

# A Pre Experimental Study to Assess the Effectiveness of Information Booklet on Knowledge Regarding Breast Self-Examination (BSE) among Higher Secondary Girls Student of Selected Higher Secondary School of Lucknow

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## ABSTRACT

Breast cancer is the most common cancer among women worldwide. Primary prevention should be given the highest priority in the fight against the disease. Breast Self-Examination (BSE) is a simple, cost effective non-invasive screening method. It is important for early detection of breast lumps. It is a useful self-care activity of all adult women over age of 20 to perform it monthly. Our research purpose is to find out the effectiveness of Breast Self-Examination in prevention of breast cancer. The objective of the study to assess the effectiveness of information booklet regarding Breast Self-Examination. We have used a pre-experimental research design method to describe the effectiveness of breast self-examination among girls of 10<sup>th</sup> to 12<sup>th</sup> class of selected school of Lucknow. After obtaining a written consent from girls a demographic data sheet was given to the girls followed by structured knowledge questionnaire regarding BSE to assess their knowledge. After filling the questionnaire girls were provided with Information Booklet regarding Breast Self-examination. Posttest was done on the 7<sup>th</sup> day. The results shows that majority of the sample are of the age group 15- 16 year(70%), studying at 10<sup>th</sup> standard(55%), belong to Hindus(90%), majority of parents had no formal education(35%), majority of mother are housewife(85%), majority of father had other occupations(80%), most of the parents are single parents(45%), majority of samples got information from other source of information(30%), have no previous knowledge regarding BSE(100%), have not practiced BSE(100%). Information booklet was effective in improving the knowledge regarding breast self-examination and there was no significant association between pretest knowledge score and selected demographic variables.

**KEYWORDS:** Breast self-examination, Information booklet, Knowledge

## INTRODUCTION

Breast cancer is the leading cause of death in women throughout the world. Progression of breast cancer is more vigorous in younger women, especially of child-bearing age, as compared to older ones, leading to a significant decrease in their survival rate. Breast cancer (BC) is the most common cancer in women in many countries in the world, ranking second among cancer diseases and the fifth in terms of cancer mortality among women. More than 90% of breast cancer can be cured if detected early. Several studies showed that breast self-examination (BSE) is a simple, feasible way for breast cancer early detection in low-middle income countries. BSE is a primary tool for prevention of Breast cancer. It is as a simple, very low cost, non-invasive screening method. It's important for early detection of breast lumps. Women can detect 95% of cancers by this method.

## NEED FOR THE STUDY

Breast cancer is the most commonly diagnosed cancer in women worldwide. Breast cancer is also the primary cause

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of cancer death among women globally. It is estimated more than 2.09 million new cases and 6,27,000 deaths globally. Breast cancer accounts for 11.6% of all the cancers. 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. A 2018 report of breast cancer statistics recorded 1,62,468 new registered cases and 87,090 reported deaths. It is estimated that 17,97,900 women in India are likely to be diagnosed with breast cancer by 2020.

In Uttar Pradesh there were 21,376 cases in 2016, 22,737 cases in 2017 and 24,181 cases of breast cancer in 2018. The incidence of breast cancer is rising all around the world, particularly in developing countries, where about 60% of all the global deaths occur due to breast cancer. Early detection of breast cancer increased the 5-year survival rate to 85%, while detecting it further on in the course brought the

survival rate down to 56%. Breast cancer accounts for 19-34% of all cancer cases among women in India. There is high mortality due to late stage diagnosis as patients usually present at an advanced stage because of lack of awareness and nonexistent breast cancer screening programs. Over the past decade, several research findings and data sources have indicated an increasing burden of breast cancer in terms of incidence, morbidity, and mortality related to breast cancer. As per global health estimates, over 508 000 women died in 2011 due to breast cancer. 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). In India, cancer prevalence is estimated around 2.5 million, with over 0.8 million new cases and 0.5 million deaths occurring each year.

The aim of my study to improving the knowledge of adolescent girls regarding Breast Self Examination, reducing the incidence of breast cancer among females, detecting the breast cancer in early stage, raising awareness about breast cancer which will empower females to follow healthy behavior and health promotion activities.

#### OBJECTIVES:-

1. To assess the pre-test knowledge score of higher secondary girls student regarding Breast Self-Examination (BSE).
2. To assess the posttest knowledge score regarding breast self-examination among higher secondary girls student.
3. To assess the effectiveness of information booklet among higher secondary girls student regarding Breast Self-Examination.
4. To find out the association between pre-test knowledge score and selected demographic variables.

#### HYPOTHESIS:-

**H0** - There is no significant difference between pre-test and post-test score of higher secondary girls student regarding Breast Self-Examination.

**H1** - There is significant difference between pre-test and post-test score of higher secondary girls student regarding Breast Self-Examination.

**H0** - There is no significant association between pre-test knowledge score and selected demographic variables.

**H2** - There is significant association between pre-test knowledge score and selected demographic variables.

#### Materials and Methods:-

##### Research approach and design

The research approach in the study was quantitative approach. The research design used for this study is pre experimental one group pretest-posttest design.

#### Result:-

A total of 20 students of selected S.V.P. Inter College Lucknow participated in the study. The demographic variables of the study subjects were analyzed using descriptive statistics and were presented in terms of frequency and percentage as shown in table 1.

#### Setting of the study

The study was conducted in a selected higher secondary school of Lucknow.

**Study duration:** 2 weeks

**Study population:-** Consisted of the students studying at 10 to 12th class of Lucknow.

**Sample size :-**20

#### Inclusion criteria:-

1. Students who was interesting to participate the study.
2. The age between 15-22years.
3. The student studying in high and higher secondary classes of selected school.
4. Who did not participated in any kind of breast self-examination classes.

#### Exclusion criteria:-

The student who participated/ attending in breast self-examination classes.

#### Selection criteria Of Methods Of Data Collection

A formal written permission taken from the principal S.V.P. Intercollegiate, Lucknow, on 16/12/2019. All the samples of particular schools assembled in multipurpose hall. Then each participant provided comfortable seating arrangement and provided demographic variables questions and structured knowledge questionnaire on BSE, after 30 min collect back the tool. And then provided information booklet on BSE. After one week post test conducted on same sample with same demographic variable questionnaire's and structured knowledge questionnaires.

#### Statistical analysis process:-

Analysis of data was done in accordance with the objectives. The data was analyzed using frequencies and percentage for demographic variables. The data collected from 20 students adolescent girls was analyzed and interpreted. Results on continuous measurements are presented using mean, standard deviation, range whereas the results on categorical measurements are presented using numbers. Pretest and posttest knowledge score of student regarding breast self-examination into mean, range and standard deviation. Paired t-test used to find out the significant difference between pretest and posttest attitude regarding breast self-examination procedure among adolescent girls who participated in the study. Chi-square used to find out the significant association between pretest knowledge score and demographic variables.

**TABLE NO.1- :DEMOGRAPHIC VARIABLE OF SAMPLE**

| S. NO. | DEMOGRAPHIC VARIABLES | FREQUENCY | PERCENTAGE |
|--------|-----------------------|-----------|------------|
| 1.     | <b>AGE</b>            |           |            |
|        | 15-16 year            | 14        | 70%        |
|        | 17-18year             | 6         | 30%        |
|        | 19-20year             | 0         | 0%         |
|        | 21-22year             | 0         | 0%         |

|       |                                         |     |      |
|-------|-----------------------------------------|-----|------|
| 2.    | <b>COURSE OF STUDY</b>                  |     |      |
|       | 11th STANDARD                           | 2   | 10%  |
|       | 12th STANDARD                           | 7   | 35%  |
|       | 10th STANDARD                           | 11  | 55%  |
| 3.    | <b>RELIGION</b>                         |     |      |
|       | Hindu                                   | 18  | 90%  |
|       | Muslim                                  | 2   | 10%  |
|       | Christian                               | 0   | 0%   |
|       | Shikh                                   | 0   | 0%   |
| 4.    | <b>EDUCATION OF MOTHER</b>              |     |      |
|       | No formal education                     | 7   | 35%  |
|       | Primary school completed                | 4   | 20%  |
|       | Junior school completed                 | 2   | 10%  |
|       | Senior school completed                 | 5   | 25%  |
|       | other                                   | 2   | 10%  |
| 5.    | <b>EDUCATION OF FATHER</b>              |     |      |
|       | No formal education                     | 7   | 35%  |
|       | Primary school completed                | 4   | 20%  |
|       | Senior school completed                 | 2   | 10%  |
|       | Senior secondary school completed       | 5   | 25%  |
|       | Others                                  | 2   | 10%  |
| 6.    | <b>OCCUPATION OF MOTHER</b>             |     |      |
|       | Housewife                               | 17  | 85%  |
|       | Teacher                                 | 2   | 10%  |
|       | Health professional                     | 0   | 0%   |
|       | Other                                   | 1   | 5%   |
| 7.    | <b>OCCUPATION OF FATHER</b>             |     |      |
|       | Farmer                                  | 4   | 20%  |
|       | Health professional                     | 0   | 0%   |
|       | Teacher                                 | 0   | 0%   |
|       | Other                                   | 16  | 80%  |
| 8.    | <b>TYPE OF FAMILY</b>                   |     |      |
|       | Nuclear family                          | 4   | 20%  |
|       | Joint family                            | 7   | 35%  |
|       | Extended family                         | 0   | 0%   |
|       | Single parent family                    | 9   | 45%  |
| 9.    | <b>SOURCE OF INFORMATION</b>            |     |      |
|       | Newspaper                               | 2   | 10%  |
|       | Television                              | 3   | 15%  |
|       | Internet                                | 5   | 25%  |
|       | Magazine                                | 0   | 0%   |
|       | Health Professional                     | 4   | 20%  |
|       | Friends                                 | 0   | 0%   |
| Other | 6                                       | 30% |      |
| 10.   | <b>PREVIOUS KNOWLEDGE REGARDING BSE</b> |     |      |
|       | Yes                                     | 0   | 0%   |
|       | No                                      | 20  | 100% |
| 11.   | <b>PRACTICE REGARDING BSE</b>           |     |      |
|       | Yes                                     | 0   | 0%   |
|       | No                                      | 20  | 100% |

Majority of the sample are of the age group 15- 16 year(70%), studying at 10<sup>th</sup> standard(55%), belong to Hindus(90%), majority of parents had no formal education(35%), majority of mother are housewife(85%), majority of father had other occupations(80%), most of the parents are single parents(45%), majority of samples got information from other source of information(30%), have no previous knowledge regarding BSE(100%) and have not practiced BSE(100%).

**TABLE NO.2:- DISTRIBUTION OF SAMPLE BASED ON PRE TEST AND POST TEST KNOWLEDGE SCORE**

|         | PRE TEST  |            | POST TEST |            |
|---------|-----------|------------|-----------|------------|
|         | FREQUENCY | PERCENTAGE | FREQUENCY | PERCENTAGE |
| POOR    | 9         | 45%        | 1         | 5%         |
| AVERAGE | 11        | 55%        | 18        | 90%        |
| GOOD    | 0         | 0          | 1         | 5%         |

In pretest majority of sample had average knowledge regarding breast self-examination (55%) 11, followed by poor knowledge (45%) 9 and no one had good knowledge and in posttest majority of sample had a average knowledge (90%) 18, followed by poor knowledge (5%) 1 and only one sample had a good knowledge (5%) 1.

**TABLE NO.3:- CHI –SQUARE TEST SHOWING THE ASSOCIATION BETWEEN PRETEST KNOWLEDGE SCORE OF HIGHER SECONDARY GIRL'S STUDENT AND SELECTED DEMOGRAPHIC VARIABLES OF SAMPLES**

| S. NO. | DEMOGRAPHIC VARIABLES             | POOR | AVERAGE | GOOD | OBTAINED VALUE | TABLE VALUE | DEGREE OF FREEDOM | INFERENCE |
|--------|-----------------------------------|------|---------|------|----------------|-------------|-------------------|-----------|
| 1      | <b>Age</b>                        |      |         |      | 0.469          | 12.59       | 6                 | NS        |
|        | 15-16 yr                          | 7    | 7       | 0    |                |             |                   |           |
|        | 17-18 yr                          | 2    | 4       | 0    |                |             |                   |           |
|        | 19-20 yr                          | 0    | 0       | 0    |                |             |                   |           |
|        | 21-22 yr                          | 0    | 0       | 0    |                |             |                   |           |
| 2.     | <b>Course of study</b>            |      |         |      | 9.49           | 9.49        | 4                 | NS        |
|        | 11th standard                     | 1    | 1       | 0    |                |             |                   |           |
|        | 12th standard                     |      | 5       | 0    |                |             |                   |           |
|        | 10th standard                     | 6    | 5       | 0    |                |             |                   |           |
| 3.     | <b>Religion</b>                   |      |         |      | 0.045          | 12.59       | 6                 | NS        |
|        | Hindu                             | 8    | 10      | 0    |                |             |                   |           |
|        | Muslim                            | 1    | 1       | 0    |                |             |                   |           |
|        | Christian                         | 0    | 0       | 0    |                |             |                   |           |
|        | Shikh                             | 0    | 0       | 0    |                |             |                   |           |
| 4.     | <b>Education of mother</b>        |      |         |      | 3.258          | 15.51       | 8                 | NS        |
|        | No formal education               | 3    | 4       | 0    |                |             |                   |           |
|        | Primary school completed          | 3    | 1       | 0    |                |             |                   |           |
|        | Junior secondary school completed | 0    | 2       | 0    |                |             |                   |           |
|        | Senior secondary school completed | 2    | 3       | 0    |                |             |                   |           |
|        | Other                             | 1    | 1       | 0    |                |             |                   |           |
| 5.     | <b>Education of father</b>        |      |         |      | 4.239          | 15.51       | 8                 | NS        |
|        | No formal education               | 1    | 0       | 0    |                |             |                   |           |
|        | Primary school completed          | 3    | 2       | 0    |                |             |                   |           |
|        | Junior secondary school completed | 3    | 2       | 0    |                |             |                   |           |
|        | Senior secondary school completed | 1    | 5       | 0    |                |             |                   |           |
|        | Other                             | 1    | 2       | 0    |                |             |                   |           |
| 6.     | <b>Occupation of mother</b>       |      |         |      | 1.816          | 12.59       | 6                 | NS        |
|        | Housewife                         | 8    | 8       | 0    |                |             |                   |           |
|        | Teacher                           | 0    | 2       | 0    |                |             |                   |           |
|        | Health professional               | 0    | 0       | 0    |                |             |                   |           |
|        | Other                             | 1    | 1       | 0    |                |             |                   |           |
| 7.     | <b>Occupation of father</b>       |      |         |      | 5.45           | 12.59       | 6                 | NS        |
|        | Farmer                            | 0    | 5       | 0    |                |             |                   |           |
|        | Health professional               | 0    | 0       | 0    |                |             |                   |           |
|        | Teacher                           | 0    | 0       | 0    |                |             |                   |           |
|        | Other                             | 9    | 6       | 0    |                |             |                   |           |
| 8.     | <b>Type of family</b>             |      |         |      | 0.547          | 12.59       | 6                 | NS        |
|        | Nuclear family                    | 3    | 2       | 0    |                |             |                   |           |
|        | Joint family                      | 3    | 4       | 0    |                |             |                   |           |
|        | Extended family                   | 0    | 0       | 0    |                |             |                   |           |
|        | Single parent family              | 3    | 5       | 0    |                |             |                   |           |
| 9.     | <b>Source of information</b>      |      |         |      | 1.8369         | 21.03       | 12                | NS        |
|        | Newspaper                         | 1    | 1       | 0    |                |             |                   |           |
|        | Television                        | 2    | 1       | 0    |                |             |                   |           |
|        | Internet                          | 3    | 2       | 0    |                |             |                   |           |
|        | Magazine                          | 0    | 0       | 0    |                |             |                   |           |
|        | Health personnel                  | 1    | 3       | 0    |                |             |                   |           |
|        | Friends                           | 0    | 0       | 0    |                |             |                   |           |
| Other  | 2                                 | 4    | 0       |      |                |             |                   |           |

|     |                                         |   |    |   |   |      |   |    |
|-----|-----------------------------------------|---|----|---|---|------|---|----|
| 10. | <b>Previous knowledge regarding BSE</b> |   |    |   | 0 | 5.99 | 2 | NS |
|     | Yes                                     | 0 | 0  | 0 |   |      |   |    |
|     | No                                      | 9 | 11 | 0 |   |      |   |    |
| 11. | <b>Practice regarding BSE</b>           |   |    |   | 0 | 5.99 | 2 | NS |
|     | Yes                                     | 0 | 0  | 0 |   |      |   |    |
|     | No                                      | 9 | 11 | 0 |   |      |   |    |

\*S- significant \* NS- Non significant  
At 0.05 level

Table value-: 2=5.99, 4=9.49, 6 = 12.59, 8 =15.51, 12 =21.03

There was no significant association with demographic variables such as Age, Course of study, Religions, Education of mother, Education of father, Occupation of mother, Occupation of father, Type of family, Source of information, Previous knowledge regarding BSE, Practice regarding BSE. Since no samples demographic variables had association with pretest knowledge score, Hypothesis 2 was rejected.

### Discussion-:

Majority of the sample are of the age group 15- 16 year(70%), studying at 10<sup>th</sup> standard(55%), belong to Hindus(90%), majority of parents had no formal education(35%), majority of mother are housewife(85%), majority of father had other occupations(80%), most of the parents are single parents(45%), majority of samples got information from other source of information(30%), have no previous knowledge regarding BSE(100%), have not practiced BSE(100%). Since the “p” value for the test is 0.05. The calculated t value was 7.09 which is greater than table value H0 was rejected, H1 was accepted. Thus it is stated that information booklet was effective. There was no significant association between pretest knowledge score and selected demographic variables, hence H0 was accepted, H2 was rejected.

### Conclusion-:

Intervention of information booklet regarding improving knowledge on breast self-examination were effective in pre-experimental group.(Higher secondary girls student)

### Nursing Implications-:

The study has several implications in-service education, nursing administration and nursing research.

### Nursing Education

It is very important for the nurses to make an attempt in developing education material to suit the need of the population. Nurses with up to date knowledge will be able to deliver quality education and bring awareness among women regarding breast cancer and BSE. The nursing school and colleges can conduct health exhibition and camps for educating females regarding BSE. The nurse educator can use the information booklet to teach the students about BSE. The findings will help the nursing faculty to give more importance for teaching programme regarding BSE to improve the knowledge in clinical practice.

### Nursing Administrator

The administrator should realize their responsibility of giving education to the adolescent girls and women regarding breast cancer and BSE. They should also motivate the nursing students and staff nurse to organize and conduct programmes to increase awareness in the community regarding BSE and implement information to the adolescent girl or women how to prevent breast cancer.

### Nursing Practice

The study findings highlighted the need of educating the women regarding breast cancer and BSE. Nursing personnel can play an important role in education the females on regular basis. The content of information booklet will help the nursing professionals working in the hospital and community for reinforcing their knowledge and practice on BSE. The findings will help the nursing personnel to put their knowledge into practice while dealing with cases on breast cancer.

### Nursing Research

Nursing research recognizes the professional responsibility of broadening the body of knowledge in nursing. The finding of the present study to the future researchers to conduct studies in the field of breast cancer and BSE. The findings can be utilized for conducting research in various area of different cities and study their behavioral changes while dealing with the captioned topic on BSE.

### LIMITATIONS-:

The limitations of study were:-

1. This study was conducted in 20 samples thus, may not portray the full picture of knowledge of Breast Self-Examination.
2. This study was limited to the selected school in Lucknow.
3. Study was limited for only 2 weeks.
4. This was limited to the particular topic in the information booklet.
5. Study was limited to quantitative research design.

### RECOMMEDATIONS

On the basis of the findings of the study, the following recommendations have been made for further study-

1. Similar study can be carried out on a larger sample for broader generalization.
2. This study can be conducted in a different institution.
3. The higher secondary students should be educated both in theory and practical on Breast Self-Examination in schools.
4. Health education and talks on breast cancer and other common health condition should be provided to the general public through schools and other mass media.
5. Similar study can be conducted in adult females.

6. A comparative study can be conducted to find out the effectiveness of information booklet and self-instruction module on the same topic.
7. The mass media should be used to disseminate information on Breast Self-Examination to enhance awareness about screening of breast cancer.

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