



# “A COMPARATIVE STUDY TO EVALUATE THE EFFECTIVENESS OF CONSTRUCTIVE TEACHING PROGRAM (CTP) AND SELF- INSTRUCTIONAL MODULE (SIM) ON KNOWLEDGE REGARDING BREAST CANCER AMONG B.Ed STUDENTS OF SELECTED B.Ed COLLEGE, HUBBALLI- DHARWAD.”

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## ABSTRACT

A quasi-experimental; two group concurrent pre-test, post-test design was conducted to evaluate the effectiveness of Constructive Teaching Program (CTP) and Self-Instructional Module (SIM) on knowledge regarding Breast Cancer among 60 B.Ed students of selected B.Ed college who were divided into two groups (30 in Group-I with CTP and 30 in Group-II with SIM) were selected using Probability; Simple random sampling technique. Instruments used to measure the effectiveness are: Demographic variables and Structured Knowledge Questionnaire on various aspects of Breast cancer. Findings revealed that the 'F'<sub>cal</sub> value (332.52\*) is greater than the 'F'<sub>tab</sub> value (4.08). This indicates that the mean gain in knowledge scores of B.Ed students in Group-I who were exposed to Constructive Teaching Program was higher than

those in the Group-II who were exposed to Self-Instructional Module. This signifies CTP is more effective than SIM.

**KEY WORDS:** Breast cancer, B.Ed students, Knowledge, Constructive Teaching Program, Self-Instructional Module, Socio demographic variables.

## INTRODUCTION

*“A lack of self-awareness is poison. Reflection and review is the antidote”*

*-James Clear*

The female breast has been regarded as a symbol of beauty, sexuality, and motherhood. From time immemorial breast has been a symbol of womanhood and ultimate fertility. It has been beautifully depicted in our art and culture, and even in modern times that women maintain the sanctity of this organ which symbolizes femininity. As a result any danger to the breast evokes fear of loss of femininity and hence fertility.<sup>1</sup>

Our relationship with the world starts from mother's breast milk and thus female breast turns out to be the source of life, which produces and secretes milk. Along with their major function in providing nutrition for infants, female breasts have social and sexual characteristics. Breasts and especially the nipples is an erogenous zone in women.<sup>2</sup> Thereby any diseases affecting breasts particularly breast cancer will have a deteriorating impact on womanliness.<sup>3</sup>

Breast cancer is an uncontrolled growth of breast cells.<sup>4</sup> It is the commonest disease that shortens the life of a woman and that threatens the happiness and peace of home. Not only in the industrialized countries, but also among countries like India where the incidence of Breast cancer is increasing steadily since past two decades and it surely will go up further because the life expectancy is rising speedily and with that the risk of breast cancer too is rising.<sup>5</sup>

Breast cancer is the most common female cancer worldwide representing nearly a quarter i.e. 23% of all cancers in women. The global burden of Breast cancer is expected to cross 2 million by the year 2030, with growing proportions from developing countries. Although age-standardized incidence rates in India are lower than in the United Kingdom (UK) of 25.8 versus 95 per 100,000, mortality rates are nearly as high as 12.7 versus 17.1 per 100,000, respectively as those of the UK.<sup>6</sup>

Breast cancer incidence rates within India display a 3-4 fold variation across the country, with the highest rates observed in the Northeast and in major metropolitan cities such as Mumbai and New Delhi.<sup>6</sup>

An educational interventional study found that there was about 25.71% of improvement of knowledge on Breast cancer and Breast Self-Examination (BSE) among school teachers, it was proved that Educational Interventional Program was effective, and also there is a need for a brief knowledge among school teachers regarding breast cancer.<sup>7</sup>

Educating an entire population is not feasible; instead educating a specific cadre society who can further educate others would be more useful.<sup>8</sup> Teachers (B.Ed students) play an effective role in communication and motivation of young students, so assessment of their knowledge is essential to reduce the risk of Breast Cancer among future generations, if the knowledge is poor in those who teach others, there will be difficulty in promoting these life saving methods

## STATEMENT OF THE PROBLEM

“A comparative study to evaluate the effectiveness of Constructive Teaching Program (CTP) and Self-Instructional Module (SIM) on knowledge regarding Breast Cancer among B.Ed students of selected B.Ed College, Hubballi-Dharwad.”

## OBJECTIVES OF THE STUDY

1. To assess the knowledge regarding breast cancer among B.Ed students who will be exposed to Constructive Teaching Program (CTP) and Self-Instructional Module (SIM).
2. To evaluate the effectiveness of Constructive Teaching Program (CTP) regarding breast cancer among B.Ed students in terms of gain in knowledge scores.
3. To evaluate the effectiveness of Self-Instructional Module (SIM) regarding breast cancer among B.Ed students in terms of gain in knowledge scores.
4. To compare the effectiveness of Constructive Teaching Program (CTP) and Self -Instructional Module (SIM) regarding breast cancer among B.Ed students in terms of gain in knowledge scores.
5. To find out an association between pre-test knowledge scores of B.Ed students and their selected socio-demographic variables who will be exposed to Constructive Teaching Program (CTP).
6. To find out an association between pre-test knowledge scores of B.Ed students and their selected socio-demographic variables who will be exposed to Self-Instructional Module (SIM).

## HYPOTHESES:

- H<sub>1</sub>:** The mean post test knowledge scores of B.Ed students who will be exposed to Constructive Teaching Program will be significantly higher than the mean pre-test knowledge scores at 0.05 level of significance.
- H<sub>2</sub>:** The mean post-test knowledge scores of B.Ed students, who will be exposed to Self- Instructional Module, will be significantly higher than the mean pre-test knowledge scores at 0.05 level of significance.
- H<sub>3</sub>:** The mean post-test knowledge scores of B.Ed students regarding Breast cancer who have undergone constructive teaching program will be significantly higher than the mean post-test knowledge scores of B.Ed students regarding Breast cancer who have undergone Self-Instructional Module at 0.05 level of significance.
- H<sub>4</sub>:** There will be statistical association between the pre-test knowledge scores of B.Ed students regarding Breast cancer who will be exposed to Constructive Teaching Program with their selected socio demographic variables at 0.05 level of significance.
- H<sub>5</sub>:** There will be statistical association between the pre-test knowledge scores of B.Ed students regarding Breast cancer who will be exposed to Self- Instructional Module with their selected socio demographic variables at 0.05 level of significance.

## REVIEW OF LITERATURE

The review of literature is organized under following headings:

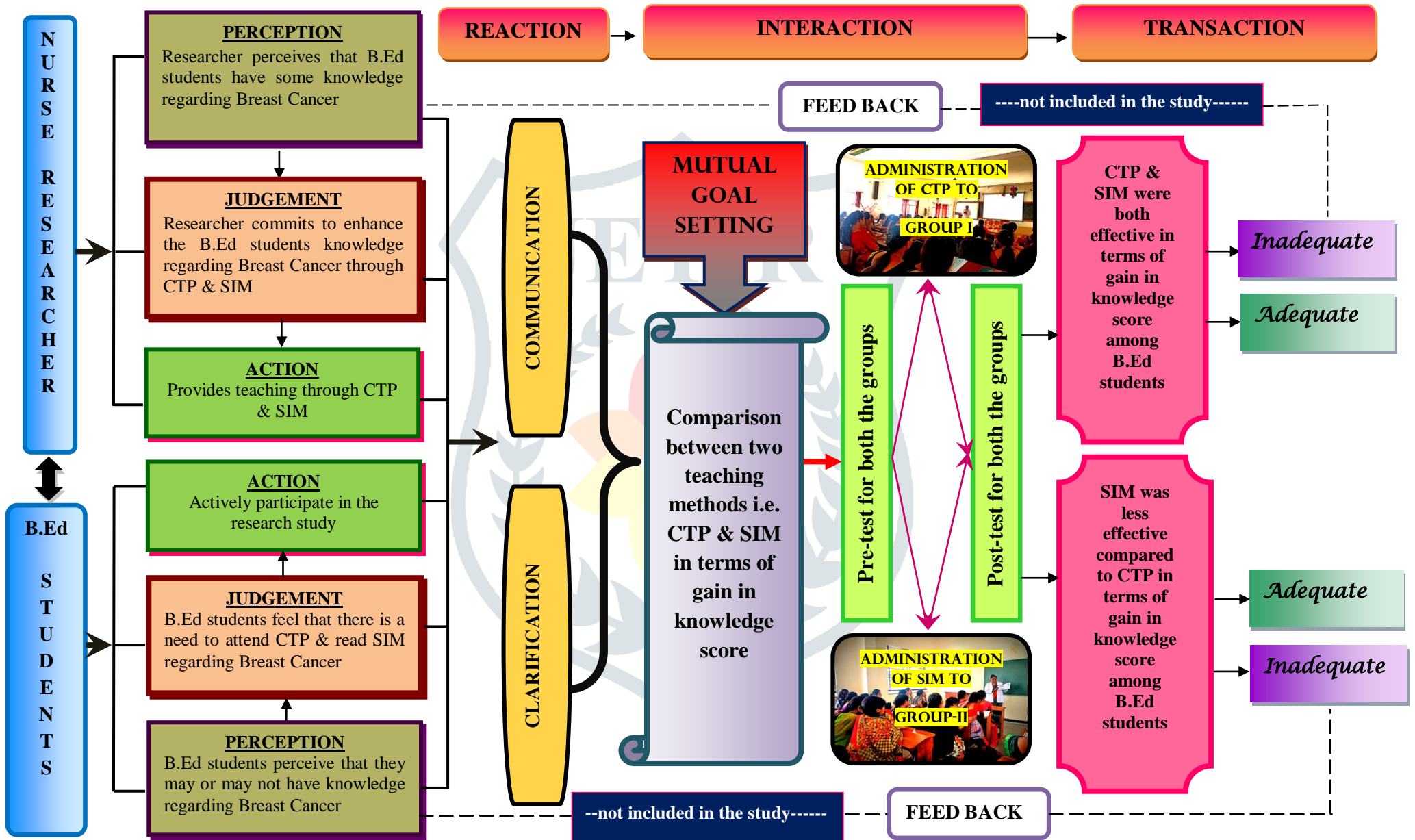
- Section I** : Review of literature related to knowledge regarding Breast cancer
- Section II** : Review of literature related to Self-Instructional Module
- Section III** : Review of literature related to Constructive Teaching Program
- Section IV** : Review of literature related to comparison of Constructive Teaching Program and Self-Instructional Module

## CONCEPTUAL FRAMEWORK

A conceptual framework represents the researcher's synthesis of literature on how to explain a phenomenon. It maps out the actions required in the course of the study and researcher's previous knowledge of other researchers' point of view and observations on the subject of research.<sup>9</sup>

The present study aims at developing and evaluating the effectiveness of Constructive Teaching Program and Self-Instructional Module on knowledge regarding Breast cancer among B.Ed students of selected B.Ed College at Hubballi-Dharwad.

The conceptual model selected for this study is based on **Imogene King's Goal Attainment Theory**. The King's model focuses on individuals, whose interaction in groups within social influence behavior within the system. As humans interact with their environment, their perceptions influence their behavior and their health. Nurses can interact with the clients to facilitate achievement of health related goals, as can other person in the environment.<sup>10</sup>



**FIG 1: CONCEPTUAL FRAMEWORK BASED ON MODIFIED KING'S GOAL ATTAINMENT MODEL**

**MATERIALS AND METHOD:**

- **Research approach:** An evaluative approach was adopted.
- **Research design:** Quasi-experimental; two group concurrent pre-test, post-test design was selected for this study.
- **Variables under the study:**
  - Independent variable** : Constructive Teaching Program (CTP) & Self-Instructional Module (SIM)
  - Dependent variable** : Knowledge of B.Ed students regarding Breast Cancer
- **Research setting:** K.L.E. Society's College of Education. Vidyanagar, Hubballi. & Siddharameshwar B.Ed College. Kalyan nagar, Dharwad.
- **Research population:** The target population comprised of B.Ed students who were studying in K.L.E. Society's College of Education. Vidyanagar, Hubballi and Siddharameshwar B.Ed College. Kalyan nagar, Dharwad.
- **Sample:** B.Ed students from B.Ed of Hubballi-Dharwad were selected.
- **Sample size:** Sixty (60) B.Ed students. [ $n_1=30$  &  $n_2=30$ ].
- **Sampling technique:** Probability; simple random sampling technique was adopted to select subjects according to the sample selection criteria.
- **Criteria for selection of samples:**

The criterion for selection of samples in this study involves:

**Inclusion criteria: B.Ed students who were:**

- ✓ Studying in K.L.E. Society's college of Education, Vidyanagar, Hubballi and Siddharameshwar B.Ed College. Kalyan nagar, Dharwad.
- ✓ Understanding Kannada and English.
- ✓ Willing to participate in the study.

**Exclusion Criteria: B.Ed students who were;**

- ✓ Sick at the time of data collection.

- **Description of the Tool:**

**Section I: Socio-demographic data variables:**

**Section II:** Structured knowledge questionnaire which contains totally of 45 items, and those were

in turn divided under the following parts:-

- Part A : 04 Knowledge items on anatomy and physiology of breast
- Part B : 04 Knowledge items on introduction to Breast cancer.
- Part C : 08 Knowledge items on risk factors for Breast cancer.
- Part D : 04 Knowledge items on clinical features of Breast cancer.
- Part E : 13 Knowledge items on methods of early detection of Breast cancer.
- Part F : 05 Knowledge items on treatment of Breast cancer.

Part G : 05 Knowledge items on prevention of Breast cancer.

Part H : 02 Knowledge items on complications of Breast cancer.

- **Procedure for data collection:** After obtaining formal consent from the Principals of K.L.E. Society's college of Education, Vidyanagar, Hubballi for Group I and Siddharameshwar B.Ed College, Kalyan nagar, Dharwad for Group II. The data for pre-test was collected through Structured knowledge questionnaire for Group I & Group II followed by administering Constructive Teaching Program for Group I & Self-Instructional Module for Group II regarding Breast cancer, there after the post-test was collected by the same Structured knowledge questionnaire. The data was tabulated and analyzed manually.

## RESULTS:

The data presented under the following sections:

**SECTION I** : Distribution of sample characteristics according to socio demographic variables.

**SECTION II** : Analysis and interpretation of knowledge scores of B.Ed students who were exposed to Constructive Teaching Program (CTP) and Self-Instructional Module (SIM) regarding Breast cancer.

**SECTION III** : Testing hypotheses

**Section I: Distribution of sample characteristics according to socio demographic variables of respondents.**

**Table No 1: Frequency and percentage distribution of subjects in Group I and Group II according to socio-demographic variables.**

$n_1+n_2=60$

Sl No.	Demographic variables	Group I		Group II	
		Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
<b>01</b>	<b>Age in years</b>				
	a. 22-24 years	20	66.67	12	40
	b. 24-26 years	08	26.67	12	40
	c. 26-28 years	02	6.66	06	20
<b>02</b>	<b>Religion</b>				
	a. Hindu	12	40	11	36.67
	b. Christian	06	20	09	30
	c. Muslim	12	40	10	33.33
	d. Others	00	0	00	0
<b>03</b>	<b>Habitat</b>				
	a. Rural	16	53.33	15	50
	b. Urban	14	46.67	15	50
<b>04</b>	<b>Course of the study</b>				
	a. B.Ed I year	15	50	18	60
	b. B.Ed II year	15	50	12	40

<b>05</b>	<b>Marital status</b>				
	a. Married	06	20	07	23.30
	b. Unmarried	24	80	23	76.70
	c. Divorced	00	0	00	0
	d. Widow	00	0	00	0
<b>06</b>	<b>Educational background</b>				
	a. B.A	10	33.33	14	46.67
	b. B.Sc.	01	3.33	02	6.67
	c. B.com	10	33.33	10	33.33
	d. BBA	05	16.67	03	10
	e. Others	04	13.354	01	3.33
<b>07</b>	<b>Age at menarche</b>				
	a. 10-13 years	18	60	20	66.67
	b. 13-16 years	09	30	08	26.67
	c. 16 years & above	03	10	02	6.66
<b>08</b>	<b>Family history of Breast cancer</b>				
	a. Yes	00	0	00	0
	b. No	30	100	30	100
<b>09</b>	<b>Source of information</b>				
	a. Print media	00	0	00	0
	b. Electronic media	05	16.67	10	33.34
	c. Health professionals	05	16.67	10	33.33
	d. Peer group	00	0	00	0
	e. No information	20	66.66	10	33.33
<b>10</b>	<b>Have you ever performed BSE</b>				
	a. Yes	00	0	00	0
	b. No	30	100	30	100

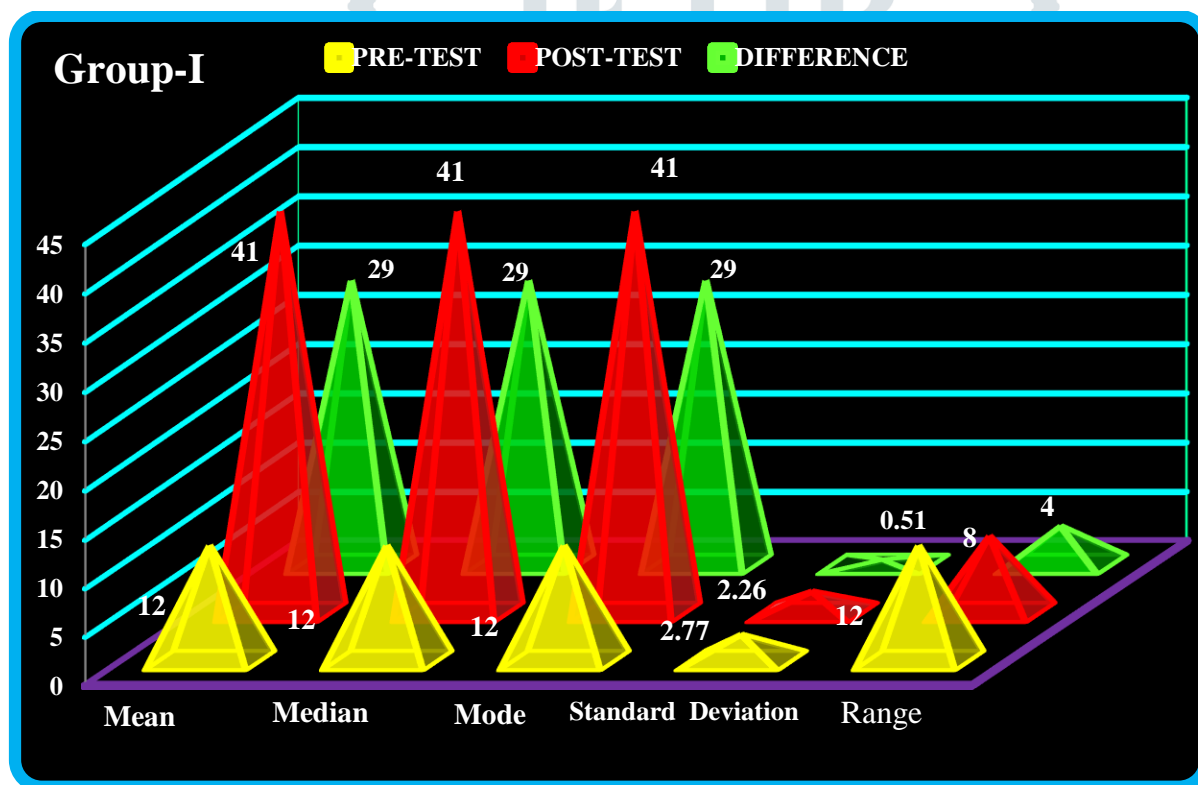


**Section II : Analysis and interpretation of knowledge scores of B.Ed students who were exposed to Constructive Teaching Program (CTP) and Self-Instructional Module (SIM) regarding Breast cancer.**

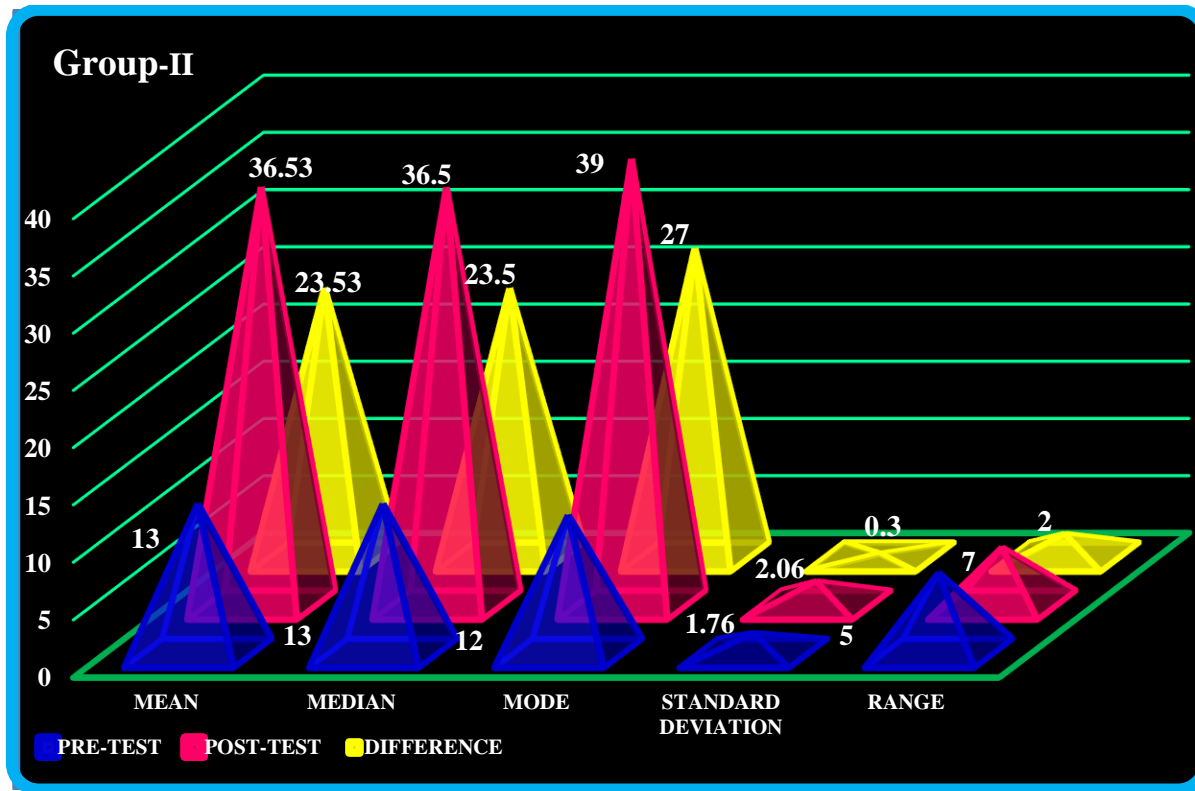
**Table No 2: Mean, Median, Mode, Standard Deviation and Range of knowledge scores of subjects regarding Breast Cancer in both Group I and Group II.**

$n_1+n_2=60$

Area of Analysis	Groups	Mean	Median	Mode	Standard Deviation	Range (H-L)
Pre-test	Group I	12	12	12	2.77	12
	Group II	13	13	12	1.76	7
Post test	Group I	41	41	41	2.26	8
	Group II	36.53	36.5	39	2.06	5
Difference	Group I	29	29	29	0.51	4
	Group II	23.53	23.5	27	0.3	2



**Graph 1: The pyramidal graph representing Mean, Median, Mode, Standard deviation & Range of B.Ed students in Group-I**

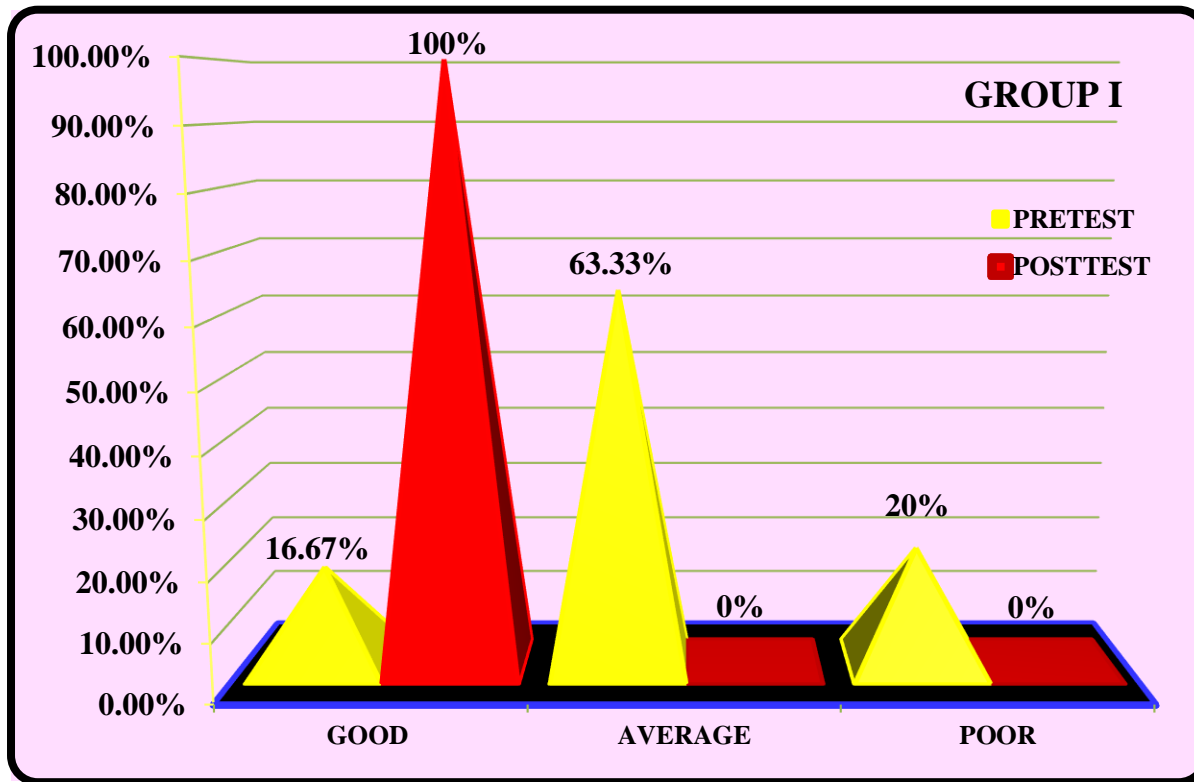


Graph 2: The pyramidal graph representing Mean, Median, Mode, Standard deviation & Range of B.Ed students in Group-II.

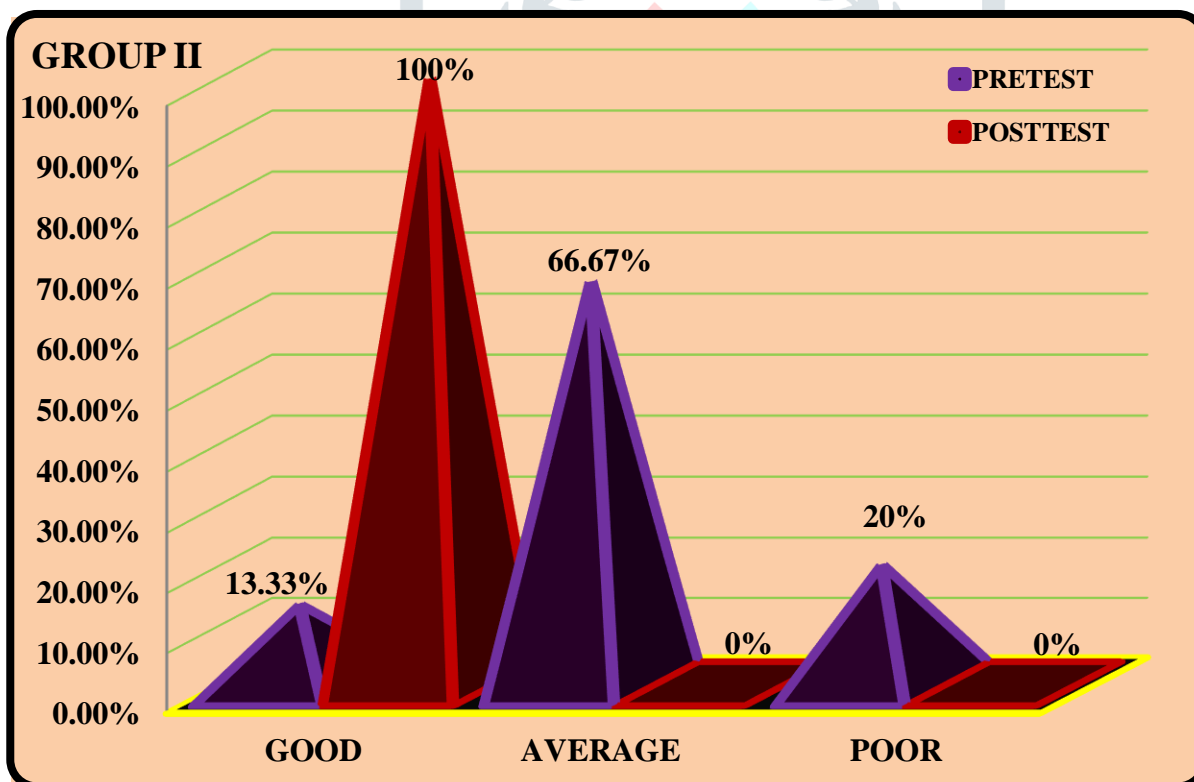
Table No 3: Frequency and percentage distribution of knowledge scores of subjects regarding Breast Cancer in both Group I and Group II.

$n_1+n_2=60$

Knowledge score	Pre-test		Post-test	
	Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
<b>Group I</b>				
Good (14.77 & above)	05	16.67	30	100
Average (9.23-14.77)	19	63.33	00	00
Poor (9.23 & below)	06	20	00	00
<b>Group II</b>				
Good (16.23 & above)	04	13.33	30	100
Average (8.57-16.23)	20	66.67	00	00
Poor (8.57 & below)	06	20	00	00



Graph 3: The pyramidal graph represents the percentage distribution of the subjects according to their level of knowledge scores in Group I.

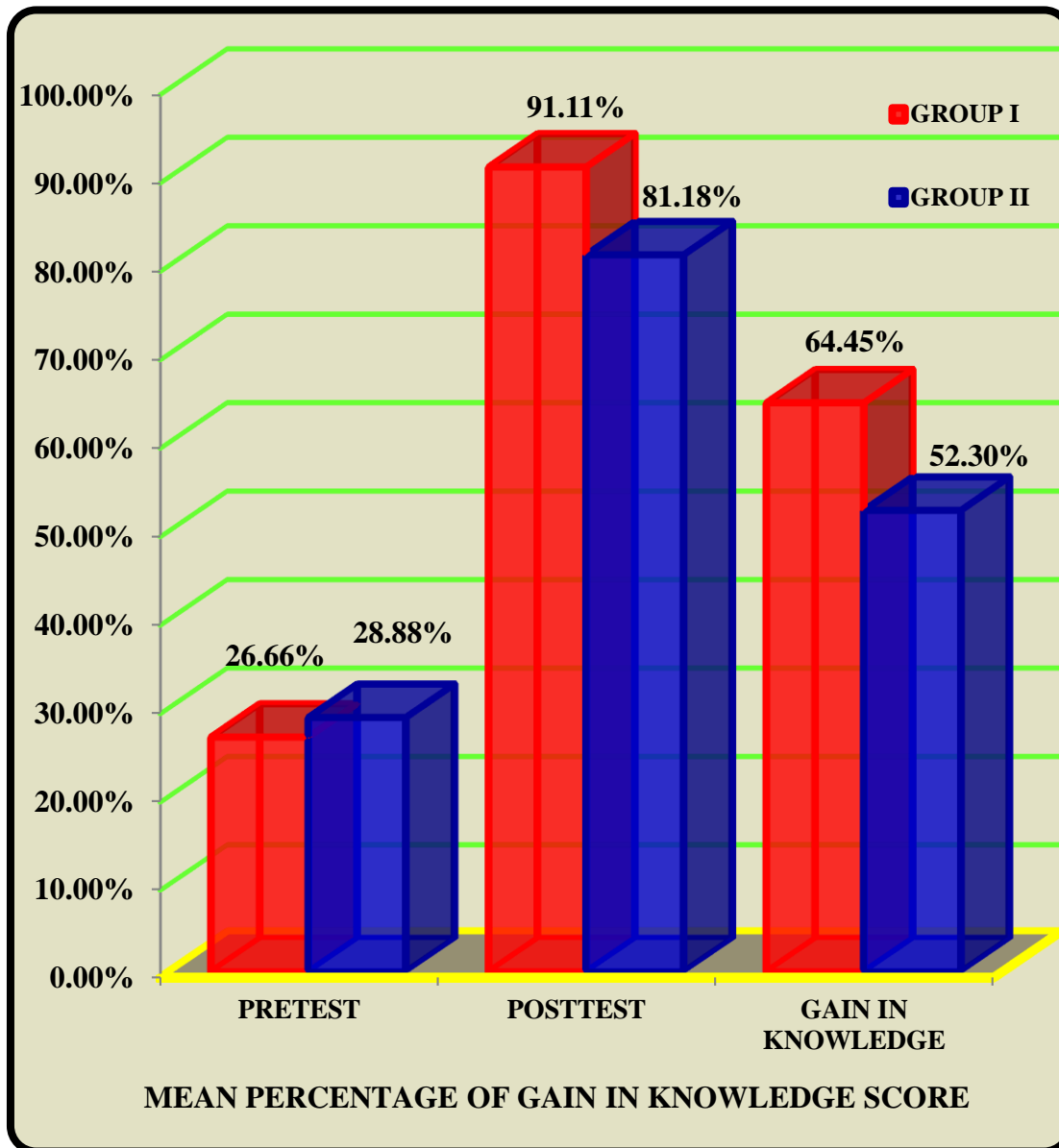


Graph 4: The pyramidal graph represents the percentage distribution of the subjects according to their level of knowledge scores in Group II.

**Table No 4: Frequency and percentage distribution of knowledge scores of subjects regarding Breast cancer in both Group I and Group II.**

$n_1+n_2=60$

Groups	Mean % of knowledge score of subjects			
	Total score	Pre-test	Post test	Gain in knowledge
Group I	1350	26.66%	91.11%	64.45%
Group II	1350	28.88%	81.18%	52.3%



**Graph 5: The column graph represents the mean percentage gain in knowledge of the subjects according to their level of knowledge scores in Group I and Group II.**

## SECTION III: TESTING OF HYPOTHESES

**H<sub>1</sub>:** The mean post test knowledge scores of B.Ed students who will be exposed to Constructive Teaching Program will be significantly higher than the mean pre-test knowledge scores at 0.05 level of significance.

**H<sub>2</sub>:** The mean post-test knowledge scores of B.Ed students, who will be exposed to Self- Instructional Module, will be significantly higher than the mean pre-test knowledge scores at 0.05 level of significance.

**Table No 5: Mean difference  $\bar{d}$ , Standard Error of difference  $\bar{SEd}$  and paired 't' values of knowledge scores of subjects regarding Breast cancer in both Group I and Group II.**

$n_1+n_2=60$

Groups	Mean Difference ( $\bar{d}$ )	Standard error of difference ( $\bar{SEd}$ )	Paired 't' values	
			Calculated	Tabulated
Group I	29	0.67	43.28*	2.756
Group II	24.16	0.94	25.70*	2.756

**\*Significant at 5% level**

**H<sub>3</sub>:** The mean post-test knowledge scores of B.Ed students regarding Breast cancer who have undergone Constructive Teaching Program will be significantly higher than the mean post-test knowledge scores of B.Ed students regarding Breast cancer who have undergone Self -Instructional Module at 0.05 level of significance.

**Table No 6: One way Analysis of Variance (ANOVA) between Group I and Group II**

$n_1+n_2=60$

Source of variance	Sum of squares	Degrees of freedom	Means of sum, of squares	F ratio	
				Cal. Value	Tab. Value
Between the groups	299.27	01	299.27	332.522*	4.08
Within the groups	52.48	58	0.90		

**\*Significant at 5% level**

**H<sub>4</sub>:** There will be statistical association between the pre-test knowledge scores of B.Ed students regarding Breast cancer who will be exposed to Constructive Teaching Program with their selected socio demographic variables at 0.05 level of significance.

The calculated chi-square value was more than tabulated value in case of age at menarche, educational background and source of information. Hence there was statistical association between knowledge scores and selected demographic variables i.e. age at menarche, educational background and source of information. **Hence, H<sub>4.6</sub> i.e. educational background, H<sub>4.7</sub> i.e. age at menarche and H<sub>4.9</sub> i.e. source of information was accepted.** There was no association found with other variables.

**H<sub>5</sub>:** There will be statistical association between the pre-test knowledge scores of B.Ed students regarding Breast cancer who will be exposed to Self-Instructional Module with their selected socio demographic variables at 0.05 level of significance.

The calculated chi-square value was more than tabulated value in case of habitat and educational background. Hence there was statistical association between knowledge scores and selected demographic variables i.e. habitat and educational background. **Hence, H<sub>5.3</sub> i.e. habitat and H<sub>5.6</sub> i.e. educational background was accepted.** There was no association found with other variables.

## DISCUSSION

- ❖ The overall pre-test knowledge scores of B.Ed students in Group I who were exposed to Constructive Teaching Program (CTP) revealed that in pre-test, majority of subjects 19(63.33%) had average knowledge, 6(20%) had poor knowledge and 5(16.66%) had good knowledge, whereas in post-test 30(100%) of them had good knowledge regarding Breast cancer. The facts analyzed were matched with the findings of the research undertaken by Bhatakhande AH, Peerapur SM, who observed that in pre-test most of the women 15 (50%) had average knowledge, 08 (26.66%) had poor knowledge and 07(23.34%) had good knowledge. Where as in post-test all 30 (100%) of them had good knowledge regarding Breast cancer after administration of CTP.<sup>11</sup>
- ❖ The overall pre-test knowledge scores of B.Ed students in Group II who were exposed to Self-Instructional Module (SIM) revealed that in pre-test majority of subjects 20(66.66%) had average knowledge, 6 (20%) had poor knowledge and 4(13.33%) had good knowledge, whereas in post-test 30(100%) of them had good knowledge regarding Breast cancer after administration of SIM. The facts analyzed were matched with the findings of the research undertaken by Walvekar SS, Mohite VR, Mohite RV, Kakade SV, who observed that in pre-test most of the women 48 (80%) had average knowledge, 11 (18%) had poor and 1 (2%) had good knowledge regarding Breast cancer. Whereas, in post-test, 59 (98%) had good, 1 (2%) had average and no participants had poor knowledge regarding Breast cancer after administration of SIM.<sup>12</sup>

## Recommendations:

Keeping in the view the findings of the present study, the following recommendations were made:

- ◆ This study can be replicated to a larger sample to generalize the findings.
- ◆ A similar study can be undertaken between Constructive Teaching Program (CTP) and Self-Instructional Module (SIM).
- ◆ A similar study can be replicated in different settings with different samples respectively.

- ◆ A similar study can be conducted to compare and evaluate the effectiveness of various other teaching methods.
- ◆ A descriptive study can be conducted to assess the knowledge and attitude regarding Breast cancer among women.
- ◆ A true experimental study with experimental and control group can be conducted regarding Breast cancer.
- ◆ To conduct intensive Health Education Programs on awareness of Breast Cancer among women.
- ◆ To conduct screening programs for women who are at average risk of developing Breast cancer.

## CONCLUSION

**Based on the findings of the study, the following conclusions were drawn.**

1. The overall pre-test knowledge level regarding Breast cancer was average in both Group I and Group II.
2. The post-test knowledge scores of Group I who were exposed to Constructive Teaching Program (CTP) showed significant improvement in the level of knowledge than Group II who were exposed to Self-Instructional Module (SIM) regarding Breast cancer.
3. The data from this study suggested that Constructive Teaching Program (CTP) was more effective than Self-Instructional Module (SIM) for B.Ed students to escalate and update their knowledge regarding Breast cancer.
4. There was statistical association between knowledge scores of B.Ed students with age at menarche, educational background and source of information regarding Breast cancer who were exposed to Constructive Teaching Program (CTP).
5. There was statistical association between knowledge scores of B.Ed students with habitat and educational background who were exposed to Self-Instructional Module (SIM).

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