

# Effectiveness of Video Assisted Teaching Programme on Knowledge Regarding Technique of Breast Self Examination Among Adolescent Girls at Maharani's Science College, Mysore

Nandaprakash. P

<sup>1</sup>Professor & HOD Department of Community Health Nursing, Government College of Nursing, Mysore Medical College and Research Institute, Mysore, Irwin Road, Mysore

**How to cite this article:** Nandaprakash. P. Effectiveness of Video Assisted Teaching programme on Knowledge Regarding Technique of Breast Self examination Among Adolescent Girls at Maharani's Science College, Mysore. 2024;12(2):12-20.

## ABSTRACT

The study was conducted to determine the level of knowledge on the Technique of Breast Self-Examination among adolescent girls. One group pre-test and post-test design without a control group with an evaluative research approach was used. It was conducted at Maharani's Science College, Mysore. Selected 50 adolescent girls by using the Purposive Sampling Technique. The Findings revealed that the effectiveness of VATP in the post-test knowledge score was 43.72% (Mean - 21.86) of subjects was significantly higher than the mean percentage of pre-test knowledge of 25.56% (Mean - 12.78), Hence, the findings suggest that the calculated paired "t" test value (2.04) was more than the table values 1.96 at 0.05,

The findings related to the association between the post-test level of Knowledge and selected demographic variables revealed that non-significant in the Type of family -  $\chi^2 = 0.56$ ,  $P > 0.05$ , Religion -  $\chi^2 = 2.37$ ,  $P > 0.05$ , Family monthly income-  $\chi^2 = 2.07$ ,  $P < 0.05$ , Food pattern-  $\chi^2 = 20.21$ ,  $P < 0.05$ , Source of health-related information -  $\chi^2 = 6.16$ ,  $P < 0.05$ . were less than the table value ( $\chi^2 = 3.841$ ) under respective degrees of freedom. Therefore the hypothesis (H2) was rejected and concluded that there is no significant association between these variables and the pre-test level of knowledge. The Video Assisted Teaching Programme has been effective in increasing the knowledge of Adolescent.

**Keywords:** (Breast Self-Examination, Video Assisted Teaching Programme, Adolescent, Validity, Reliability)

## INTRODUCTION OR BACKGROUND

Breast Self-Examination enables a woman or girl to detect changes in her breasts. The examination should be done each month soon after the menstrual period ends as normal physiological changes that confuse results occur in the premenstrual period. This method of self-examination is useful in the early detection of breast cancer.<sup>1</sup>

Breast Self-Examination is easily detected by an adolescent girl so the priority is given to

teaching all girls how and when to examine their breasts. It is estimated that only 25% - 30% of women perform Breast Self-Examination proficiently and regularly each month. Breast cancer is a common cause of cancer morbidity and mortality in women. Breast Self-Examination (examination of the breasts by the individual) or clinical breast examination (examination of the breasts by a doctor or a nurse) have been promoted for many years as screening methods to diagnose breast cancer at

**Corresponding author:** Nandaprakash. P, Professor & HOD Department of Community Health Nursing, Government College of Nursing, Mysore Medical College and Research Institute, Mysore, Irwin Road, Mysore

**Email:** nandu8670@gmail.com

an early stage to decrease the risk of dying from breast cancer.<sup>2</sup>

Approximately one million new cases of breast cancer are diagnosed each year worldwide. It is the commonest malignancy in women and comprises 18% of all female cancers and it accounts for nearly 1 in 4 cases of cancer among all. Fifty-five per cent of cases occurred in more industrialized countries and the rest in less industrialized countries. The estimated incidence rate of breast cancer in Malaysia in the year 2000 was about 35 per 100 000.<sup>3</sup>

During the clinical experience, the investigators found that Breast self-examination is an ideal, safe, effective and cost-free method, which can be done by every woman at her leisure time with little training. Breast self-examination helps adolescent girls to find their breast cancer early. Despite an increase in women's literacy rate and knowledge about breast cancer, there are certain barriers to practising breast self-examination, like worry about breast cancer, embarrassment, lack of time, unpleasant procedure, lack of privacy, fear of discovering a lump and unfavourable attitude towards breast self-examination. Hence the investigator felt that the study would help students, as are source of information to society need to be provided with necessary information on breast self-examination.

## MATERIAL AND METHODS

**Aim:**To Improve the Knowledge of Adolescent girls regarding the technique of breast self-examination

### Objectives of the study

1. To assess the Knowledge of Adolescent Girls regarding the Technique of Breast Self-Examination at Maharani's Science College, Mysore.
2. To Conduct an assisted Teaching Programmeregarding the Technique of Breast Self-Examination among Adolescent Girls at Maharani's Science College, Mysore.
3. To Evaluate the Effectiveness of Video Assisted Teaching Programmeregarding the Technique of Breast Self-Examination

among Adolescent Girls at Maharani's Science College, Mysore.

4. To findan association between the level of pre-test Knowledge score and selected Demographic Variables (Age of the student, type of family, Age at menarche, Religion, Occupation of the mother, Occupation of the father, Family monthly income, Food pattern, Source of Health Information and Have you ever performed Breast self-examination etc.)

## HYPOTHESES

- H<sub>1</sub>** There will be a significant difference between the mean pre-test knowledge score and the mean post-test knowledge score among Adolescent Girls regarding the Technique of Breast Self-Examination.
- H<sub>2</sub>** There will be a significant association between the level of Knowledge among Nursing Personnel regarding Adolescent Girls regarding the Technique of Breast Self-Examinationand their selected Socio-demographic Variables.

## RESEARCH APPROACH

- An evaluative Quasi-Experimental approach was considered appropriate to accomplish the objectives.

## RESEARCH DESIGN

- Pre-experimental with one group pre-test and post-test design, in which pre-test is conducted followed by Video Assisted Teaching Programme and then conducting post-test for the same group after 7 days on 50 subjects.

Pre Test	Treatment	Post Test
Assessment of Knowledge	Video-Assisted Teaching Programme	Assessment of Knowledge
O <sub>1</sub>	X	O <sub>2</sub>

- O<sub>1</sub>: Pre-test the knowledge regarding the Technique of Breast self-examination among adolescent girls.

X: Video-assisted teaching programme onTechnique of Breast self-examination.

O<sub>2</sub> : Post-test knowledge regarding Technique of Breast self-examination.

**SETTING:** This study was conducted in Maharani’s Science College, Mysore City Mysore.

- **TARGET POPULATION:** Adolescent girls (18 - 20 years) studying First Degree (Undergraduate) at Maharani’s Science College, Mysore city Mysore.

**SAMPLING TECHNIQUE:** The purposive sampling technique was adapted to select the sample for the study.

**SAMPLE AND SAMPLE SIZE:**The sample of this study comprised 50Adolescent girls.

**CRITERIA FOR SELECTION OF SAMPLE**

- Adolescent girls (18 - 20 years) studying First Degree (undergraduates) at Maharani’s Science College, Mysore city Mysore.

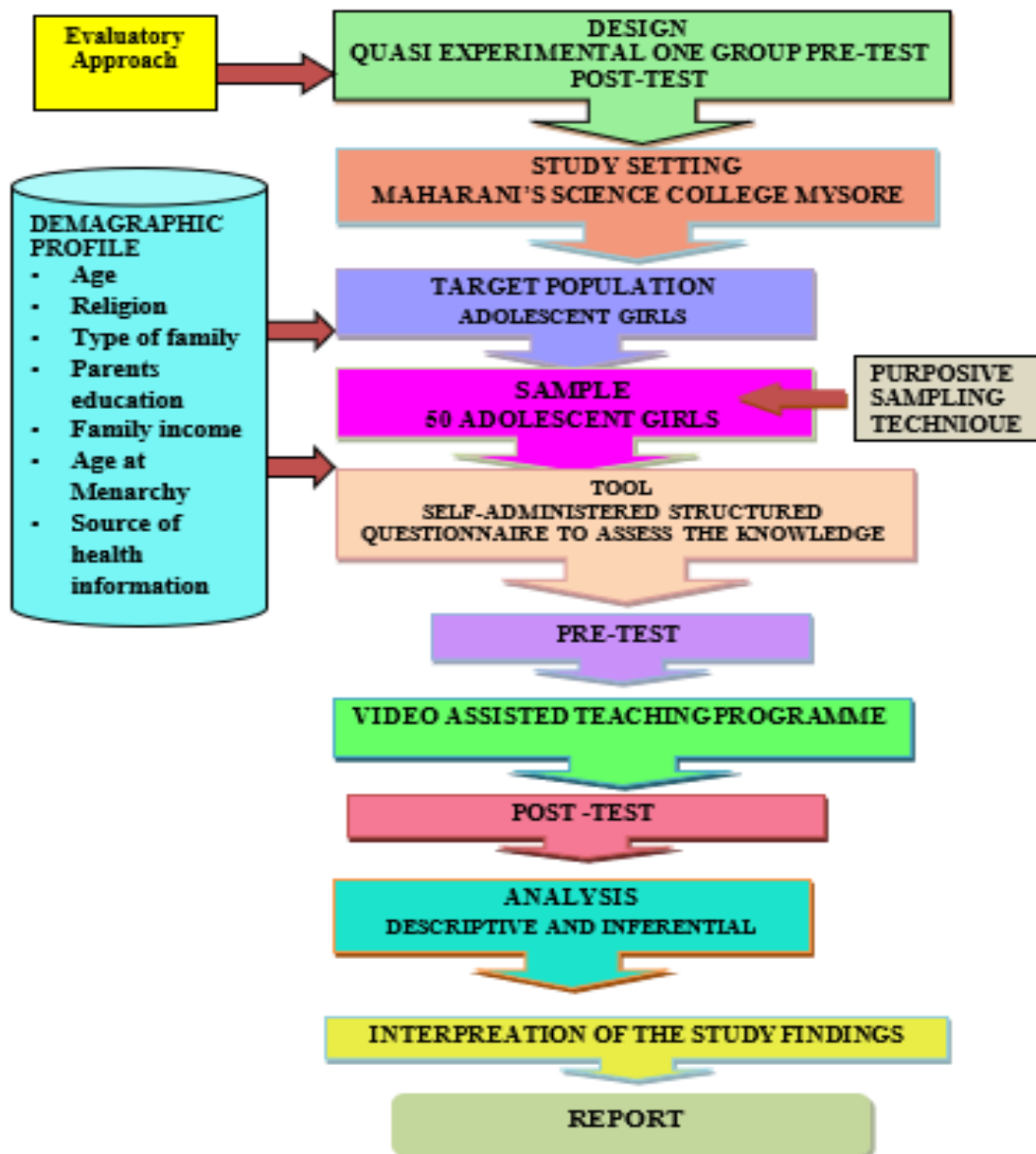


Fig . 1: Research Design Flowchart

- Adolescent girls who are present at the time of data collection.

### Exclusion Criteria

- Adolescent girls who are not present at the time of data collection.
- Adolescent girls who are sick and not willing to participate in the study

### Development of the Video-Assisted Teaching Programme

- Video-assisted teaching plan was developed based on Objectives, Review of Literature and consulting with experts. The steps adopted in the development of the Video-Assisted Teaching Programme were:

#### Preparation of First Draft

- Video-assisted Teaching plan was prepared based on the review of the literature on Knowledge regarding the Technique of Breast self-examination.

### Development of a Criteria Checklist to Evaluate the Video-Assisted Teaching Programme

- ◆ Identification and Stating of Objectives in Behavioural Terms
- ◆ Selection of the Content

The content of Quality Assurance in Nursing Services was selected through a literature search and in consultation with the subject experts.

- Content Validity of the Video-Assisted Teaching Programme

The initial draft of the Video-Assisted Teaching Programme was given to 10 experts in the field along with the tool. The necessary modifications were incorporated into the video-assisted teaching plan based on the suggestions of experts.

**Content validity of the tool:** The tool was validated by subject experts and corrections were made based on their recommendations and suggestions after consultation with the guide. The statistical validity coefficient of the tool was found to be 0.95.

### RELIABILITY OF THE TOOL

The Reliability of the tool is the degree of consistency with which it measures the attribute it is supposed to be measuring. The reliability of the tool was obtained by split half method. The tool was administered to 10 adolescent girls of Mysore Maharani's Degree College, Mysore after obtaining formal permission from the Principal. Karl-Pearson correlation coefficient was utilized to find out the reliability of the half test and Spearman-Brown prophecy formula was used for the full test.

$$r = \frac{\sum x}{\sqrt{\sum x^2 \times \sum y^2}}$$

Spearman Brown prophecy formula was used to find out the reliability of the full test.

$$R = \frac{2r}{1+r}$$

R - Reliability co-efficient of whole test

r - Reliability co-efficient of correlation of half test

A value of  $r = 0.84$  for self-administered structured knowledge questionnaire. Hence the tools were considered to be reliable.

### PREPARATION OF THE FINAL DRAFT

- The final draft of the tool of the study was prepared by considering the suggestions of validators.

### DESCRIPTION OF THE TOOL

A thorough review of literature related to the topic was done to develop a structured knowledge questionnaire. The tool consisted of two parts: part I includes the Demographic characteristics and part II consists of knowledge questions on the Technique of BSE.

### PART I: DEMOGRAPHICAL CHARACTERISTICS

Baseline Characteristics consisted of 9 items to collect the information regarding age, religion, type of family, food pattern, education of the parents, monthly income of the family, age at Menarche and source of health information.

**Table 1: Blue Print for Knowledge Questionnaire Regarding Breast Self-Examination**

SI No	VARIABLES	No. of Items	Items No	Total Marks
1	Socio-Demographical Variables	10	1-10	Nil
2	Introduction and definition	8	11 to 18	8
3	Purposes of BSE	2	19, 20	2
4	Criteria	6	21 to 26	6
5	Position BSE	3	27 to 29	3
6	Technique	11	30 to 40	11

## PART II: STRUCTURED KNOWLEDGE QUESTIONNAIRE

This section of the tool consisted of 30 multiple choice questions covering four areas of Technique of BSE with four alternatives each. The four areas were Introduction and definition, purpose of BSE, criteria for BSE, position of BSE & Technique of BSE.

The respondents were instructed to place a tick mark against the most suitable single answer. A score of "one" was given for every correct response and for every wrong response a "zero" was awarded. Therefore the maximum score was 30 and minimum score was zero for the knowledge questionnaire.

**Table 2: Classification Of Level Of Knowledge Of Adolescent Girls**

Slno	Grade of Knowledge	Score
1	Poor	1-8
2	Average	9-15
3	Good	16-22
4	Excellent	23-30

## PILOT STUDY

Pilot study is a small preliminary investigation of the same general characters as the major study, which is designed to acquaint the researcher with the problem that can be corrected in preparation for a larger project.

Formal administrative approval was obtained. The inclusion criteria were checked and 10 students were selected for the pilot study. The purpose of the study was explained to the subjects and consent was taken from the students. Pre-testing was done on 14-08-2017 by administering

the structured knowledge questionnaire to determine the knowledge of the students regarding the Technique of BSE. The average time taken for the pre-test was 30 minutes, Then the planned Video-assited teaching programme was given in a classroom for a period of 45 minusing an LCD projector and the students were informed about conducting a post-test after 7 days. Post-test was conducted after seven days using the same questionnaire on 20-8-2017 to determine the knowledge of the students. The average time taken for the post-test was 30 min. The study was found to be feasible and practicable and therefore no modifications were made in the tool after the pilot study.

The data collected was compiled for analysis. Data analysis was done by using descriptive and inferential statistical methods. The findings of the study revealed that the pre-test knowledge scores of the students ranged from 9-17 and that of the post-test score range from 25-33 which showed that the Video Assisted Teaching Programme (STP) was much more effective in improving the knowledge of the students regarding Technique of Breast Self-Examination.

## DATA COLLECTION METHOD

The investigator obtained permission from the Principal, of Maharani's Science College, Mysore, before the collection of data. The data collection period was extended from 21/8/2018. Post-test was conducted after seven days using the same questionnaire on 28/8/2017 to determine the knowledge of the students. The purpose of the study was explained to the subjects and informal consent was obtained. Confidentiality was assured to all the subjects to get the cooperation.

## MAJOR FINDINGS OF THE STUDY:

### I: Findings related to the Subjects' Characteristics:

- Majority of respondents were age groups of below 20years (72%).
- The majority of the respondents 34 (66.%) belong to the Nuclear family.
- The majority of the respondents 46 (920%) were Hindus.
- The majority of the respondents 20 (40%) have a Family monthly income of Rs. 5,0001 to Rs. 15,000.
- The majority of respondents 37 (74.0%) were using a mixed diet.

### II: FINDINGS RELATED TO THE EFFECTIVENESS OF VIDEO-ASSISTED TEACHING PROGRAMME

Data in the table showed that the level of pretest knowledge of adolescent girls regarding the technique of Brest Self-Examination Majority 56% of subjects had average knowledge, 30% had good and 14% had poor knowledge and 0% (Table 3).

Further post-test knowledge of adolescent girls regarding the technique of Brest Self-Examination Majority 48% had good and excellent knowledge 4% had average knowledge and 0% poor knowledge (Fig2).

### II: THE MEAN PERCENTAGES OF PRE AND POST-TEST KNOWLEDGE SCORES OF SUBJECTS

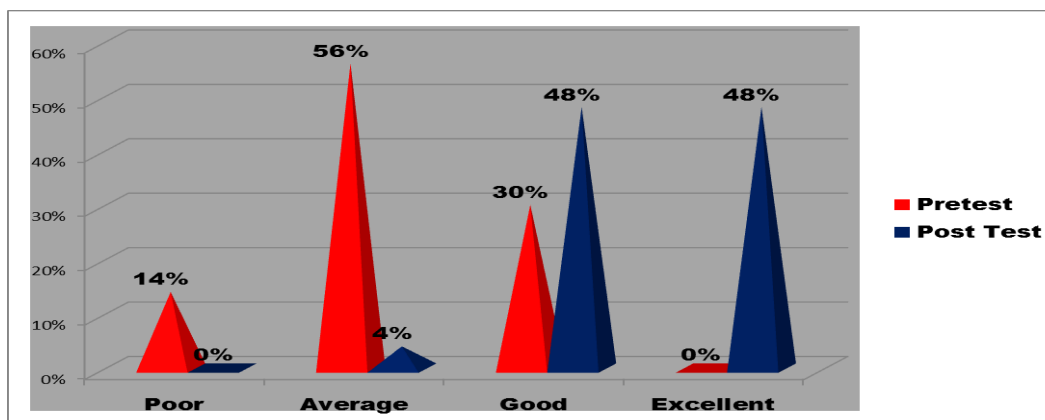
The mean percentages of pre and post-test knowledge scores of subjects on the Technique of Brest Self Examination were also found out in each area and data is presented.

The Table 4 & Below shows that the pretest knowledge scores ranged from 07 to 15 whereas the post-test knowledge scores ranged from 2 to 24.

The mean post-test knowledge score of 43.72% was higher than the mean pretest knowledge score of 25.56%. The median of the post-test knowledge score (22 with sd 3.49) was also higher than the median of the pre-test knowledge score (13 with sd 4.12).

**Table 3: Frequency and Percentage Distribution of pretest knowledge level of subjects on Brest Self Examination**

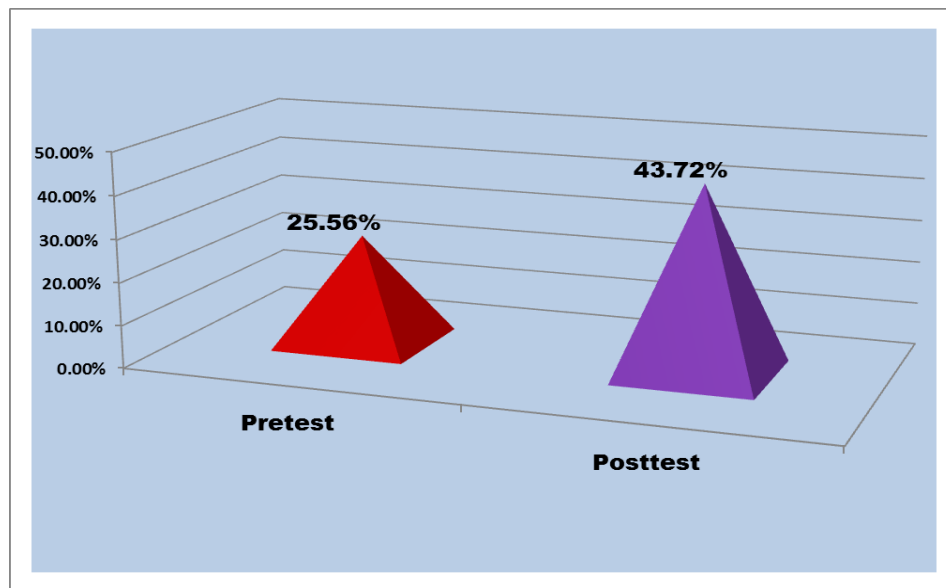
Grade of Knowledge	Score	Pre-test		Post-test	
		Frequency	Percentage	Frequency	Percentage
Poor	1-8	7	14%	0	0%
Average	9-15	28	56%	2	4%
Good	16-22	15	30%	24	48%
Excellent	23-30	0	0	24	48%



**Fig- 2: Frequency and Percentage Distribution of pretest knowledge level of subjects on Brest Self Examination**

**Table 4: Pre-test and Post-test knowledge score of Adolescent Girls on Brest Self Examination**

	Range	Mean	Median	SD	Mean Percentage
Pre-test	7 - 15	12.78	13	4.12	25.56%
Post-test	2 - 24	21.86	22	3.49	43.72%



**Fig 3: Pre-test and post-test knowledge score of adolescent girls on Brest Self Examination**

**SECTION - IV: ASSOCIATION BETWEEN POST-TEST LEVEL OF KNOWLEDGE OF SUBJECTS AND SELECTED DEMOGRAPHIC VARIABLES**

This area consists of data related to selected demographic variables that are age, religion, educational qualification of parents, type of family,

monthly income of the family, age at menarche, and source of health information regarding Technique of Brest self-examination (Table 5).

The data presented in above table shows that  $\chi^2$  values, calculated to determine the association between the pre-test knowledge level and ten of the selected demographic variables viz., age of the

**Table-5: Chi-Square Test Showing Association of Pre-Test Knowledge Score with Selected Demographical Variables**

Sl. no	Demographical Variables	$\chi^2$ Value	df	Table value	Inference
1	Age of the student	0.58	1	3.84	Not significant
2	Type of family	0.56	1	3.84	Not significant
3	Age at menarche	0.65	1	3.84	Not significant
4	Religion	2.37	1	3.84	Not significant
5	Occupation of mother	2.68	1	3.84	Not significant
6	Occupation of father	1.46	1	3.84	Not significant
7	Family monthly income	2.07	1	3.84	Not significant
8	Food pattern	2.21	1	3.84	Not significant
9	Source of health-related information	0.96	1	3.84	Not significant
10	Have you ever performed breast self-examination?	2.21	1	3.84	Not significant

$(\chi^2 = 3.841, p < 0.05)$

student, type of family, Age at menarche, religion, occupation of the mother, occupation of the father, family monthly income of the family, Food pattern, source of health information and Have you ever performed breast self-examination were less than the table value ( $\chi^2 = 3.841$ ) under respective degrees of freedom. Therefore the hypothesis ( $H_2$ ) was rejected and concluded that there is no significant association between these variables and the pre-test level of knowledge.

## CONCLUSION

- This study aimed to assess the knowledge of adolescent girls on the Technique of Breast Self-Examination as well as to provide information to them about the prevention of breast cancer. among adolescent girls in all the areas like anatomy and physiology of the breast, meaning of the definition of breast cancer, Purpose of BSE, criteria for performing BSE, stage of performing BSE, stages of performing BSE, Technique of performing BSE, Position of performing BSE, steps involved in performing BSE, abnormal findings,
- On the whole, carrying out the present study was an enriching experience for the investigator. The various literature reviewed and the research process helped the investigator a great deal to explore and improve the knowledge of the researcher and the respondents. The constant encouragement and guidance by the guide, co-operation and interest of respondents in the study contributed to the fruitful completion of the study.

**Conflict of Interest:** Nil

**Source of Funding:** Self Or Other Source – Self

**Ethical Clearance No:** Gcon-20/Mmc/2016-17. Dated: 08/10/2016.

## REFERENCES

5. Gulani. K.K. Community Health Nursing. First Edition; 2005. Kumar Publishing House. Jabalpur
6. Sidramshettar.S.C. All India Social Science Conference, St. Aloysius College, Mangalore, Karnataka, January 2003.
7. Arlene L, Suzanne E. Luckmann's Medical Surgical Book. Philadelphia: W.B. Saunders; 1996.
8. Park, J.E. & park Textbook of preventive and Social Medicine. Jabalpur: M/S
9. Hemlatha, E, A study to assess the knowledge and attitude towards Breast Self Examination Among College girl at selected college, Tamilnadu, Nightingale Nursing Times, Vol. 3, Issue 10, Jan 2008.
10. Lewis, Collier, Heitkemper. Medical-Surgical Nursing. USA, Mosby, 1996, Pg No 2382.
11. W.A Milaat, Knowledge of Secondary-school female students on breast cancer and breast self-examination, EMHJ, 2000, 333-343.
12. Adebamowo CA, Adekunle OO. Case-controlled study of the epidemiology risk factors for breast cancer in Nigeria. British Journal of Surgery 1999; 86: 665 – 668.
13. Jhansi Rani, U, Swarna S, A Study to evaluate the effectiveness of Planned Health Teaching Programme Regarding Breast Self Examination among postgraduate students in Padmavati Mahila University At Tirupati(A.P), Nightingale Nursing Times, Vol. 2, Issue 5, Aug. 2006, Pg No 22-25.
14. Ranjani Mohan. Cancer in India. November 2009. [Cited 2009 Dec 02nd] Available from: URL: [http:// www.Chil-libreeze.co.in](http://www.Chil-libreeze.co.in).
15. B.T. Basvanthappa, Nursing Theories, New Delhi; Jaypee Brothers; 2007.
16. Free Women's Health Newsletter. Symptoms of Breast Cancer. [Cited 2009 Dec 2 nd] Available from: URL: <http://www.manipalhospital.org/index.php?option=com>
17. Wikipedia. What Is Breast Cancer? [Cited 2009 Nov 28th] Available from URL: [http://www.breastcancer.org/symptoms/understand\\_bc/what\\_is\\_bc.jsp](http://www.breastcancer.org/symptoms/understand_bc/what_is_bc.jsp)
18. WHO, The Women's Health Resources Breast Cancer: Statistics on Incidence, Survival, and Screening. [Cited 2009 Nov 29th ] Available from URL <http://www.imaginis.com/breasthealth/statistics.asp>.
19. THE HINDU. Health: Breast cancer — a wake-up call for Indian women. New Delhi, September 30, 2009
20. Coughlin SS, Ekwueme DU. Breast cancer as a global health concern. Cancer Epidemiology. 2014 Nov 5.
21. Nettles-Carlson B. Early detection of breast cancer. Journal of Obstetrics Gynecology Neonatal Nurses. 1999 Sep-Oct; 18(5): 373-81.
22. Ludwig von Bertalanffy (1968). General System Theory: Foundations, Development, Applications New York: George Braziller. Available from: <http://www.iss.org/1998meet/weltansc.htm>
23. Janda M, obermair A. G, Waldhoer T, Vutuc C, A study conducted on knowledge and attitude regarding breast self examination, j cancer educ. 2000 summer; 15(2):91-4
24. Journal for clinical nurses (2005) faculty health and social care [www.ncbi.org/viewarticle/15840071](http://www.ncbi.org/viewarticle/15840071)
25. Ahmet A, Tacettin I, Elmira B, Fikret B. Knowledge, attitudes, and behaviours of female teachers related to breast cancer and breast examination in southern Turkey. Breast Care (Basel) 2008; 3(1):5– 15.

26. Jhansi Rani, U, Swarna S, A Study to evaluate effectiveness of Planned Health Teaching Programme Regarding Breast Self Examination among post graduates students in Padmavati Mahila University At Tirupati(A.P.), Nightingale Nursing Times, Vol. 2, Issue 5, Aug. 2006,Pg No 22-25.
27. Milaat WA., A study conducted on knowledge regarding breast self examination and breast cancer, department of community medicine, college of medicine, king abdulaziz university, Jeddah, Saudi Arabia. East Mediterr Health j. 2000 Mar-May;6(2-3):338-44.
28. Simi A, Yhabibzadeh F. A study was conducted on knowledge and attitude regarding breast self examination, national iranian oil company medical education and research center, shiraz, iran. postgrad med j. 2009 jun;85(1004):283-7.
29. Suja JS. Effectiveness of SIM on BSE for college in Mangalore, Unpublished Nursing Dissertation submitted to Rajiv Gandhi University of health sciences, Mangalore; 2002.
30. Jasmine J. Effect of SIM on breast cancer and BSE. Nightingale Nursing Times. 2005 June; 3(12):40-47.
31. Ludwick R. Gaczkowski T. Breast cancer prevention by Breast self-exams by teenagers: outcome of a teaching program. Cancer Nursing. 2001 Aug; 24(4): 315-9
32. Clark JK, Sauter M, Totechi JE, Adolescent girls knowledge and attitude towards Breast Self Examination, evaluating on the outreach education program, UC,2000 Winter, Vol-15 (4).
33. Jhansi Rani, U, Swarna S, A Study to evaluate the effectiveness of Planned Health Teaching Programme Regarding Breast Self Examination among postgraduates students in Padmavati Mahila University At Tirupati(A.P.), Nightingale Nursing Times, Vol. 2, Issue 5, Aug. 2006,Pg No 22-25.
34. Milaat WA., A study conducted on knowledge regarding Breast Self-examination and Breast Cancer, Department of Community Medicine, College of Medicine, King Abdul Aziz University, Jeddah, Saudi Arabia. East Mediterr Health j. 2000 Mar-May;6(2-3):338-44.
35. Simi A, Yhabibzadeh F. A study was conducted on knowledge and attitude regarding Breast Self-Examination, NationalIranianOil Company Medical Education and Research Center, Shiraz, Iran. postgrad med j. 2009 jun;85(1004):283-7.