbers and the reliability was found by using split half method  $r = 0.786$ .

**Conceptual / Theoretical framework :** Nola J Pender's Health Promotion model (2006)

**Inclusion criteria:-**

College students who are:-

- females.
- available at the time of data collection.
- willing to participate in the study.
- belonging civil engineering.

**Exclusion criteria:-**

College students those who are :-

- attended any formal education programme regarding breast cancer and preventive measures.
- in other engineering branches.

**Data collection process****Step 1**

- Written Permission was taken from the Principal of Sree Buddha College of Engineering..
- Data collection period was from 08-12-2016 to 16-12-2016.
- 60 college students selected through disproportionate stratified random sampling.
- Informed consent was taken from the study subjects.
- Sociodemographic data collected and pretest was conducted on 08-12-2016 by using self administered structured knowledge questionnaire.
- Informed the date and venue of structured teaching programme.

**Step 2 :** Researcher provided structured teaching programme on risk factors, early identification and preventive measures of breast cancer for a period of 2 hours on 09-12-2016.

**Step 3 :** Posttest was conducted on 16-12-2016

**Step 4 :** The researcher provided class for the rest of the students on 17/12/17 for ethical reasons.

**Data analysis****Descriptive statistics**

- 1) Frequency and percentage distribution.
- 2) Mean, standard deviation and mean percentage

**Inferential statistics**

- 1) Paired 't' test.
- 2) Chi-square

## Results

### Section I : Distribution of subjects according to socio demographic variables.

1. Less than one third(28.3%) of the subjects belonged to  $\geq 21$  yrs.
2. Majority (86.7%) of the subjects belonged to nuclear family.
3. Less than half (46.7%) of the subjects were Hindus.
4. More than half (51.7%) of the subjects were residing in panchayath.
5. Regarding educational status of father one third (33.3%) of the subjects father had graduation.
6. Regarding educational status of mother one third (33.3%) of the subjects mother had higher secondary education.
7. Regarding occupational status of father more than one third (43.3%) of the subjects father were private employed.
8. Regarding occupational status of mother more than one third (36.7%) of the subjects mother were home maker.
9. The monthly family income showed that more than half (60%) of the subjects had income  $\geq$  Rs 30,000/-.
10. Regarding previous educational status majority (80%) of the subjects had higher secondary education.
11. Regarding present year of study an equal proportion (25%) of the subjects were belongs to first year, second year, third year and fourth year.
12. A vast majority (93.3%) of subjects were non-vegetarian.
13. All the subjects (100%) were unmarried.
14. Less than half (45%) of the subjects don't know about family history of breast cancer.
15. More than three fourth (76.7%) of the subjects didn't heard about breast self examination.
16. None (100%) of the subjects were practicing breast self examination.
17. Regarding main source of information regarding breast cancer more than one third (40%) of the subjects gets information from internet.

### Section II :Pretest and posttest level of knowledge among college students regarding risk factors, early identification and preventive measures of breast cancer.

The overall pretest level of knowledge among college students regarding breast cancer showed that, a vast majority (93.3%) the subjects had poor knowledge, less than one tenth (6.7%) of the subjects had good knowledge and none of them had good knowledge regarding risk factors, early identification and preventive measures of breast cancer before structured teaching programme.

The posttest level of knowledge among college students regarding breast cancer showed that, majority (88.4%) of the subjects had average knowledge, more than one tenth (11.6%) of subjects had poor knowledge and none of the subjects had good knowledge regarding risk factors, early identification and preventive measures of breast cancer after structured teaching programme.

### Section III :Comparison of pretest and posttest level of knowledge regarding risk factors, early identification and preventive measures of breast cancer for the effectiveness of study.

The comparison of pretest and posttest level of knowledge regarding risk factors, early identification and preventive measures of breast cancer showed that, in pretest a vast majority (93.3%) the subjects had poor knowledge , less than one tenth (6.7%) of the subjects had good knowledge and none of them had good knowledge. In posttest a vast majority (93.3%) the subjects had poor

knowledge, less than one tenth (6.7%) of the subjects had good knowledge and none of them had good knowledge. This shows that there was significant increase in posttest level of knowledge regarding risk factors, early identification and preventive measures of breast cancer among college students.

### Section IV : Association between mean pretest knowledge score of college students with selected socio demographic variables.

The calculated chi-square value for heard about breast self-examination (6.395) was greater than the table value (3.84) with degree of freedom 1 at  $p < 0.05$  level of significance. So there was a significant association between heard about breast self-examination and pretest level of knowledge score. Hence the null hypothesis ( $H_2$ ) with regard to heard about breast self-examination was accepted and null hypothesis ( $H_{02}$ ) was rejected.

#### Discussion

**Objective 1:** To assess the pretest and posttest level of knowledge regarding risk factors, early identification and preventive measures of breast cancer among college students.

In this study researcher found that a vast majority (93.3%) of the subjects had poor knowledge, less than one tenth (6.7%) of the subjects had good knowledge and none of them had good knowledge. After the researcher conducted the study it was found that majority (88.4%) had average knowledge, more than one tenth (11.6%) had poor knowledge and none of the subjects had good knowledge.

**Objective 2:** To find out the effectiveness of structured teaching programme regarding risk factors, early identification and preventive measures of breast cancer among college students.

After the researcher conducted the study it was found that majority (88.4%) of the subjects had average knowledge, more than one tenth (11.6%) of subjects had poor knowledge and none of the subjects had good knowledge.

**Objective 3:** To find out the association between pretest level of knowledge regarding risk factors, early identification and preventive measures of breast cancer among college students with selected socio demographic variables.

The calculated chi-square value for heard about breast self-examination (6.395) was greater than the table value (3.84) with degree of freedom 1 at  $p < 0.05$  level of significance. So there was a significant association between heard about breast self-examination and pretest level of knowledge score. Hence the null hypothesis ( $H_2$ ) with regard to heard about breast self-examination was accepted and null hypothesis ( $H_{02}$ ) was rejected.

#### Conclusion

The study aimed to assess the effectiveness of the structured teaching programme on knowledge regarding risk factors, early identification and preventive measures of breast cancer among college students. This study was very much effective among the college students. This type of studies can be conducted in other settings to create awareness.

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