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A study to evaluate the effectiveness of Educational package on cancer breast on the level of knowledge, attitude and practice on Breast Self-Examination (BSE) among teachers working in selected schools at Thiruvananthapuram district, Kerala

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ABSTRACT

Breast cancer is the most common cancer in women both in the developed and less developed world. Global Health Estimates of WHO 2013 estimated that worldwide over 508,000 women died in 2011 due to breast cancer. Aim of the present study is to evaluate the effectiveness of Educational package on cancer breast on the level of knowledge on cancer breast, attitude and practice on Breast Self-Examination (BSE) among teachers working in selected schools at Thiruvananthapuram district, Kerala. Researcher adopted the General System Theory by Ludwig Von Bertalanffy. Research approach: Quantitative. Research design: Pre experimental –One group pretest –post test design. Dependent variables: Level of knowledge, attitude and practice on BSE Independent variables: Educational Package On Cancer Breast. Setting: selected schools. Subjects: teachers at selected schools. Sample size: 150. Tool: Self administered questionnaire on knowledge, Modified Self-Administered Attitude Assessment Scale on BSE and Self administered questionnaire on practice of Breast Self Examination.There was a moderately positive correlation between knowledge and attitude, knowledge and practice and attitude and practice of Breast Self Examination. And there was a significant association between knowledge, attitude and practice on Breast self Examination and selected demographic variables such as age, religion, language, teaching experience, socio-economic status, residential area, type of family, type of diet, body built, migration and health insurance. It can be concluded that self instructional education module is one of the easy, cost effective and simple diagnostic measure to diagnose breast cancer early.

Key words: Effect, Breast Self Examination (BSE), Self Instructional Education Module .

1.1 Statement of the problem

A study to evaluate the effectiveness of Educational package on cancer breast on the level of knowledge, attitude and practice on Breast Self-Examination (BSE) among teachers working in selected schools at Thiruvananthapuram district, Kerala.

1.2 Introduction

Every year we celebrate the Women's Day, Inspiring the women of today to stride ached in life. In India Women are becoming more and more aware of their health status as a result of modern education, electronic, print media and health agencies. While women have made progress in most of the field but still she tends to inexplicably neglect her personal health. Common health problems seen among women are cancer, sexual and reproductive health problems such as sexually transmitted diseases such as HIV infection, gonorrhoea, chlamydia and syphilisetc., maternal mortality, physical and sexual violence and mental health issues such as anxiety, depression, and somatic complaints.

1.3 Background of the study

Lewis stated that the most common health problem seen among women is cancer. Black defines breast cancer as a group of malignant diseases that commonly occur in the female breast than in the male breast. Breast cancer is one of the commonest causes of death in many developed countries in the middle age women and is becoming frequent in the developing countries too.

Breast cancer is the most common cancer in women both in the developed and less developed world. Global Health Estimates of WHO in 2013 estimated that worldwide more than 508,000 women died in 2011 due to breast cancer.

Breast cancer is affecting 18 to 25 per 1, 00,000 urban women and 8.6 per 1,00,000 for rural Indian women. Current statistics indicate that a woman's lifetime risk for developing breast cancer is one in eight, but this is not the same for all the age groups. For example the risk for developing breast cancer by 35 years is 1 in 622 by 60 is 1 in 23. Approximately 80% of breast cancer is diagnosed after the age of 50yrs. (Bakane, et al 2002).

Based on GLOBCON 2008 incidence rate vary greatly worldwide from 19.3 per 100,000 women in Eastern Africa to 89.7 per 100,000 women in Western Europe. In most of the developing regions the incidence rates are below 40 per 100,000. The lowest incidence rates are found in most African countries but here breast cancer incidence rates are also increasing.

Breast cancer is now the most common cancer in most cities in India, and second most common in the rural areas.

In India, although age adjusted incidence rate of breast cancer is lower 25.8 per 100 000 than United Kingdom 95 per 100 000 but mortality is at par 12.7 *vs.* 17.1 per 100 000 with United Kingdom. There is a significant increase in the incidence and cancer-associated morbidity and mortality in Indian subcontinent as described in global and Indian studies. Earlier cervical cancer was most common cancer in Indian woman but now the incidence of breast cancer has surpassed cervical cancer and is leading cause of cancer death, although cervical cancer still remains most common in rural India.

Breast Self-Examination (BSE) is a process whereby women examine their breasts regularly to detect any abnormal swelling or lumps in order to seek prompt medical attention. By doing Breast Self-Examinations regularly females able to detect any changes in breast more easily. Women can begin practicing Breast Self-Examination at about age 20 and continue the practice throughout their lives, even during pregnancy and after menopause. It can be performed every month.

Teaching skills of breast self-examination can be lifesaving and with regular breast self-examination, malignancy may be discovered at an earlier stage, which can save lives.

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 women to identify any lump or discharge in the breast.

The women should begin practicing Breast Self-Examination at the time of their first gynaecologic examination, which usually occurs in their late teens or early 20s. Optimal timing for Breast Self-Examination is 5 to 7 days after menses begins for premenopausal women and monthly once for postmenopausal women.

Physicians do not provide preventive services including Breast examinations. Research has shown that most women learn Breast self-examination from a variety of media and from the family (Ludwick).

Breast Self-Examination (BSE) is a safe, effective easy, private and an economical screening method involves no cost or require any specific equipment in the early detection of breast cancer. Women aged 20 years and above are recommended to perform BSE. Proper BSE techniques have clearly been shown to be related to lump detection ability and remains a useful part of Breast cancer screening. BSE detect tumours missed by mammography and clinical Breast examination or those that appear between screenings (Brever M. K. 2000).

A breast self-exam is a screening technique used to identify breast lumps. A breast self-exam can help to screen or diagnose tumors, cysts and other abnormalities in the breasts. Breast self-exam was once thought to be a good screen for breast cancer when there was lack of technology to diagnose cancer breast.

1.4 Need for the study

In this Internet era science and technology are rapidly advancing and progressing. Moreover the consumers are well aware about their rights and cost effective quality care. It is our responsibility to protect our body from the disease in the early stage by doing self-assessment or examinations. So many disorders are affecting both men and women but the breast disorders are more common to women than men. The second commonest cause in women, next to cervix cancer is breast cancer.

Breast cancer is the leading cause of cancer-related death among females worldwide. In 2012, an estimated 1.7 million cases and 521,900 deaths occurred. Female breast cancer incidence rates vary by more than ten-fold among the selected registries, with the highest rates in Western Europe and the United States and the lowest rates in Africa and Asia. Mortality rates vary about four-fold. The highest mortality rates are found in the United States among Black women, whereas the lowest are in Korean women.

Incidence of breast cancer in the Kerala has shown a threefold increase over the recent years causing serious concern in health sector. Incidences of breast cancer among women have gone up from 12/lakh population in 1980's to 35-36/lakh population. More than 1,500 new cases of breast cancer are reported at the RCC annually and majority of these require surgical intervention.

Thiruvananthapuram has already emerged as the country's breast cancer Capital, recording incidence rate of 40 per 1 lakh women as per the latest estimation of population breast cancer Registry for Thiruvananthapuram at the RCC.

A breast self-exam is a screening technique used to identifying breast lumps. A breast self-exam can help screen for diagnosing tumors, cysts and other abnormalities in the breasts. A breast self-exam was once thought to be a good screen for breast cancer. Now, a self-exam is considered to be less effective than other techniques, such as regular mammograms.

Hormonal changes affect the size of breasts and can make them sensitive during your menstrual cycle. An ideal time to perform breast self-examination is a few days after the monthly menstrual cycle ends; when the breast tissue is the least lumpy.

1.5 Objectives of the study

1. To assess and compare the pre and posttest score on knowledge on cancer breast among teachers working in selected schools.
2. To assess and compare the pre and posttest score on attitude among teachers working in selected schools.
3. To assess and compare the pre and posttest score on practice among teachers working in selected schools.
4. To determine the effectiveness of Educational package on knowledge on cancer breast, attitude and practice on BSE among teachers working in selected schools.
5. To find out the correlation between knowledge on cancer breast and attitude on Breast Self-Examinationamong teachers working in selected schools.
6. To find out the correlation between knowledge on cancer breast and practice on Breast Self-Examinationamong teachers working in selected schools.
7. To find out the association betweenthe pretest knowledge level on cancer breast and selected socio demographic variables among teachers working in selected schools.
8. To find out the association between the pretest attitude on BSE and selected socio demographic variables among teachers working in selected schools.
9. To find out the association between the pretest practice on BSE and selected socio demographic variables among teachers working in selected schools.

1.6 Research Approach

The research approach chosen for this study is quantitative research approach.

1.7 Research Design

The research design adopted for this study was Pre experimental, one group pretest-posttest design. This design measures the effect on the experimental group based on their state before the beginning of the experiment (pretest) and the difference achieved at the end of the experiment Pre experimental –One group pre-test –post-test design was used for the study and it involved four steps.

- **Step1:-**Subjects selected based on simple random sampling technique and inclusion criteria.
- **Step2:-** Assessed the knowledge on cancer breast, attitude and practice on BSE among the subjects in the intervention group before giving intervention.
- **Step3:-**Administered Educational package to the subjects.
- **Step4:-**Assessed the knowledge level on Cancer Breast.

The diagrammatic representation of the research design is the following :

R :

Pre-test	Intervention	Post-test
O_1	X	O_2

Key:

R : Randomization (Simple Random Sampling).

O_1 :Pre-teston
Knowledge level on cancer breast which was assessed using knowledge questionnaire on Cancer Breast.
Attitude on BSE which was assessed using attitude assessment scale for BSE.
Practice on BSE which was assessed using practice questionnaire.

X : Educational Package on Cancer Breast.(Video Assisted Teaching Cum Demonstration And Self-Instructional Module)

O_2 : Post-test on
Assess the knowledge level on Cancer Breastwhich was assessed using knowledge questionnaire on Cancer Breast.
Attitude on BSE which was assessed using attitude assessment scale for BSE.
Practice on BSE which was assessed using practice questionnaire.

1.8 Variables under Study

1.8.1 Dependent variables

.Level of knowledge on Cancer breast, Attitude on BSE and Practice on BSE

1.8.2Independent variables

The independent variable is the educational package on Cancer Breast. It includes the video assisted teaching on Cancer Breast, demonstration and Self Instructional Module on BSE.

1.9 Research Setting

The study was conducted in selected schools at Thiruvananthapuram District. Study was conducted in three schools in Trivandrum District i.e. Govt. High School, Parassala, Govt. Higher Secondary School, Parassala and Evans Higher Secondary School, Parassala..

1.10 Population

The population for the present study was teachers working in schools between the ages of 25 to 56 years.

1.11 Sample

Samples included for the present study were the school teachers who met the inclusion criteria.

1.12 Criteria for sample selection

Inclusion criteria:

Teachers who were

- working in selected schools at Thiruvananthapuram District.
- between the ages of 25 and 56 years.
- present at the time of data collection.

Exclusion Criteria:

Teachers

- who were not willing to participate.
- with cancer breast.

1.13 Sample Size

The sample size for the present study was 150.

1.14 Sampling Technique

Sampling is the process of selecting a portion of the population to represent the entire population (Polit 2008). For the present study the researcher used the simple random sampling technique (lottery method) to select the samples.

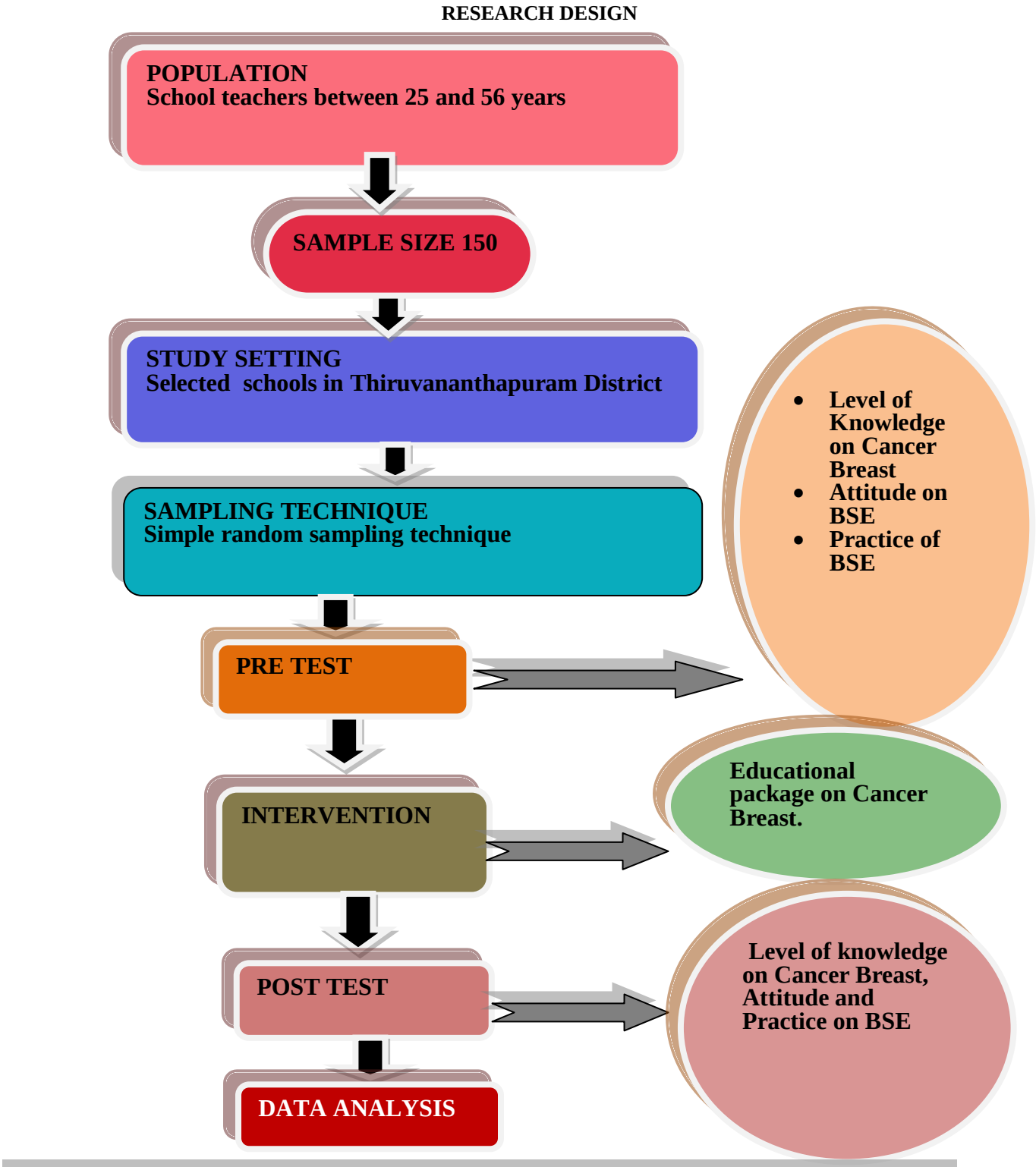

Figure : Schematic Representation of the Research Design

1.15 Tools and techniques of data collection

Data were collected from the subjects through self-administered questionnaire. The tool used to gather data had four sections. They were the following:

SL.NO	TOOL	TECHNIQUE	PURPOSE
I	**Biographic Data.** SectionA- Personal and Socio demographic Data. Section B – General Health History. Section C – Clinical Variables. Section D – Breast Health History	Self administerd Questionnaire Method	To collect the baseline data.
II	**SelfAdministered Knowledge Questionnaire On Cancer Breast.** Section A – Questionnaire to assess the knowledge On BSE. Part I – General Information On Breast Cancer. Part II – Causes and risk factors of Breast Cancer. Part III – Clinical Variables of Breast Cancer. Part IV – Investigation and Early Detection of Breast Cancer. Part V – Treatment Modalities And Prevention.	Self administerd Questionnaire Method	To assess the knowledge level on cancer breast among the subjects.
II	Modified Self-Administered Attitude Assessment Scale For BSE	Self-Rating	To assess the attitude level on BSE among the subjects.
III	Self-AdministeredPractice Assessment Questionnaire On BSE.	Self administerdQuestionnaire Method	To assess the practice level on BSE among the subjects.

1.16 Score interpretation:

Knowledge level on BSE

Level Of Knowledge	Score	Percentage
Inadequate knowledge	1 - 10	0 - 33%
Moderately Adequate knowledge	11 - 20	34 - 66%
Adequate Knowledge	21 - 30	67 – 100%

Attitude on BSE

Attitude	Score	Percentage
Negative	0 – 75	Below 50%
Positive	76 - 150	Above 50%

Practice on BSE

Practice	Score	Percentage
Inadequate practice	0 – 7	0 - 35%
Moderately Adequate practice	8 – 14	36 - 70%
Adequate practice	14 - 20	71 - 100%

1.17 Intervention

Educational package on Cancer Breast

This includes the video assisted teaching on Cancer Breast, demonstration cum Self- Instructional Module on BSE. Video assisted teaching were given 30mts and demonstration for 10 minutes and issued a self-instructional module on BSE

1.18 Data Collection Procedure

Data collection was done from January to December 2016. Researcher obtained the permission from the authorities of the schools and written consent from the subjects. Based on the inclusion criteria, 150 subjects (school teachers) were selected.Pre-test was conducted to assess the demographic data, knowledge on cancer breast, attitude and practice on BSE. After that the researcher provided educational package onCancer Breast to the subjects in the form of video assisted teaching for 30 minutes, demonstration cum Self Instructional Module on BSE for 10 minutes. Post-test was conducted after 7 days to assess the changes in the knowledge on cancer breast, attitude and practice on BSE. Then the data were prepared for analysis.

1.19 Ethical consideration

Ethics are the norms or standards for conduct that distinguish between right and wrong. They assist to work out the difference between acceptable and unacceptable behaviours. Research proposal was approved by the Institutes Ethics Committee of Saraswathy College of Nursing and Himalayan University, Arunachal Pradesh.

Permission from the authorities concerned of the schools and the written consent from the subjects was obtained after explaining the purpose, type of data required, and the right to withdraw from the study at any point of time. Assurance was given to them that anonymity of each individual would be maintained.

1.20 Major findings of the study

Personal and Socio-Demographic variables of the subjects

It can be noted that in the group, 38% were in the age of 31-45years, 54.67%were Hindus, 54% were B.Ed. in education, 24.67% were English in specialization, 76% were 11-20 years teaching experience, 32% were 5001-15000 in monthly income,65.33% were upper middle class in their socio-

economic status, 68% were living in the rural area, 49.33% belonged to nuclear family, 49.33% of them were married in their marital status,84% belonged to non vegetarian in the type of diet, 37.33% belonged to thin in their body built, 56% belonged to non migrants and 65.33% have health insurance.

General Health History variables of the subjects

In the group, 57.33% had any one of the chronic illnesses and among that 38% were suffering from diabetes mellitus. About 92% subject's family members were suffering from any type of cancer and in that 4% were from breast cancer. Among that 2.67% had the history of breast cancer to their mothers.

General Information variables of the subjects

In the group, the age of menarche was 12-15 years among 63% subjects, 90% attained menopause after >40years of age, 56.00% became pregnant at the ages between 21-30 years, 36.67% have two children, 43.33% breast fed their babies for less than one year, 92.67% have not undergone hysterectomy, 12% had taken some type of hormone therapy and in that 44.44% have gone through progesterone therapy.

Breast Health History variables of the subjects

In the group, 69.33% had no health problems related to breast; in that 34.78% had Nipple discharge, 70% had not undergone any type of breast surgery/ investigations, 68. 89% had undergone mammography, 36% of them had the practice of breast self-examination and 15.33% were occasionally doing breast self-examination.

pre-test knowledge level of school teachers about cancer breast and breast self-examination

In the group**,** 57.33% of samples had inadequate knowledge, 42.67% of samples had moderately adequate knowledge and none of samples had adequate knowledge on Breast self-Examination. In which, 60.67% of samples had inadequate knowledge on general information and 47.33% of samples had moderately adequate knowledge on causes/risk factors and none of the samples had adequate knowledge on any component of breast self-examination in pre-test.

Post-test knowledge level of school teachers about breast self-examination

. In which, 100% of samples had adequate knowledge on all component of breast self-examination in post-test.

pre-test of attitude of school teachers towards breast self-examination

self-examination among school teachers with mean value 58.66 and standard deviation 12.18. In which, 70.67 % of samples had negative attitude towards breast self-examination and 29.33% of samples had positive attitude towards breast self-examination.

Post-test of attitude of school teachers towards breast self-examination

In the group, 84.55% of samples had post-test attitude on breast self examination among school teachers with mean 126.83 and standard deviation 23.66. In which, 41.33% of samples had negative attitude towards breast self examination and 58.67% of samples had positive attitude towards breast self examination.

Practice of breast self examination among school teachers

In the group, 24.80% had pre-test practice and 69.10% had post-test practice among school teachers regarding BSE. In which 70.67% of samples had inadequate practice and 29.33% of samples had moderately adequate practice among school teachers regarding BSE. And in post-test 65.33% of samples had moderately adequate practice and 34.67% of samples had adequate practice among school teachers regarding BSE.

Correlation between the knowledge and attitude on breast self examination

The relation between the knowledge and practice was analysed using Karl Pearson correlation coefficient. The correlation coefficient value between the pre-test knowledge score and pre-test attitude knowledge was 0.52. That is limited positive correlation. The correlation value for the post test knowledge score and post-test attitude score was 0.89 that is high degree positive correlation. That means when knowledge score was increasing then the attitude score also increasing.

Correlation between the knowledge and practice on breast self examination

The correlation coefficient value between the pre-test knowledge score and pre-test knowledge on practice was 0.38. That is low degree positive correlation. The correlation value for the post test knowledge score and post-test knowledge on practice score was 0.76 that is high degree positive correlation. That means when knowledge score was increasing then the attitude score also increasing

The effect of educational package on knowledge level of Breast self examination among school teachers

The pre-test knowledge score on BSE was 12.33 with SD 4.36 and in the post test score was 25.72 with SD 5.16. The mean difference was high and the obtained 't' value was statistically high significant at 0.05 level. That is the educational package programme was effective regarding the knowledge on BSE among school teachers.

The effect of educational package on attitude of Breast self examination among school teachers

The pre test mean score was 58.66 with SD 12.18 and in the post test mean score was 126.83 with SD 23.600. The mean difference was high and

statistically different. That is the educational package was effective to increase the attitude score among school teacher's regarding BSE.

The effect of educational package on practice of Breast self examination among school teachers

The pre test knowledge on practice score was 4.96 with SD 1.90 and in the post test score was 13.84 with SD 4.520 the mean difference was high and statistically significant. The obtained 't' value is statistically significant at 0.05 level. That is the educational practice programme was effective on the knowledge on practice among school teachers regarding BSE.

Association between selected demographic variables and knowledge on breast self examination among school teachers

There was a significant association between knowledge on Breast self-Examinations and selected demographic variables such as age, religion, language, teaching experience, socio-economic status, residential area, type of family, type of diet, body built, migration and health insurance.

Association between selected demographic variables and Attitude on breast self examination among school teachers

There was no association between pre test level of attitude on Breast self-Examination and selected demographic variables such as subject taught, teaching experience, monthly income, socio-economic status, type of family, marital status, body built, migration except age religion, education, residential area, type of diet, category of school and health insurance.

Association between selected demographic variables and practice on breast self examination among school teachers

There was a no association between practice on Breast self-Examination and selected demographic variables such as language, teaching experience, socio-economic status, type of family, body built, migration except age, religion, education, residential area, type of diet, category of school and health insurance.

1.21 Nursing implications

The findings of the study revealed implication in nursing practice, nursing education, nursing research and nursing administration. They have the following implications.

Nursing practice:

- Health promotion and early are the vital functions of a nurse. Health education programme the nurses should have an understanding on the level of knowledge on cancer breast , attitude and practice on breast self-examination.
- Present study findings help the nurses to understand the importance of assessing the knowledge on cancer breast, attitude and practice of Breast Self-Examination among females.
- Study findings also motivate the nurses to provide health education to females on cancer breast and breast self-examination.
- Findings help the nurses to understand that health education improves the knowledge on breast self-examination, develops positive attitude towards breast self-examination and perform breast self-examination regularly.
- In-service education programmes, workshops and seminars can be arranged to update the knowledge of staff nurses regarding BSE.

Nursing education:

- The curriculum is responsible for preparing the future nurses with more emphasis on preventive and promotive health practices.
- The result of the study emphasizes the need for correlating the concepts in order to understand and advice on breast self-examination attitude.
- Findings also motivate the students to take a positive step to impart knowledge, attitude and practice among women in the community during their study period.

Nursing research:

- Study findings will be useful to the researchers to plan for further studies in future. They provide a base for the researchers to plan for further studies.
- The findings of this study help to expand professional knowledge upon which further researches can be conducted. They also initiate

evidence based nursing practice.

- Findings motivate the nurse researchers to conduct some research studies to assess the effectiveness of some of the other measures to improve the knowledge, attitude and practice of breast self-examination. The researcher may have to take up a role in preparing the women to do breast self-examination.

Nursing administration:

- Findings help the nursing administrator who is the member in the planning committee to provide suggestions to include BSE in the health education programme.
- In policy making for including Breast Self-Examination in the health education programme. He or she should establish the policies or protocols to regularly perform Breast Self-Examination among adult females studying or working in institutions.
- In-service program may be organized to create awareness on the topic among the staff nurses. They should encourage the staff nurses to provide health education to women's about importance of early detection of breast cancer and techniques of Breast Self-Examination.
- Nurse administrators can arrange in-service education programme for staff nurses to expand their knowledge on Breast Self-Examination.
- The nurse administrator should take interest in disseminating the information through instructional materials such as pamphlets, posters, modules that impart health information to the working women.

1.22 Conclusion

Findings of the present study clearly exhibited that there is a significant improvement on the knowledge on cancer breast, attitude and practice on breast self-examinations after implementing educational package on cancer breast among school teachers. There was a moderately positive correlation between knowledge and attitude, moderately positive correlation between knowledge and practice and moderately positive correlation between attitude and practice and also there was significant association.

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