

# Effectiveness of Structured Teaching Programme on Breast Cancer & its Prevention for Pre-University Adolescent Girls (2011)

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**Abstract:** Background of the study: Pre-university adolescent girls have less knowledge on Breast Cancer & its prevention, but knowledge level can be increased through structured teaching program. Aim: The main objective of the study was to determine the level of knowledge on Breast Cancer & its prevention among Pre-university adolescent girls and to improve the knowledge level of Breast Cancer & its prevention, which will be helpful in their future. Method: One group pre-test, post-test design without a control group with evaluative research approach was used. A Study was conducted at The New Cambridge P.U. College, Bangalore. 40 Pre-university adolescent girls were selected as a sample by using Simple Random Sampling technique. The tools used to collect the data were socio-demographic Performa and structured knowledge questionnaire on Breast Cancer & its prevention. The method used to collect the data was self-administered questionnaire. The Results: Collected data were analyzed by using descriptive and inferential statistics. The result of the study revealed that, In Pretest, 55% of respondents had an average knowledge level and 45% of them had a poor level of knowledge. In Posttest, 65% had good knowledge level, 30% had average knowledge and 5% had poor knowledge. Interpretation and conclusions: Significant difference was found between the pretest and posttest knowledge levels among Pre-university adolescent girls. There was a statistical significant association between the pretest knowledge levels and religion of Pre-university adolescent girls at 0.05 levels and no statistical association could be established with other remaining demographic variables. Hence, the present study suggests that primordial prevention should be initiated to prevent Breast cancer.

**Keywords:** structured teaching program, Pre-university adolescent girls, knowledge, Breast Cancer & its prevention

## 1. Introduction

Health is the precious possession of all human beings as it is an asset for an individual and community as well. Though, health is related to individual and attained through individual efforts to quite an extent but it also depends upon the concerted and co-operative efforts of people in the community to which the individuals belong. Doctors and nurses, who claim to be promoters of health, concentrate on making diagnosis and give therapeutic care to ill clients. The emphasis in modern medicine has been on freedom from disease and currently there is shift in the trend i.e. increasing emphasis on preventive and promotive aspects of health<sup>1</sup>.

It is accepted that women's health and reproductive rights are important means of women's empowerment and quality of life<sup>2</sup>. Cancer prevalence in India is estimated to be around 2.5 million, with over 8,00,000 new cases and 5,50,000 deaths occurring each year due to this disease. More than 70% of the cases report for diagnostic and treatment services in the advanced stages of the disease, which has lead to a poor survival and high mortality rate, whereas the predominant cancer in the female population is breast cancer<sup>4</sup>.

Breast cancer is an uncontrolled growth of breast cells. Cancer occurs as a result of mutations or abnormal changes. Genes responsible for regulating the growth of cells and keeping them healthy. The genes are in each cell's nucleus, which acts as the "control room" of each cell. Normally, the cells in our bodies replace themselves through an orderly process of cell growth: healthy new cells take over as old ones die out. But over time,

mutations can "turn on" certain genes and "turn off" others in a cell. Changed cell gains the ability to keep dividing without control or order, producing more cells just like it and forming a tumor. A tumor can be benign (not dangerous to health) or malignant (has the potential to be dangerous).

Public health data indicate that the global burden of breast cancer in women, are measured by incidence, mortality, and economic costs, is substantial and on the increase. Worldwide, it is estimated that more than one million women are diagnosed with breast cancer every year, and more than 410,000 will die from the disease<sup>3</sup>. Globally, every three minutes a woman is diagnosed with breast cancer in the world, amounting to one million cases annually. The incidence could go up by 50 percent to 1.5 million by 2020, said the World Cancer Report<sup>8</sup>. In reality, about 1 in 8 women is at United States — or 13%, or 13 out of every 100 — can expect to develop breast cancer over the course of an entire lifetime<sup>9</sup>.

There is a rising incidence of breast cancer in India. According to the International Agency for Research on Cancer, which is part of the World Health Organisation, there were approximately 79,000 women per year affected by breast cancer in India in 2001 and over 80,000 women in 2002<sup>6</sup>. "India needs a change. Women, especially in the semi-urban areas and Tier 2 cities, should be told that they are important to society and efforts must be made to preserve their health,"<sup>9</sup> Breast cancer is emerging as a prominent public health problem in the urban centers of India<sup>10</sup>

## 2. Need for the Study

Breast cancer, a dreaded disease has got deadlier for the modern woman who is becoming vulnerable to the illness<sup>9</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>11</sup>.

Experts project breast cancer to strike approximately 2.5 lakh women in India by 2015. 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, says ICMR. 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<sup>12</sup>.

Whereas in Karnataka the total population of is 52,850,562 in which 25,951,644 (49.11%) are females (2001 census)<sup>18</sup> among these there would be about 1.5 lakhs cancer cases at any given time and about 35,000 new cancer cases are added to this pool each year<sup>19</sup>, Incidence of breast cancer in Bangalore increased from 14.5 % in the year 1990 to 23.5 % in the year 2005. Cases of breast cancer among a younger age group have increased by 15 to 20 per cent<sup>20</sup>. It indicates each year, 1,82,000 women are diagnosed with breast cancer and 43,300 die. One woman in eight either has or will develop breast cancer in her lifetime<sup>21</sup>. Expert oncologists say that while earlier breast cancer was common among women in their 60s, they are now seeing cases in women as young as 20<sup>22</sup>.

Authentic and accurate information and public education is basic to any disease control initiative. It is more so for a disease like cancer where more than 70% of disease burden is related to life-style factors such as food & beverage practices, personal habits, infections, tobacco consumption and social customs. In addition, urbanization, industrialization and increasing life span are also known to influence the cancer pattern globally. This necessitates proper appreciation of risk factors and other causes of cancer by the people. So information and public education to be of vital importance in our cancer prevention initiatives<sup>24</sup>. Preventive Services Task Force regarding the use of mammography, clinical breast examination (CBE), and breast self-examination (BSE). Nursing interventions to decrease barriers to effective screening are discussed, and an expanded role of nurses in breast cancer screening and prevention is proposed<sup>25</sup>.

The above facts and studies created an insight in the investigators mind that by educating the younger generation about the prevention of deadly breast cancer, as they are prone to be affected in the future. It is possible that the incidence of breast cancer can be reduced considerably and by early diagnosis by self breast-examination and reaching the medical aid in time can

prevent complications as well as will contribute to the reduction of mortality rate in women's due to breast cancer.

### Statement of the Problem

'A study to assess the effectiveness of structured teaching programme on breast cancer and its prevention among pre-university adolescent girls of selected colleges, Bangalore'.

### Objectives of the Study

1. To Assess the knowledge of pre-university adolescent girls on breast cancer and its prevention through pretest.
2. To provide structured teaching programme on breast cancer and its prevention for pre-university adolescent girls.
3. To assess the knowledge acquired by the pre-university adolescent girls after structured teaching programme on breast cancer and its prevention through posttest.
4. To compare the pretest and posttest knowledge scores and determine the effectiveness of structured teaching programme on breast cancer and its prevention among pre-university adolescent girls.
5. To find association between the pretest knowledge scores and selected socio demographic variables among pre-university adolescent girls.

### Hypotheses

**H<sub>01</sub>** : The mean post-test knowledge scores of subjects will be significantly higher than the mean pre-test knowledge scores on breast cancer and its prevention.

**H<sub>02</sub>** : There is no significant association between the pre-test knowledge scores and Selected Socio-demographic variables among Pre-university adolescent girls.

### 2.4 Assumptions

1. The pre-university adolescent girls of selected colleges will not have any knowledge on breast cancer and its prevention.
2. Structured teaching programme is an effective way to improve the knowledge of pre-university adolescent girls on school health services.

### Conceptual Framework

The present study was focused on assessing the knowledge regarding Breast Cancer & its Prevention among pre-university adolescent girls by applying Ludwig Von Bertalanffy Model.<sup>26</sup>

## 3. Methodology

### Research Approach

Evaluative approach was used to carry out the study.

**Research Design**

One group pre-test post-test design was used.

**Setting**

The New Cambridge P.U College, Vijayanagar, Bangalore.

**Variables**

- 4.4.1 Dependent variable refers to : Level of knowledge.
- 4.4.2 Independent variable refers to : Structured Teaching Programme.
- 4.4.3 Extraneous variable refers to : Demographic variables like age, religion, type of family, income, place of residence etc.

**Population**

The population of the present study consists of the pre-university adolescent girls who are studying in The New Cambridge P.U College, Bangalore.

**Sample**

The sample of the present study consists of Pre-university adolescent girl students of P.U. College Bangalore, who fulfill the inclusion criteria.

**Sample Size**

The sample size of the present study comprises 40 pre-university adolescent girls.

**Sampling Technique**

Simple Random Sampling technique was adopted to select the sample.

**Method of Collection of Data**

Self-Administered Questionnaire was used to collect the data.

**4. Data Analysis and Interpretation of Results**

**Section-I**

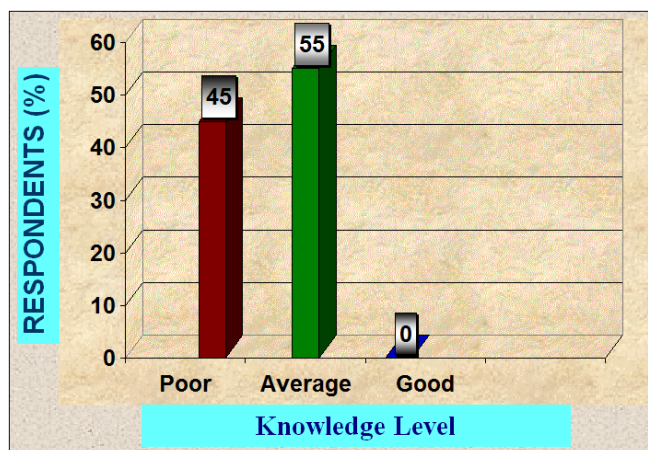
**Table 1: - Levels of pre-test knowledge score among Pre-university adolescent girls regarding breast cancer and its prevention.**

**N=40**

Sl. No.	Levels of knowledge	Score Range	Frequency (f)	Percentage (%)
1.	Poor	0 -10	18	45
2.	Average	11-20	22	55
3.	Good	21-30	0	0

The above table depicts that among 40 Pre-university adolescent girls, the majority of respondents 22 (55%) had average level of knowledge where as 18 (45%) had poor

level of knowledge and none (0) of the respondents had good level of knowledge on breast cancer and its prevention.



**Figure 1: Levels of the pre-test knowledge score among Pre-university adolescent girls on breast cancer and its prevention**

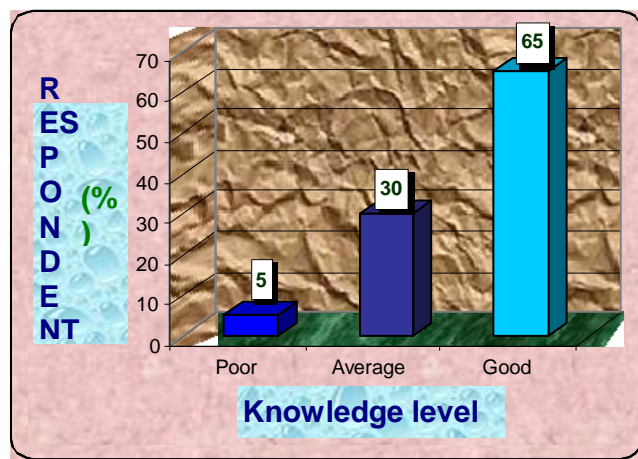
**Section-II**

**Table 2: - Levels of Post-test knowledge scores among Pre-university adolescent girls**

**N=40**

Sl. No.	Levels of knowledge	Score Range	Frequency (f)	Percentage (%)
1.	Poor	1-10	2	5.0
2.	Average	11-20	12	30.0
3.	Good	21-30	26	65.0

The above table depicts that among 40 Pre-university adolescent girls, the majority of respondents 26 (65%) had good level of knowledge where as 12 (30%) had average knowledge and 2 (5%) had poor level of knowledge.



**Figure 2: Levels of the post-test knowledge score among Pre-university adolescent girls**



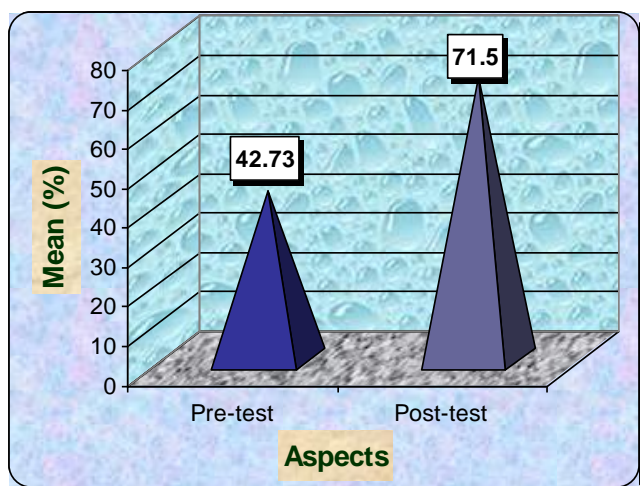
**Section-III**

**Table 3:** - Comparison of Pre-test and Post-test Knowledge Scores among Pre-university adolescent girls N=40

Sl. No.	Aspects	Mean	Mean Difference	Standard Deviation Difference	Paired 't' test Value
1.	Pre-test	12.82			
2.	Post-test	21.45	8.63	4.37	12.6*

\*  $t(39) = 2.021 (P>0.05)$   
**2.704 (P>0.01)**

The above table shows that the mean of Pre-test knowledge score is 12.82 and the Post-test knowledge score is 21.45 with the mean difference of Pre-test and Post-test 8.63 and standard deviation difference of 4.37 which showed that there is considerable improvement in the knowledge of adolescents regarding breast cancer and its prevention. The Paired 't' tests value of Pre-test and Post-test knowledge scores were 12.6 which is more than 't' table value at 0.05 level (Df 39). Hence, there was a significant difference between the Pre-test and Post-test knowledge scores.



**Figure 3:** Comparison of the pre-test and post-test knowledge scores for Pre-university adolescent girls

**5. Discussion**

**1. To assess the knowledge of pre-university adolescent girls on breast cancer and its prevention through pretest.**

The overall results of the pre-test knowledge scores depict that 80% of the respondents had average level of knowledge and rest of 20% had poor level of knowledge. Mean Pre-test knowledge scores indicate that the Pre-university adolescent girls had more knowledge in the aspects of Management & Prevention domain (53.12%), than in General Information, Causes, & Risk factors domain (40.6%) followed by signs and symptoms complication & Stages of Breast cancer domain (39.37%), Diagnostic Evaluation & Prognosis domain (37.5%) and in Classification & Sites of Breast cancer domain (21.66%).

**2. To provide structured teaching programme on breast cancer and its prevention for pre-university adolescent girls.**

The researcher collected material regarding breast cancer & its prevention for structured teaching programme from various resources like Books, journals, Magazines, Newspaper and internet. Later on the material was refined and organized. Further it was validated from the many experts. Then the researcher prepared the slides for structured teaching programme with appropriate Pictures and content and then it was presented to the girl students of P.U. College, Bangalore. In structured teaching programme slides were presented to make the Pre-university girls to understand acquire the complete knowledge about Breast cancer and its prevention in detail.

**3. To assess the knowledge acquired by the pre-university adolescent girls after structured teaching programme on breast cancer and its prevention through posttest.**

The overall results of the post-test knowledge scores of pre-university adolescent girls depict that 65% had good knowledge whereas 30% had average knowledge and rest of 5% had poor level of knowledge about breast cancer and its prevention. Mean Post-test knowledge scores indicated that the pre-university adolescent girls had more knowledge in the aspects of Management & Prevention (77.12%), than in Prognosis & Diagnostic Evaluation (74.58%) followed by General Information, Causes, & Risk factors domain (71.66%), Signs and Symptoms, Complication & Stages of Breast cancer (62.5%) and Classification, & Sites of Breast cancer domain (55.66%).

**4. To compare the pretest and posttest knowledge scores and determine the effectiveness of structured teaching programme on breast cancer and its prevention for pre-university adolescent girls.**

From the results of our study, we found that the knowledge level of Pre-university adolescent girls in pre-test is low i.e. 80% of respondents had average knowledge level and 20% of respondents had poor knowledge level. But, after the implementation of structured teaching programme, post-test revealed the increased knowledge level i.e. 65% of respondents had good knowledge level, 30% of respondents had average knowledge level and only 5% of respondents had poor knowledge level. This shows that structured teaching programme was effective for them. Hence, the findings suggest that the calculated paired 't' test value (12.6) was more than the table values 2.021 and 2.704 at 0.05 and 0.01 levels respectively. Hence, the finding suggests that Null hypothesis ( $H_{02}$ ) was rejected only for religion variable but was accepted for rest of the variables.

**6. Conclusion**

**The conclusions related to the major finding of the study were as follows:**

In pretest, among 40 Pre-university adolescent girls, 20% of respondents had poor knowledge about breast cancer and its prevention and 80% had average knowledge and none of them had good knowledge. But in posttest 5% respondents had poor knowledge and 30% had average

knowledge and 65% had good knowledge about the prevention and management of breast cancer. There was significant difference between the pretest and posttest knowledge scores. There was a significant association was found only between the pretest knowledge levels of Pre-university adolescent girls and the demographic variable, religion at (0.05) level. But other demographic variables had no statistical significance.

### **Implications of the Study**

After analyzing the gathered information by the researcher came to know the facts about the levels of knowledge of antenatal mothers regarding the role of antioxidants in the prevention of pre-eclampsia. Based on the outcome of the study, following suggestions were made to the various fields of nursing such as nursing practice, nursing education, nursing administration and nursing research etc.

### **Nursing Education**

The changing values of society due to modernization, globalization, urbanization, industrialization etc. have influenced the practices of the population as well as the genetically modified characteristics of the diseases, which have contributed to the increase in occurrence of Breast cancer and based on broad review of various literature it is evident that in the recent decades Breast cancer strikes earlier in adolescent girls, So it was today's need to involve the Breast cancer & its Prevention related education in nursing curriculum at basic level, which would prepare the nurse to address the issue of Breast Cancer & its Prevention in the society. The advanced concept of nursing care is provision of holistic care and hence family is an unavoidable part of care. So the nurse with proper education in that regard should have a clear cut idea about the physical, psychological, social, economic, occupational, familial, marital and sexual havoc to work on the need base approach. A knowledgeable nurse have to handle such problem in the country far identifying the knowledge level of adolescents regarding Breast cancer & its prevention and teach them the effective preventive measures by the STP (structure teaching program), in order to promote the knowledge of the group.

### **Nursing Practice**

Today, health care delivery system is much more complicated as well as advanced but it is of such a distance to achieve the approach of promotion of health and prevention of illness. Considering these factors, nursing personnel can contribute much for Breast cancer & its Prevention by creating awareness in the adolescent girls through structured teaching programme at schools and colleges and education through mass media. Since the nursing personnel come in contact with the family and the adolescent girls during the Hospital care, school health programmes, cancer prevention camps and other camps, a Nurse can support them to overcome the problem by providing education & counseling services related to breast cancer.

### **Nursing Administration**

The main focus of nursing administration was to organize seminars, workshops and other educational programme for staff nurses as a part of in-service education programme by

which knowledge towards Breast Cancer & its Prevention would be enhanced. Nurse administrator can make a separate budget in each hospital to develop health teaching material in this regard and more accessible to the population. They can also learn to provide specialized care for Breast cancer.

### **Nursing Research**

Nurses in developed countries have conducted the studies regarding Breast cancer compared to India. So there is a broader and large Scale Research work to be planned and executed to obtain the exact causes for breast cancer in adolescents and ways to prevent its occurrence in adolescent girls in India, limited studies have such significance in contribution to prevention of breast cancer. So investigations have to be carried out on a large scale to determine the level of knowledge regarding Breast cancer & its Prevention among adolescent girls in different parts of our country. This helps to give meaningful, need-based information and create awareness towards Breast cancer & its Prevention.

## **7. Suggestions**

1. The public awareness regarding Breast Cancer & its prevention would be created by mass media and also by conducting seminars and workshops.
2. Special guidance and counseling programme would be initiated for the adolescent girls on Breast Cancer.
3. Regular guidance and counseling programme could be initiated in the Schools and College.

## **8. Recommendations**

Based on the findings of this study, the following recommendations are made:

- a. The study could be replicated in other parts of the country on large sample and with different settings like high school, Degree colleges and others.
- b. An experimental study could be carried out to find out the effectiveness of seminar & workshop in enhancing the knowledge level regarding Breast Cancer among Staff Nurses.
- c. A correlation study could be conducted to find the relationship between the adolescent girls of rural and urban area regarding Breast cancer and its prevention.

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