# "Effectiveness of information booklet on knowledge regarding breast cancer among female young adults in selected teacher's training colleges at Udaipur, Rajasthan".

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***Abstract–** A quasi experimental One group pre-test post-test study to assess the effectiveness of information booklet on knowledge regarding breast cancer among female young adults in selected teacher's training colleges at Udaipur, Rajasthan. The sample consisting of 140 female young adults in selected teacher's training colleges at Udaipur by using simple random sampling technique method. The tool comprised of by using structured knowledge questionnaire. The pretest was conducted and the information booklet was distributed. The post test was conducted after one week. The data obtained were analyzed by using differential and inferential statistics. The mean score of post-test knowledge 26.00 (76.5%) was apparently higher than the mean score of pre-test knowledge 14.87 (43.73%), suggesting that the information booklet was effective in increasing the knowledge of the female young adults regarding breast cancer. The mean difference 11.13 between pre-test and post-test knowledge score of the female young adults was found to be significant.*

***Key words** – Breast cancer, female young adults, and one group pre – test post – test quasi experimental study*

## I. INTRODUCTION

Cancer is a group of disease that cause cells in the body to change and grow out of control most types of cancer cells eventually form a lump or mass called a tumor and are named after the part of body where the tumor originates.[1] Breast cancer is the most common type of cancer among women in the united states (other than skin cancer). Each year more than 1, 80,000 women in this country learn they have breast cancer.[2] Breast cancer can spread through the lymph system. The lymph system includes lymph nodes, lymph vessels and lymph fluid found throughout the body. The most common type of breast cancer is ductal carcinoma, which begins in the cells of the ducts. Cancer that begins in the lobes or lobules is called lobular carcinoma and is more often found in both breasts than are other types of breast cancer.[3] The major risk factor for breast cancer are family history of breast cancer, menarche before 12 years of age, menopause after 55 years of age, null parity or first child after 30 years of age, obesity and excessive exposure to the ionizing radiators before 30 years of age, personal history of breast cancer, hormonal dysfunction, stress, unhealthy life style.[2] Breast cancer may develop any time after puberty 5 years survival rates have been improving because of earlier diagnosis and better treatment. The most reliable method for the detection of breast cancer is regular breast self examination.[4] Breast cancer typically produce no symptoms when the tumour is small it produces no symptoms and easily treated. When breast cancer has grown to a size, the most common sign is a painless lump. Even breast cancer can spread to lymph nodes nearer to under arm and cause a lump or swelling, redness of the breast skin, thickening of the skin and nipple abnormalities such as erosion or retraction and bloody spontaneous discharge. It is useful to note that pain does not indicate the absence or presence of breast cancer. Any persistent change in the breast should be evaluated by the physician as early possible.[5] Its symptoms may vary widely like lumps in the breast or armpit, swelling or skin changes, nipple inversion, change in the size of the breast, pain, soreness or discoloration of the breast. There is no specific cause to it but some of the risk factors like increasing age, positive family history, high fat diet, smoking, alcohol consumption, first child at late age >30yrs, early menarche, late menopause, stress and larger breast definitely increase the likelihood of developing this disease. Early detection and treatment of breast cancer can improve the survival rate up to 98%. Risk of breast cancer can be prevented by performing monthly Breast self examination, regular clinical breast examinations and mammography.[6]

A cohort study was carried out by **Sara Ijaz Gilani & et al.** in the year 2015 to assess knowledge and attitude of breast cancer among Pakistani females. The sample consisted of 1000 randomly selected adult

females. Pre-tested structured questionnaire was used to gather data. Results revealed that majority (82.9%) had heard of breast cancer. More than 50% participants were aware of cancer's relationship with increasing age, painless lump, lack of breast feeding, obesity and smoking. Except for breast lump, over 50% participants had knowledge about breast cancer symptoms. More 50% subjects had knowledge about diagnostic modalities and treatment. Majority (90%) had positive attitude but had poor (28.3 %) regarding breast self examination.[7]

## II. RESEARCH ELABORATIONS

Statement of problem –

"A study to assess the effectiveness of information booklet on knowledge regarding breast cancer among female young adults in selected teacher's training colleges at Udaipur, Rajasthan".

## III. OBJECTIVES

1. To assess the pretest knowledge scores regarding breast cancer among female young adults.
2. To develop and distribute information booklet regarding breast cancer among female young adults.
3. To assess the post test knowledge scores regarding breast cancer among female young adults**.**
4. To determine the effectiveness of information booklet on knowledge regarding breast cancer among female young adults**.**
5. To find out the association between mean pretest knowledge score regarding breast cancer with selected socio demographic variable**.**
6.

## IV. HYPOTHESIS

$H_1$- There will be a significant difference between pretest and post test knowledge scores regarding breast cancer among female young adults.

$H_2$- There will be significant association between pre test knowledge scores of female young adults with selected socio demographic variables.

## V. MATERIALS AND METHODS

Population – Female Young adults.

Sample- Female young adult in selected teacher's training colleges at Udaipur, Rajasthan".

Sample Size – 140 Female Young adults.

Setting – Nimbark teacher training college Udaipur, Rajasthan mahila teacher's training college Udaipur and Lokmanya tilak teachers training college Udaipur Rajasthan, India

The conceptual framework for the present study is based on Kogleles, Rosenstock and Becker's M's Health Belief model.

## VI. RESEARCH DESIGN

The research design selected for the present study was a one group pre-test post-test research design

| PRE-TEST (Dependent variable) | TREATMENT (Independent variable) | POST –TEST (Dependent variable) |
|---|---|---|
| O1 | X | O2 |
| Knowledge of Female Young adults. | Information booklet regarding breast cancer. | Knowledge of Female Young adults. |

**Table 1**: Quasi experimental one group pre and post-test research design

The interpretations of the symbol are as below:

O1     -     Administration of pre-test knowledge questionnaire

O2     -     Administration of post-test knowledge questionnaire

X     -     Intervention, treatment (independent variable) i.e. Information booklet.

**ETHICAL CONSIDERATION**

After obtaining permission from research committee of Geetanjali College of Nursing, prior permission was obtained from principal of Nimbark teacher training college Udaipur, Rajasthan mahila teacher's training college Udaipur and Lokmanya tilak teachers training college Udaipur Rajasthan, India.Consent was taken from each participant who had participated in the study.

**DESCRIPTION OF THE TOOL**

The structured knowledge questionnaire consisted of two parts i.e. Part – I & II.

Part - I: consisted of 10 items on socio- demographic data such as Age in years, Religion, marital status, area of residence, types of family, age at menarche, source of information, family history of breast cancer, educational status and family income regarding breast cancer.

Part - II: consisted of 34 knowledge items. Each item was multiple choices in nature with 4 choices.

**SCORING**

The knowledge of female young adults regarding the outcomes of breast cancer was scored as follows, one mark for each correct answer and zero marks for incorrect answer. The maximum score was 34, to interpret level of knowledge the score was distributed as follows;

Interpretation of knowledge:

| Level | Range |
|---|---|
| Inadequate knowledge | <50 % |
| Moderate knowledge | 50-75 % |
| Adequate knowledge | >75 % |

An answer key was prepared for scoring answer to the structured knowledge questionnaire.

**DATA COLLECTION AND DATA ANALYSIS**

The data was presented under the following sections

Section-I: Description of socio-demographic variables of the respondents.

Section-II: Findings related to knowledge scores of respondents on breast cancer.

Section-III: Findings related to association between pre-test knowledge score and selected demographic variables of Respondents.

## VII. RESULTS
**Table 2:- Area wise pretest and post test knowledge score of Respondents regarding Breast cancer**

| Area of Knowledge | Max. Score | Pre-test | | | Post-test | | |
|---|---|---|---|---|---|---|---|
| | | Mean score | Mean % | SD | Mean score | Mean % | SD |
| Introduction of mammary gland | 6 | 2.79 | 8.20 | 13.30 | 5.49 | 16.15 | 23.27 |
| Introduction and definition of breast cancer | 7 | 2.67 | 7.85 | 11.44 | 4.81 | 14.15 | 18.48 |
| Causes and risk factor of breast cancer | 4 | 1.67 | 4.91 | 9.76 | 2.67 | 7.87 | 15.41 |
| Sign and symptom of breast cancer | 3 | 1.49 | 4.38 | 10.05 | 2.18 | 6.41 | 14.65 |
| Diagnosis of breast cancer | 3 | 1.27 | 3.73 | 8.60 | 2.13 | 6.26 | 11.20 |
| Treatment of breast cancer | 8 | 3.35 | 9.85 | 13.35 | 6.20 | 18.23 | 24.59 |
| Prevention of breast cancer | **3** | 1.62 | 4.76 | 11.04 | 2.49 | 7.32 | 16.68 |
| **Total** | **34** | **14.86** | **43.68** | **77.54** | **26** | **76.39** | **124.28** |

**N=140.**

**Table 2 :** Depicts that the pre test highest mean percentage obtained by the respondents is 9.85% with SD of 13.35 in the aspect of treatment of breast cancer, 8.20% with SD 13.30 in the aspect of Introduction of mammary gland, 7.85% with SD 11.44 in the aspect of Introduction and definition of breast cancer, 4.91% with SD 9.76 in the aspect of Causes and risk factor of breast cancer, 4.76% with SD 11.04 in the aspect of Prevention of breast cancer, 4.38% with SD 10.05 in the aspect of Sign and symptom of breast cancer and the minimum mean percent obtained by the respondents are 3.73% with SD of 8.60 in the aspect of Diagnosis of breast cancer.

Depicts that the post test highest mean percentage obtained by the respondents is 18.23 with SD 24.59 in the aspect of treatment of B.C., 16.15 with SD 23.27 in the aspect of introduction of mammary gland, 14.15 with SD 18.48 in the aspect of introduction & definition of B.C., 7.87 with SD 15.41 in the aspect of causes & risk factor, 7.32 with SD 16.68 in the aspect of prevention of B.C., 6.41 with SD 14.65 in the aspect of sign & symptoms of B.C., 6.26 with SD 11.20 diagnosis of B.C.

### Table 3:- Distribution of Respondents by the level of knowledge.

**N=140**

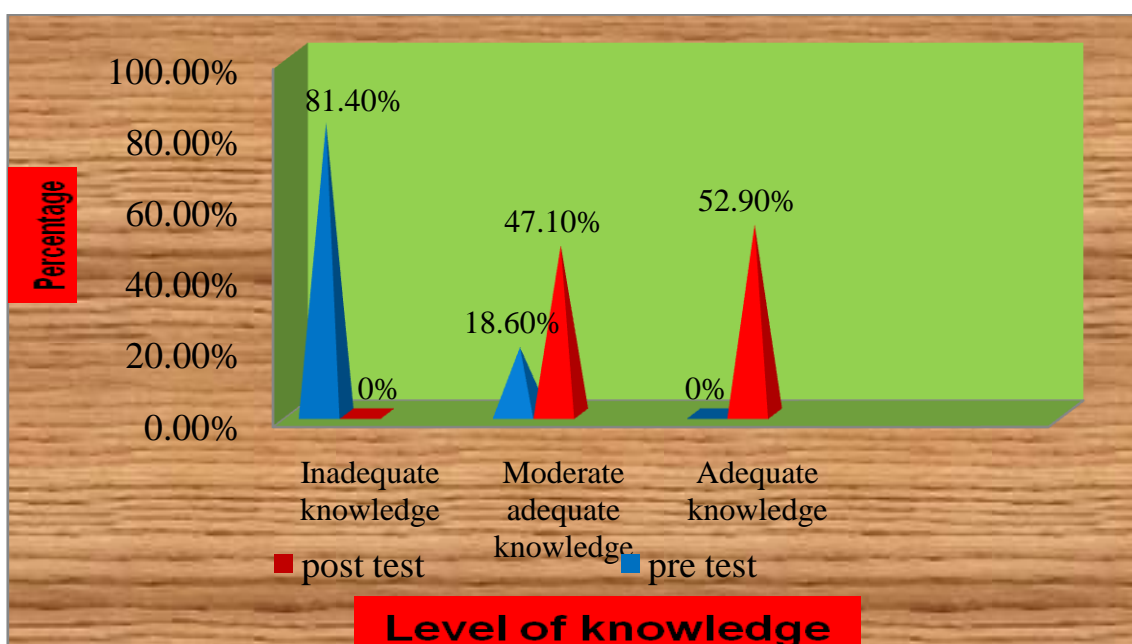| LEVEL OF KNOWLEDGE | FREQUENCY | | PERCENTAGE | |
|---|---|---|---|---|
| | Pre test | Post test | Pre test | Post test |
| Inadequate knowledge (<50%) | 114 | 0 | 81.4% | 0 % |
| Moderate knowledge (50-75%) | 26 | 66 | 18.6% | 47.1% |
| Adequate knowledge (>75%) | 0 | 74 | 0% | 52.9% |
| **Total** | **140** | **140** | **100%** | **100%** |



**Figure 1: Distribution of Respondents by the level of knowledge.**

**Table 3 & Figure 1:** The table represents the post test knowledge level of respondents regarding Breast cancer. The result showed that 52.9% of the respondents had adequate knowledge and 47.1% of the respondents had moderately adequate knowledge regarding breast cancer.

**Table 4:- Effectiveness of the Information booklet regarding knowledge of breast cancer among female young adults.**

**N=140**

| | Mean | Mean Percentage (%) | SD | Enhancement | Enhancement percentage (%) | Df | T | Inference |
|---|---|---|---|---|---|---|---|---|
| Pretest | 14.87 | 43.73 | 2.76 | 11.13 | 32.7 | 139 | 101.90 | S |
| Post test | 26.00 | 76.5 | 3.13 | | | | | |

S = Significant

Table 4:- The result reveals that the mean post test knowledge score 26.00(76.5%) is greater than the mean pre test knowledge score 14.87(43.73%). The above table also depicts that the enhancement in the knowledge of respondents is 11.13 (32.7%) supporting the post test knowledge score are higher than the pretest knowledge score. The data further represent that the 't' value of 101.90 is significantly higher than the table value 1.96 at 0.05 level of significance. This indicates that there was difference in pre test and post test knowledge score and further the data supports that the Information booklet regarding breast cancer is effective in improving the knowledge score of respondents.

**H$_1$ -** There is a significant difference between the pre and post test knowledge score of female young adults on breast cancer. Hypothesis was tested at 0.05 levels. The calculated 't' value 101.9 is significantly higher than the table value 1.96 at 0.05 level of significance. This indicates that there is significant difference between the pre test and post test knowledge score hence the hypothesis H$_1$ is accepted.

**H$_2$:** There is a significant association between pre-test knowledge score regarding breast cancer with selected demographic variables.

The Chi-square test was carried out to determine the association between the pre test knowledge score and demographic variables such as Age in years, Religion, marital status, area of residence, types of family, age at menarche, source of information, family history of breast cancer, educational status and family income regarding breast cancer.

Out of which Age in years, marital status, educational status and family income were found to be significantly associated with pre test knowledge at 0.05% level and the rest of the demographic variables were not significant. Hence research hypotheses H$_2$ is partially accepted.

## VIII. CONCLUSION

This study concludes that there is improvement in the level of knowledge of female young adults which indicates that the Information booklet is effective. The demographic variables of female young adults significantly associated with the pre test knowledge score. The development of information booklet will help the female young adults to enhance their knowledge.

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