Assess the Effectiveness of Structured Teaching Programme on Knowledge Regarding Prevention of Cervical Cancer Among Staff Nurses in KIMS Hospital, Amalapuram

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Abstract: The present study conducted by the investigator on "A study to assess the effectiveness of structured teaching programme on knowledge regarding prevention of Cervical cancer among Staff nurses in KIMS Hospital, Amalapuram". *Objectives:* 1. Assess the knowledge regarding prevention of Cervical cancer among Staff nurses. 2. Assess the effectiveness of structured teaching programme among Staff nurses on knowledge regarding prevention of Cervical cancer. 3. Determine the association between level of knowledge regarding prevention of Cervical cancer with the selected demographic variables of staff nurses. *Methods:* The research approach selected for the study was pre-experimental approach and one group pre test and post test only design. 60 staff nurses were selected by using Purposive sampling technique. *Results:* Among 60 Staff nurses, in pre test 34 (56.7%) were under below average knowledge level in pre test whereas in post test were found nil, 26 (43.3%) were under average knowledge level in pre test whereas 12 (20%) were average knowledge level in post test, above average knowledge level in pre test were found nil whereas 48 (80%) were under above average knowledge level in post test. There is significant difference (p<0.01) in pre test and post test knowledge scores of Staff nurses on Prevention of Cervical cancer which was evident by the significant t values. Hence the structured teaching programme was effective. There is significant association between the knowledge of Staff nurses with selected demographic variables such as Age, education, type of family, monthly family income and duration of marital life. *Conclusions:* The results of the study revealed that the Structured teaching programme on prevention of cervical cancer was effective in order to improve the knowledge of Staff nurses regarding prevention of cervical cancer.

Keywords: cervical cancer, teaching programme.

Nomenclature

< - Less than
> - Greater than
SD - Standard deviation
X^2 - chi-square
WHO - World Health Organization
% - Percentage
df - Degree of freedom

1. Introduction

"She who has health has hope; and she who has hope has everything" - Charles Michael

Women Health is a unique specialty of health care. 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 own health. Though in the present age women are aware of their problems, the readiness to seek help from health personnel is hindered by economic constraints social stigma and rigid superstitious beliefs regarding health problems.

Invariably most common Health problem seen among women is cervical cancer. Cervical cancer has a major impact on women lives worldwide. It is the second most common cancer and is the major cause of mortality among Indian women. cervical cancer creates long term problems for families and challenge for Health care systems.

Cervical cancer is a very common kind of cancer in women. It is a disease in which cancer cells are found in the tissues of cervix. It usually grows slowly over a period of time. Before cancer cells are found on the cervix, the tissues of the cervix go through changes in which abnormal cells begin to appear (a condition called dysplasia). Later, cancer starts to grow and spread more deeply into the cervix and to surrounding areas.

Cervical cancer is caused by Human papillomavirus. It is a sexually transmitted infection which in the majority of cases is transient, asymptomatic, and clinically insignificant. In some women the infection becomes persistent and may lead to development of cervical cancer. Today cervical cancer is most prevalent in areas where no effective screening has been established.

Cancer it is an Oncogenes regulate cell growth in a positive fashion. Oncogenes include transforming genes of Viruses and normal cellular genes that are activate by mutations to promote cell growth to a partly malignant behaviour. It needs one mutational events for its gain of function.

Cervical cancer is defined as an abnormal cell proliferation

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in the cervix (or) abnormal cells growth in the cervix. Cervical cancer is the second most common cancer affecting women worldwide and is a Significant cause of morbidity and mortality, particularly in the developing world. Where more than 288,000 women will die of this disease each year. Rates of cervical cancer is unacceptably high. The American cancer Society estimates that 11,150 women will be diagnosed with cervical cancer in 2007 and that 3670 women will die.

In today's World Cervical cancer is primarily a disease found in low income countries. Of the nearly 500,000 new cases that occur annually, 83 % are in the developing world, as are 85 % of the 274,000 deaths associated with cervical cancer. The South Asian region harbors one fourth of the burden of cervical cancer. In India alone there are an estimated 132,000 new cases and 74,000 deaths each year. Most women with cervical cancer in these countries present with advanced disease, resulting in low cure rates. Several factors contribute to high burden of disease and advanced stage at presentation including poor knowledge about the disease furthermore there is a lack of screening among general population.

The chance of an individual developing cancer depends on both genetic & non genetic factors. A genetic factor is an inherited. Unchangeable trait, while a non-genetic factor is a variable in a person's environment. Which can after be changed. Non genetic factors may include diet, exercise or exposure to other substances present in our surroundings. These non-genetic factors are often referred to as environmental factors. Some non-genetic factors play a role in facilitating the process of healthy cells turning cancerous, while other cancers have no known environmental correlation but are known to have a genetic predisposition. A genetic predisposition means that a person may be at higher risk for a certain cancer if a family member has that type of cancer.

The most important cause of cervical cancer is infection with a high risk type of human papilloma virus. The types HPV most commonly linked with cervical cancer are HPV 16 and HPV 18, but several other high risk types contribute to cancer as well. HPV infection is extremely common and generally occurs soon after an individual becomes sexually active.

In recent years, there has been an alarming increase aware that use of improper sanitary napkins is the major reason for cervical cancer. Also second hand Smoking, obesity, eat improper time, less drinking water and exposure to ultraviolet rays, dust and other harms leads to more risk of cervical cancer. Diet which are included in day to day life like chips, soft drink, cookies, pizza, sugar, cakes, butter or margarine, doughnuts, pop side, oils, syrups and jams can cause cancer.

Although the pap smear is recognized as an invaluable tool, there are several well-known problems with it. Many women are not routinely screened and may go years without a pap smear. This is a particular problem for older women. Whatever the cause, more than half the women with cervical cancer have not had a pap smear in at least 3 years despite repeated contacts with health care providers. The link between cervical cancer and the HPV is well established at least 90% of all cervical cancers are known to be caused by HPV and other 10% of cases may reflect false negative test results for the Virus.

For many types of cancer, progress in the areas of cancer screening and treatment has offered promise for earlier detection and higher cure rates. Women are advised to begin cervical cancer screening within the three years of becoming sexually active, and no later than the age of 21. Screening generally includes a pap test, and may also include and HPV test. Regular surveillance can increase the possibility that cancer could be found at an early stage when treatment is most likely to produce a cure. Routine screening with a pap smear is used to detect cancerous cells in the cervix early, as well as to detect abnormal cells in the cervix before they become cancerous. During a pap smear, a sample of cells from the cervix is taken with small wooden spatula or brush & examined under the microscope.

One of the most important prevention of cervical cancer has been the development of the Vaccine for HPV, Gardasil, it is effective against for HPV subtypes, including 16 & 18. the FDA has approved the vaccination which is given as a series of three injections', for girls age 9 to 26 years. The Vaccine will be most effective when given before a young women has any sexual contact. Although effective, it will not protect against all types of HPV and will not prevent all cases of cervical cancer, so routine pap testing is still required. Research continues on other HPV Vaccines and on Vaccinating men, who severe as the vector for HPV in most infected women.

2. Methodology

This section dealt with methodology adopted for present study. It includes research approach, research design, variables, setting, population, sample, sampling technique, development and description of tool, pilot study and procedure for data collection and plan for data analysis.

In present study the investigator aims to assess the effectiveness of structured teaching programme on knowledge regarding Prevention of Cervical cancer among Staff nurses in KIMS Hospital, Amalapuram.

Research methodology is a way to systematically solve the research problem. It may be understood as a science of studying how research is done scientifically (Kothari, 2000).

3. Research Approach

The research approach refers to a general set of orderly disciplined procedures used to acquire dependable and useful information (Polit and Hungler, 2000). In the present study the investigator aimed to assess the effectiveness of Structured teaching programme on knowledge regarding Prevention of Cervical cancer among Staff nurses in KIMS Hospital, Amalapuram. The research approach selected for the study was Quantitative approach.

4. Research Design

Research design is a blue print for the conduct of a study that maximizes control factors that could interfere with study's desired outcome. Type of design directs the selection of a population, sampling procedure, methods of measurement, data collection and plan for data analysis. The choice of research
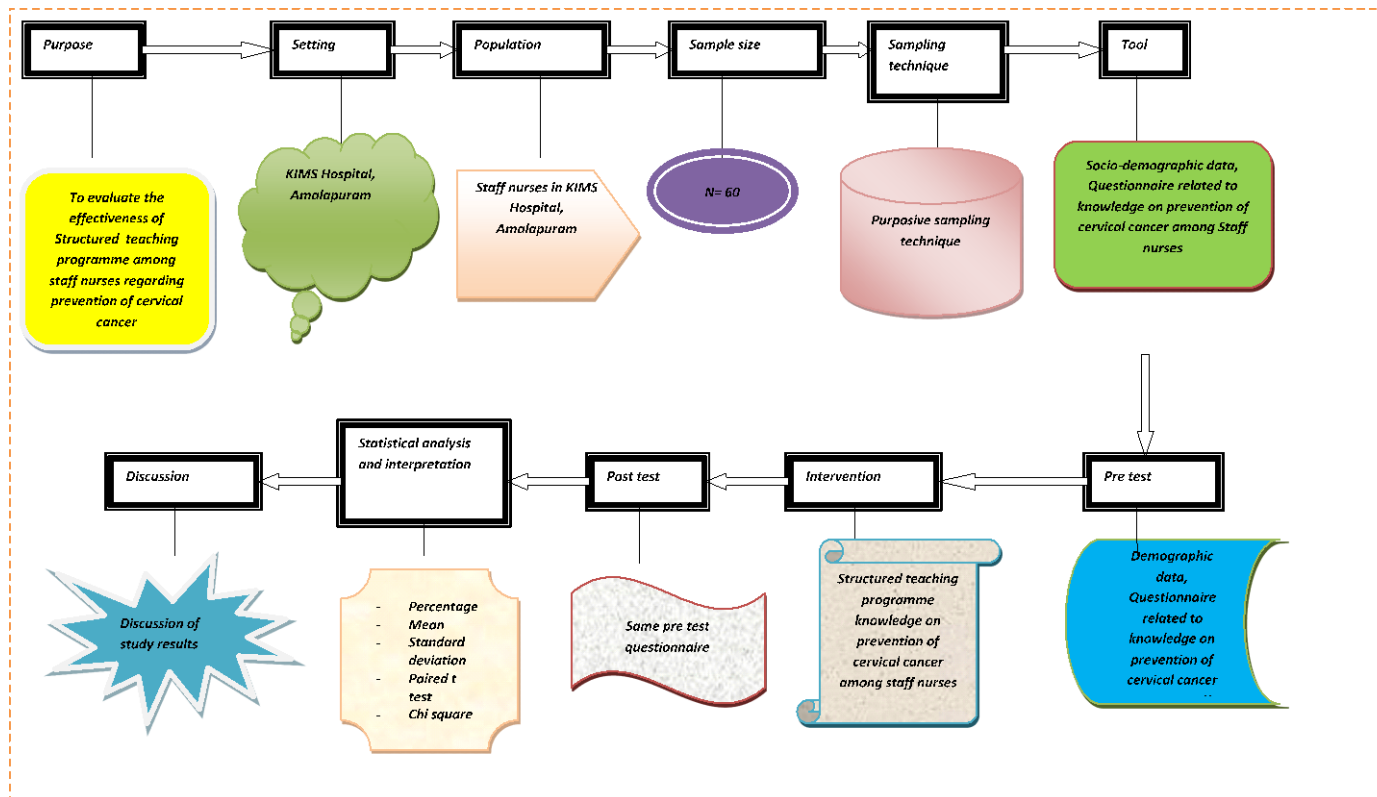
Fig. 1. Research design

design depends upon the researcher's expertise the problem and purpose for the study and desire to generalize the findings.

The research design adapted for the present study is the pre experimental one group pre test and post test design. This design provides a comparison between a group of subjects before and after intervention. In this design only one group is taken and pre tested for level of knowledge (01), following the pre test the intervention (x) of structured teaching programme will be given to the completed sample.

The effectiveness of intervention is tested with the help of post test (02) level of knowledge conducted after 1 week. Chi-square test to associate the post level of knowledge with selected demographic variables.

- O_1: Assessment of knowledge scores before Structured teaching programme.
- X: Administer structured teaching programme.
- O_2: Assessment of knowledge scores after Structured teaching programme.

Description of variables:

Independent variable: The independent variable in the study is structured teaching programme regarding Prevention of Cervical cancer among Staff nurses in KIMS Hospital, Amalapuram.

Dependent variable: The dependent variable is level of knowledge on Prevention of Cervical cancer among Staff nurses in KIMS Hospital, Amalapuram.

Demographic variables: Demographic variables which could influence the knowledge of Staff nurses regarding Prevention of Cervical cancer are age, religion, educational status, type of family, monthly family income, age at marriage,

duration of marital life, history of menstrual irregularities, family history of cancers and source of information on Prevention of Cervical cancer.

Settings of Study:

According to Polit and Hungler (2008) Setting refers to the physical location and condition in which data collection takes place in a study. Researchers make decisions about where to conduct a study based on the nature of the question and the type of information needed to address.

The setting for the present study was undertaken in KIMS Hospital, Amalapuram.

Population:

Polit and Hungler (2008), specify the population is the entire set of individuals or objects having the common characteristics. The population always comprises the entire aggregate of elements in which the researcher is interested.

Population means the total subjects on which the researcher interested to do study. Population of this study included the Staff nurses working in Amalapuram.

Sample:

Sample is a subject of population selected to participate in a research study (Polit, 1990). In the present study sample were Staff nurses in KIMS Hospital, Amalapuram who had fulfilled sample criteria were selected and included in the study.

Sample Size:

According to Polit (2008), sample size is the number of people who are participate in a study. A sample is a portion of the population that has been selected to represent the population of interest. It consists of subset of the units that comprise the population.

Sample size of the study consists of 60 Staff nurses in KIMS Hospital, Amalapuram.

Sampling Technique:

Sampling technique is the process of selecting who are representative of the population of being studied. Purposive sampling technique was used for selecting the sample. Purposive sampling technique is one of the method of Non Probability sampling.

Criteria for Sample Selection

Inclusive criteria:
 - ➢ Staff nurses with the age group of 30-50 years.
 - ➢ Staff nurses who are willing to participate in the study.
 - ➢ Staff nurses, who are able to read, write and understand English Language.
 - ➢ Staff nurses who were present at the time of data *collection*

Exclusive criteria:
 - ➢ Staff nurses who are not willing to participate in study.
 - ➢ Staff nurses who were not present at the time of data collection

Sample Characteristics:

The sample was described in terms of demographic data, which includes age, religion, educational status, type of family, monthly family income, age at marriage, duration of marital life, history of menstrual irregularities, family history of cancers and source of information on Prevention of Cervical cancer.

Method of Data Collection:

The most important and crucial aspect of any investigation is collection of appropriate information, which provides necessary data for the study.

"It is the precise, systematic gathering of information relevant to the research purpose or specific objectives, questions or hypothesis at a study. (Nancy Burns, 2007).

Tracee and Tracee (1986) stated that the instrument selected at research should as far as possible be the vehicle that would be best obtaining the data for drawing conclusion pertinent to the study. Most important and crucial aspect of any investigation, which will provide necessary data to answer the questions in the study.

In the present study the investigator collects the data regarding demographic variables and knowledge regarding Prevention of Cervical cancer among Staff nurses by structured questionnaire.

Description of Tool:

A search of literature was made for the purpose of developing appropriate tools for assessing knowledge on Prevention of Cervical cancer. An instrument in the form of structured interview schedule was developed to assess the knowledge with the help of selected literature from various textbooks and journals and internet and discussions with experts in the field of Obstetrics and Gynecological Nursing and Obstetrics and Gynecology.

The questionnaire consists of 2 parts:

Part A: Deals with demographic data of Staff nurses such as age, religion, educational status, type of family, monthly family income, age at marriage, duration of marital life, history of menstrual irregularities, family history of cancers and source of information on Prevention of Cervical cancer.

Part B: Deals with questions to assess the knowledge on Prevention of Cervical cancer among Staff nurses. It consists of 30 multiple choice questions. Each question consists of 4 choices in which one is correct answer.

Validity of the Tool:

To determine the content validity, the tool was submitted to the experts in the field of Obstetrics and Gynecological Nursing and Obstetrics and Gynecology. After obtaining their valuable suggestions they were incorporated and necessary modifications were made accordingly.

Reliability of the Tool:

The reliability of the measuring instrument is a major criteria for assessing its quality and adequacy (Polit and Hungler, 2002). Test-retest method was done in order to assess the reliability by administering the tool twice to the same sample of 6 subjects in the pilot study. Each subject's first score was compared with the same subject's second score with the help of Pearson's product movement co-efficient correlation(r). Obtained r value is 0.82. Hence it was statistically determined to be reliable.

Pilot Study:

The pilot study was conducted from 20-02-2021 to 29-02-2021, to assess the effectiveness of Structured teaching programme on Prevention of Cervical cancer to see the practicability and feasibility of the study and to plan for statistical analysis of the data. Pilot study was conducted in KIMS Hospital. Five Staff nurses were selected for pilot study based on sample criteria. The study was found feasible practicable and appropriate. Staff nurses participated in pilot study were excluded for main study.

Techniques for Data Collection:

In order to collect data for the study, the investigator obtained permission from Medical Superintendent, KIMS Hospital through proper channel. Data collection was done from 02-03-2021 to 28-03-2021.

The subjects of the study were selected according to the criteria by Purposive sampling method. The purpose of the study was explained to the subjects and the pre test was given with the help of structured interview schedule with suitable questionnaire. The investigator administered structured teaching programme on Prevention of Cervical cancer for 30 minutes at Demonstration room, KIMS Hospital. Post test was conducted six days after the Structured teaching programme to the same sample by interview schedule with the help of questionnaire which were used for the pre-test.

Plan for Data Analysis:

Descriptive Statistics:
 - ➢ Frequency and percentage distribution was used to describe the demographic variables among Staff nurses
 - ➢ Mean and Standard deviation was used to assess the pre test and post test level of knowledge among Staff nurses regarding Prevention of Cervical

cancer

Inferential Statistics:
- ➢ Paired t test was used to find out the difference between pre test and post test mean knowledge scores among Staff nurses.
- ➢ Chi square test was used to find out the association between the level of knowledge among Staff nurses with their selected demographic variables.

Epilogue:

This section dealt with research approach, research design, variables, setting, population, sample, sampling technique, criteria for sample selection, method of data collection, development & description of tool, validity & reliability, pilot study, techniques of data collection & plan of data analysis

The data was entered in the master sheet for analysis and interpretation. Descriptive and inferential statistical procedures such as frequencies, percentages, mean, standard deviation, paired t-test and chi square tests were used.

Data was presented in following headings:

Section A: Frequency and percentage distribution of Prevention of Cervical cancer among Staff nurses according to their selected demographic variables.

Section B: Frequency and percentage of knowledge scores of Staff nurses on Prevention of Cervical cancer according to the level of knowledge scores in pre test and post test.

Section C: Paired t test of significance for knowledge scores of Staff nurses on Prevention of Cervical cancer in pre test and post test and comparing pre test and post test knowledge scores.

Section D: Association between knowledge scores of Staff nurses on Prevention of Cervical cancer in accordance with selected demographic variables.

A. Section - A

Demographic data of the sample includes age, religion, educational status, type of family, monthly family income, age at marriage, duration of menstrual life, family history of cancer, history of menstrual irregularities and source of information. The data collected with the help of structured questionnaire and presented in the following tables.

Table 1
Frequency and percentage distribution of Staff nurses according to age, religion and educational status (N=60)

Characteristics	Frequency	Percentage
Age in years		
30-35 years	16	26.7%
36-40 years	26	43.3%
41-45 years	14	23.3%
46-50 years	4	6.7%
Religion		
Hindu	34	56.7%
Christian	10	16.7%
Muslim	16	26.7%
Others	0	0%
Educational status		
GNM	12	20%
B Sc Nursing	22	36.7%
Post basic B. Sc. (N)	26	43.3%
M. Sc. Nursing	0	0%

The table 1 shows that out of 60 subjects, 16 (26.7%) were in

the age group of 30-35 years, 26 (43.3%) were in the age group of 31-35 years, 14 (23.3%) were in the age group of 41-45 years and 4 (6.7%) were in the age group of 46-50 years. Regarding religion among subjects, majority 34 (56.7%) were Hindus, 10 (16.7%) were Christians and 16 (26.7%) were Muslims. In regard to educational status of Staff nurses, majority 26 (43.3%) were with post basic B. Sc. nursing, 22 (36.7%) were with B. Sc. nursing and 12 (20%) were with B. Sc. nursing.
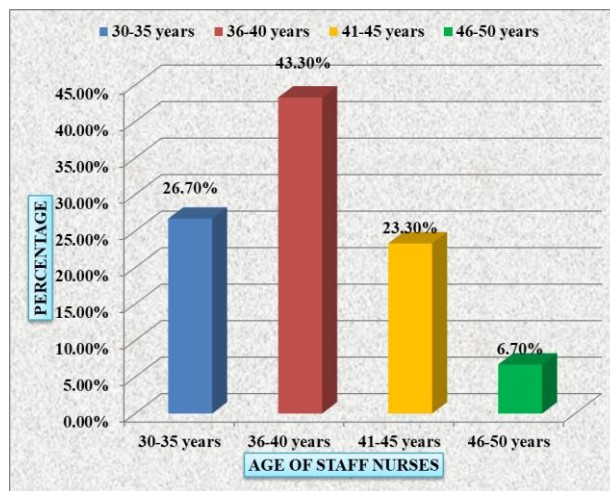

Fig. 2. Percentage distribution of Staff nurses according to age

Table 2
Frequency and percentage distribution of Staff nurses according to Type of family, family income and Age at marriage (n=60)

Characteristics	Frequency	Percentage
Type of family		
Nuclear	34	56.7%
Joint	10	16.7%
Extended	4	6.7%
Single parent	12	20%
Family income per month		
<Rs.10000/-	22	36.7%
Rs.10001-20000/-	30	50%
Rs.20001-30000/-	8	13.3%
Above Rs.30001/-	0	0%
Age at marriage		
<20 years	4	6.7%
21-25 years	34	56.7%
26-30 years	18	30%
>31 years	4	6.7%

The table 2 shows that in respect of occupation of Staff nurses 34 (56.7%) were from nuclear family, 10 (16.7%) were from joint family, 12 (20%) were from single parent family and 4 (6.7%) were from extended family. In regard to family income per month majority 30 (50%) were getting Rs.10001-20000/-, 22 (36.7%) were getting less than Rs.10000/- and 8 (13.3%) were getting Rs.20001-Rs.30000/- per month. In view of age at marriage among Staff nurses, 34 (56.7%) were marriage at the age of 21-25 years, 18 (30%) were married at the age of 26-30 years and 4 (6.7%) were married at the age of less than 20 years and more than 30 years respectively.
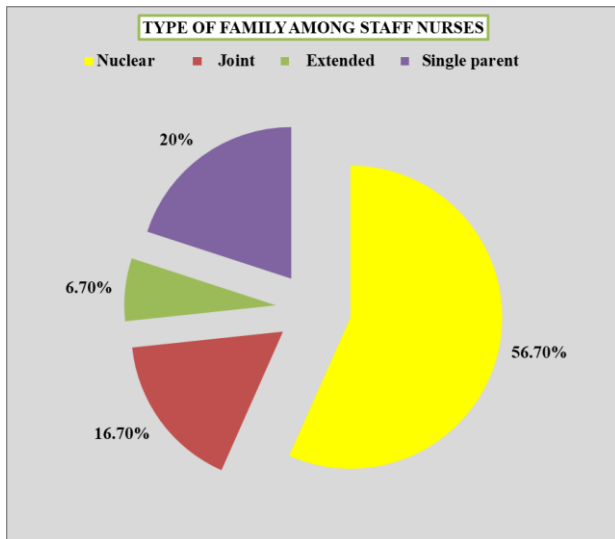
Fig. 3. Percentage distribution of staff nurses according to type of family

Table 3
Frequency and percentage distribution of staff nurses according to
Duration of marital life, history of cancers, history of menstrual problems and
source of information (n=60)

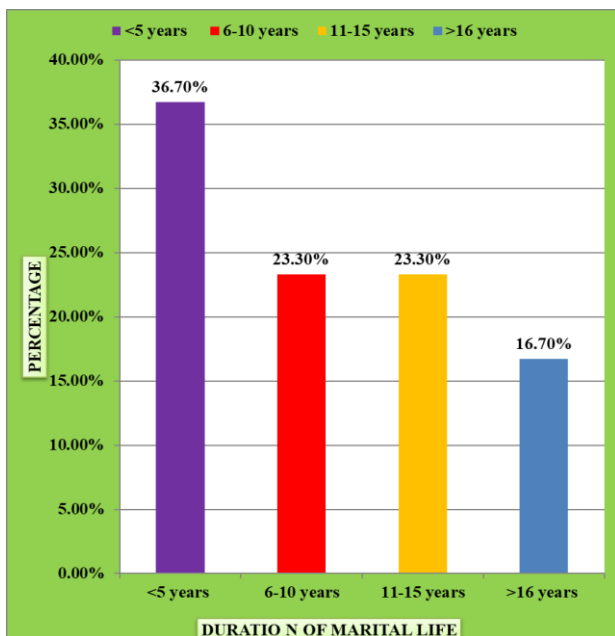| Characteristics	Frequency	Percentage
Duration of marital life		
<5 years	22	36.7%
6-10 years	14	23.3%
11-15 years	14	23.3%
>16 years	10	16.7%
Family history of cancer		
Yes	20	33.3%
No	40	66.7%
History of Menstrual irregularities		
Yes	22	36.7%
No	38	63.3%
Source of information		
Mass media	8	13.3%
Journals	8	13.3%
Text books	22	36.7%
ISE	22	36.7%

Fig. 4. Percentage distribution of staff nurses according to duration of
marital life

The table 3 shows that in regard to duration of marital life among Staff nurses, majority 22 (36.7%) of Staff nurses were with less than 5 years of marital life, 14 (23.3%) were with 6-10 years and 11-15 years of marital life respectively and 10 (16.7%) were with more than 16 years of marital life. In regard to family history of cancers, majority 40 (66.7%) not had family history of cancers and 20 (33.3%) had family history of cancers. In respect of history of Menstrual irregularities, majority 38 (63.3%) not had any history of Menstrual irregularities and 22 (36.7%) had history of Menstrual irregularities. In regard to source of information, 22 (36.7%) had information from text books and ISE programme respectively and 8 (13.3%) had information from mass media and journals respectively.
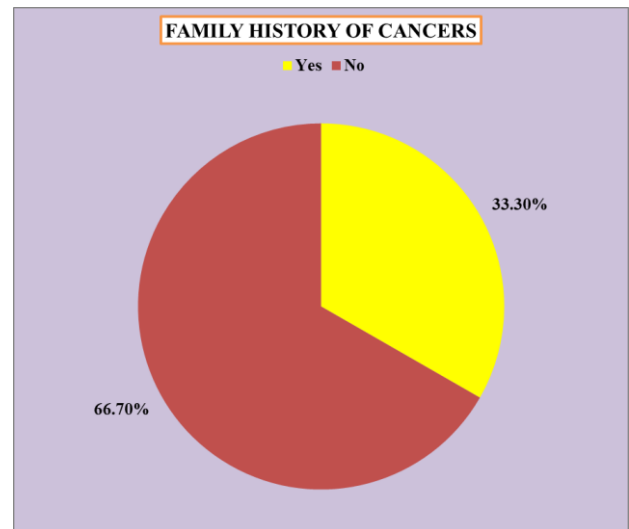

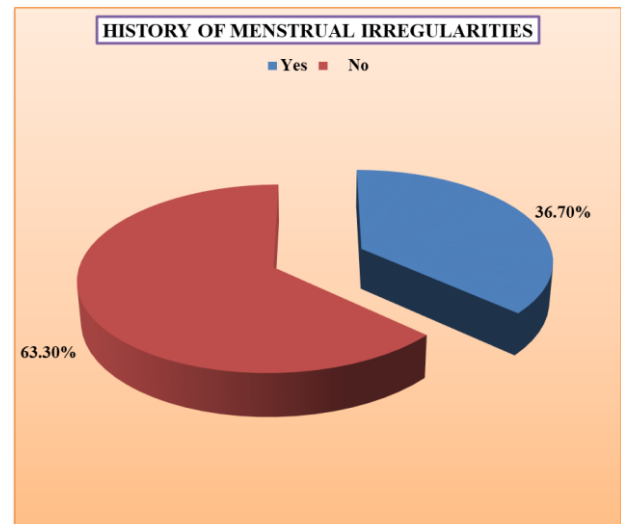Fig. 5. Percentage distribution of staff nurses according to family history
of cancers

Fig. 6. Percentage distribution of staff nurses according to history of
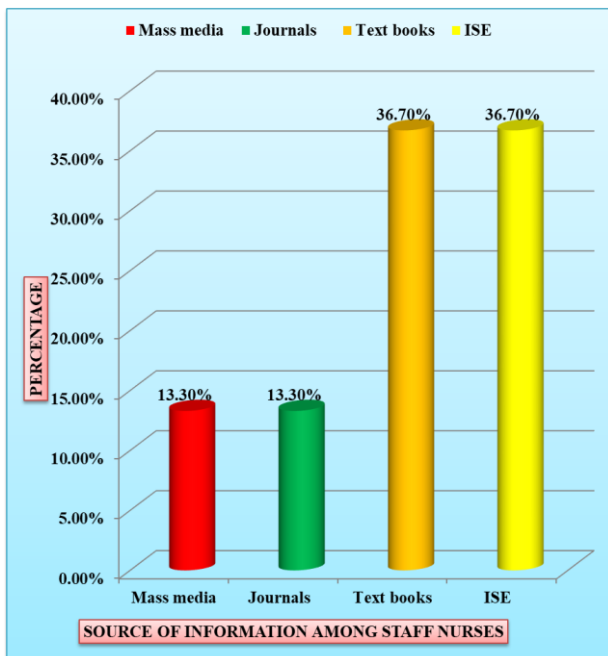menstrual irregularities

Fig. 7. Percentage distribution of staff nurses according to source of information
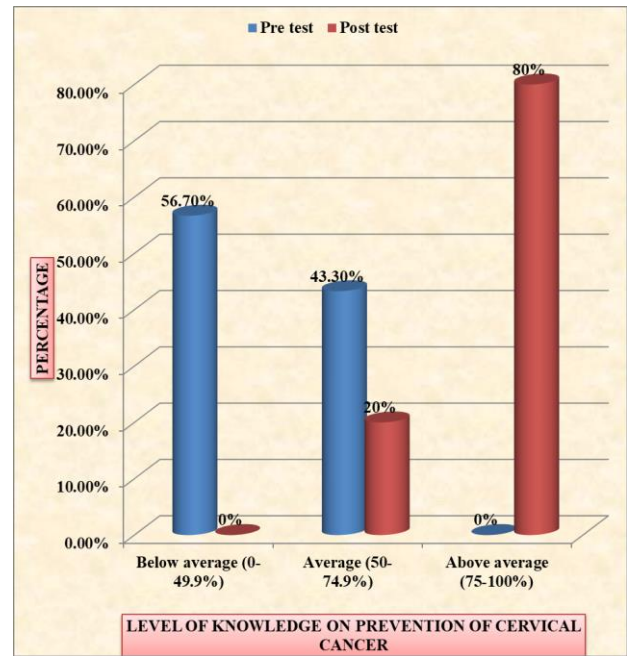

Fig. 8. Percentage distribution of staff nurses according to level of knowledge on prevention of cervical cancer

B. Section - B

It dealt with the categorization of Staff nurses into three groups such as below average, average and above average based on the knowledge scores obtained in pre test and post test and section wise analysis of knowledge score in each area.

C. Section - C

It dealt with the mean knowledge and comparison of pre test and post test mean knowledge scores by using paired t test and testing the hypothesis of the present study.

Table 4
Frequency and percentage of distribution of knowledge scores of staff nurses according to level of knowledge in pre test and post test on Prevention of cervical cancer (n=60)

Categorization	Pre test		Post test	
	Frequency	Percentage	Frequency	Percentage
Below average (0-49.9%)	34	56.7%	0	0%
Average (50-74.9%)	26	43.3%	12	20%
Above average (75-100%)	0	0%	48	80%

Table 5
Pre test and post test mean knowledge scores and paired t-test of significance on prevention of cervical cancer among staff nurses (n=60)

Knowledge scores	Pre test	Post test
Mean	10.93	25.20
Standard Deviation	2.25	4.28
Paired t-test	31.08	

59dF, Table t-value 3.46, $p<0.001$

The table 4 shows that frequency and percentage based on knowledge scores of the Staff nurses about Prevention of Cervical cancer. Below average (0-49.9%) indicates the scores in between 0 to 14, Average (50-74.9%) indicates the score between 15-22 and Above average (75-100%) indicates the scores between 23-30.

Table 4, 34 (56.7%) were under below average knowledge level in pre test whereas in post test were found nil, 26 (43.3%) were under average knowledge level in pre test whereas 12 (20%) were average knowledge level in post test, above average knowledge level in pre test were found nil whereas 48 (80%) were under above average knowledge level in post test. These differences indicate that Structured teaching programme was highly effected the Staff nurses.
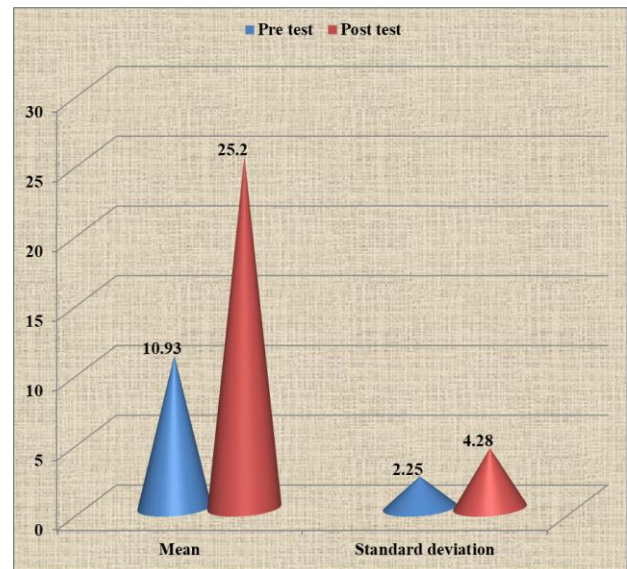

Fig. 9. Mean and standard deviation of knowledge of staff nurses on prevention of cervical cancer

The table 5 shows that the pre test mean was 10.93 with 2.25 standard deviation and that of post test was 25.20 with 4.28

standard deviation. The calculated 't' value was 31.08, which is higher than the table 't' value 3.46 at 59df with 0.001 level of significance. It shows that there is significant difference (p<0.001) in pre test and post test knowledge scores.

Hence it concluded after Structured teaching programme on Prevention of Cervical cancer the knowledge scores of the Staff nurses have been increased. The positive result gives a clear indication of effectiveness of Structured teaching programme on prevention of cervical cancer. Hence H1 was accepted.

D. Section - D

This part dealt with identifying the association between knowledge of Staff nurses on Prevention of Cervical cancer according to the selected demographic variables such as age, religion, educational status, type of family, monthly family income, Age at marriage, duration of marital life, family history of cancers, history of menstrual irregularities and source of information by using the chi-square test.

The table 6 showed that association between pre test and post test knowledge scores on Prevention of Cervical cancer among Staff nurses with age. For pre test the table value of $\chi2$ at 0.05 level of significance with 3df is 7.82, as the calculated value of $\chi2$ (8.76) was more than the table value that shows there was significant association between the level of knowledge on Prevention of Cervical cancer among Staff nurses with age. For post test the table value of $\chi2$ at 0.05 level of significance with

3df is 7.82, as the calculated value of $\chi2$ (8.12) was more than the table value that shows there was significant association between the post test level of knowledge on Prevention of Cervical cancer among Staff nurses with age.

The table 7 showed that association between pre test and post test knowledge scores on Prevention of Cervical cancer among Staff nurses with religion. For pre test the table value of $\chi2$ at 0.05 level of significance with 2df is 5.99, as the calculated value of $\chi2$ (0.46) was less than the table value that shows there was no significant association between the level of knowledge on Prevention of Cervical cancer among Staff nurses with religion. For post test the table value of $\chi2$ at 0.05 level of significance with 2df is 5.99, as the calculated value of $\chi2$ (2.01) was less than the table value that shows there was no significant association between the level of knowledge on Prevention of Cervical cancer among Staff nurses with religion.

The table 8 showed that association between pre test and post test knowledge scores on Prevention of Cervical cancer among Staff nurses with education of parents. For pre test the table value of $\chi2$ at 0.05 level of significance with 2df is 5.99, as the calculated value of $\chi2$ (12.23) was more than the table value that shows there was significant association between the level of knowledge on Prevention of Cervical cancer among Staff nurses with educational status. For post test the table value of $\chi2$ at 0.05 level of significance with 2df is 5.99, as the

Table 6
Association between pre test and post test knowledge scores of staff nurses on prevention of cervical cancer with age (n=60)

Age in years	Level of Knowledge													
	Pre test						Total Fre	Post test						Total Fre
	Below Average		Average		Above Average			Below Average		Average		Above Average		
	F	%	F	%	F	%		F	%	F	%	F	%	
30-35 years	12	20%	4	6.7%	-	-	16	-	-	4	6.7%	12	20%	16
36-40 years	10	16.7%	16	26.7%	-	-	26	-	-	3	5%	23	38.3%	26
41-45 years	8	13.3%	6	10%	-	-	14	-	-	4	6.7%	10	16.7%	14
46-50 years	4	6.7%	0	0%	-	-	4	-	-	1	1.67%	3	5%	4
Total	34	56.7%	26	43.3%	-	-	60	0	0	12	20%	48	80%	60

Pre test $\chi2$ = 8.76   3df   p< 0.05
Post test $\chi2$ =8.12   3df   p<0.05

Table 7
Association between pre test and post test knowledge scores of staff nurses on prevention of cervical cancer with religion (n=60)

Religion	Level of Knowledge													
	Pre test						Total Fre	Post test						Total Fre
	Below Average		Average		Above Average			Below Average		Average		Above Average		
	F	%	F	%	F	%		F	%	F	%	F	%	
Hindu	18	30%	16	26.7%	-	-	34	-	-	6	10%	28	46.7%	34
Christian	6	10%	4	6.7%	-	-	10	-	-	1	1.7%	9	15%	10
Muslim	10	16.7%	6	10%	-	-	16	-	-	5	8.3%	11	18.3%	16
Total	34	56.7%	26	43.3%	-	-	60	0	0	12	20%	48	80%	60

Pre test $\chi2$ = 0.46   2df   p< 0.05
Post test $\chi2$ = 2.01   2df   p<0.05

Table 8
Association between pre test and post test knowledge scores of staff nurses on prevention of cervical cancer with educational status (n=60)

Education of Staff nurses	Level of knowledge													
	Pre test						Total Fre	Post test						Total Fre
	Below Average		Average		Above Average			Below Average		Average		Above Average		
	F	%	F	%	F	%		F	%	F	%	F	%	
GNM	6	10%	6	10%	-	-	12	-	-	3	5%	9	15%	12
B Sc (N)	14	23.3%	8	13.3%	-	-	22	-	-	4	6.7%	18	30%	22
PB B Sc (N)	14	23.3%	12	20%	-	-	26	-	-	5	8.3%	21	35%	26
Total	34	56.7%	26	43.3%	-	-	60	0	0	12	20%	48	80%	60

Pre test $\chi2$ =12.23   2df   p< 0.05
Post test $\chi2$ =8.33   2df   p<0.05

calculated value of χ^2 (8.33) was more than the table value that shows there was significant association between the level of knowledge on Prevention of Cervical cancer among Staff nurses with educational status of Staff nurses.

The association between pre test and post test knowledge scores on Prevention of Cervical cancer among Staff nurses with type of family. For pre test the table value of χ^2 at 0.05 level of significance with 3df is 7.82, as the calculated value of χ^2 (8.83) was more than the table value that shows there was significant association between the level of knowledge on Prevention of Cervical cancer among Staff nurses with type of family. For post test the table value of χ^2 at 0.05 level of significance with 3df is 7.82, as the calculated value of χ^2 (8.72) was more than the table value that shows there was significant association between the level of knowledge on Prevention of Cervical cancer among Staff nurses with type of family.

The association between pre test and post test knowledge scores on Prevention of Cervical cancer among Staff nurses with family income. For pre test the table value of χ^2 at 0.05 level of significance with 2df is 5.99, as the calculated value of χ^2 (6.36) was greater than the table value that shows there was significant association between the level of knowledge on Prevention of Cervical cancer among Staff nurses with family income. For post test the table value of χ^2 at 0.05 level of

significance with 2df is 5.99, as the calculated value of χ^2 (6.17) was more than the table value that shows there was significant association between the level of knowledge on Prevention of Cervical cancer among Staff nurses with family income.

The table 9 showed that association between pre test and post test knowledge scores on Prevention of Cervical cancer among Staff nurses with Age at marriage. For pre test the table value of χ^2 at 0.05 level of significance with 3df is 7.82, as the calculated value of χ^2 (1.07) was less than the table value that shows there was no significant association between the level of knowledge on Prevention of Cervical cancer among Staff nurses with Age at marriage. For post test the table value of χ^2 at 0.05 level of significance with 3df is 7.82, as the calculated value of χ^2 (2.32) was less than the table value that shows there was no significant association between the level of knowledge on Prevention of Cervical cancer among Staff nurses with age at marriage.

The table 10 showed that association between pre test and post test knowledge scores on Prevention of Cervical cancer among Staff nurses with duration of marital life. For pre test the table value of χ^2 at 0.05 level of significance with 3df is 7.82, as the calculated value of χ^2 (10.12) was more than the table value that shows there was significant association between the level of knowledge on Prevention of Cervical cancer among

Table 9
Association between pre test and post test knowledge scores of staff nurses on prevention of cervical cancer with age at marriage (n=60)

Age at marriage	Level of knowledge													
	Pre test						Post test						
	Below Average		Average		Above Average		Total Fre	Below Average		Average		Above Average		Total Fre
	F	%	F	%	F	%		F	%	F	%	F	%	
<20 years	2	3.3%	2	3.3	-	-	4	-	-	0	0%	4	6.7%	4
21-25 years	18	30%	16	26.7	-	-	34			8	13.3%	26	43.3%	34
26-30 years	12	20%	6	10	-	-	18	-	-	4	6.7%	14	23.3%	18
>31 years	2	3.3%	2	3.3%	-	-	4			0	0%	4	6.7%	4
Total	34	56.7%	26	43.3	-	-	60	0	0	12	20%	48	80%	60

Pre test χ^2 =1.07   3df   p< 0.05
Post test χ^2 =2.32   3df   p<0.05

Table 10
Association between pre test and post test knowledge scores of staff nurses on prevention of cervical cancer with duration of marital life (n=60)

Duration of marital life	Level of knowledge													
	Pre test						Post test						
	Below Average		Average		Above Average		Total Fre	Below Average		Average		Above Average		Total Fre
	F	%	F	%	F	%		F	%	F	%	F	%	
<5 years	16	26.7%	6	10%	-	-	22	-	-	6	10%	16	26.7%	22
5-10 years	6	10%	8	13.3%	-	-	14	-	-	2	3.3%	12	20%	14
10-15 years	4	6.7%	10	16.7%	-	-	14	-	-	1	1.7%	13	21.7%	14
>16years	8	13.3%	2	3.3%	-	-	10	-	-	3	5%	7	11.7%	10
Total	34	53.3%	26	43.3%	-	-	60	0	0	12	20%	48	80%	60

Pre test χ^2 =10.12   3df   p< 0.05
Post test χ^2 =8.08   3df   p<0.05

Table 11
Association between pre test and post test knowledge scores of staff nurses on prevention of cervical cancer with family history of cancers (n=60)

Family history of cancers	Level of knowledge													
	Pre test						Post test						
	Below Average		Average		Above Average		Total Fre	Below Average		Average		Above Average		Total Fre
	F	%	F	%	F	%		F	%	F	%	F	%	
Yes	12	20%	8	13.3%	-	-	20	-	-	2	3.3%	18	30%	20
No	22	36.7%	18	30%	-	-	40	-	-	10	16.7%	30	60%	40
Total	34	56.7%	26	43.3%	-	-	60	-	-	12	20%	48	80%	60

Pre test χ^2 =0.16   1df   p< 0.05
Post test χ^2 =0.27   1df   p<0.05

Table 12

Association between pre test and post test knowledge scores of staff nurses on prevention of cervical cancer with history of menstrual problems (n=60)

History of Menstrual problems	Level of knowledge													
	Pre test							Post test						
	Below Average		Average		Above Average		Total Fre	Below Average		Average		Above Average		Total Fre
	F	%	F	%	F	%		F	%	F	%	F	%	
Yes	12	20%	10	16.7%	-	-	22	-	-	4	6.7%	18	30%	22
No	22	36.7%	16	26.7%	-	-	38	-	-	8	13.3%	30	60%	38
Total	34	56.7%	26	43.3%	-	-	60	-	-	12	20%	48	80%	60

Pre test $\chi 2$ =0.06   1df   p< 0.05
Post test $\chi 2$ =0.07   1df   p<0.05

Staff nurses with duration of marital life. For post test the table value of $\chi 2$ at 0.05 level of significance with 3df is 7.82, as the calculated value of $\chi 2$ (8.08) was more than the table value that shows there was significant association between the level of knowledge on Prevention of Cervical cancer among Staff nurses with duration of marital life.

The table 11 showed that association between pre test and post test knowledge scores on Prevention of Cervical cancer among Staff nurses with family history of cancers. For pre test the table value of $\chi 2$ at 0.05 level of significance with 1df is 3.84, as the calculated value of $\chi 2$ (0.16) was less than the table value that shows there was significant association between the level of knowledge on Prevention of Cervical cancer among Staff nurses with family history of cancers. For post test the table value of $\chi 2$ at 0.05 level of significance with 1df is 3.84, as the calculated value of $\chi 2$ (0.27) was less than the table value that shows there was no significant association between the level of knowledge on Prevention of Cervical cancer among Staff nurses with family history of cancers.

The table 12 showed that association between pre test and post test knowledge scores on Prevention of Cervical cancer among Staff nurses with History of Menstrual problems. For pre test the table value of $\chi 2$ at 0.05 level of significance with 1df is 3.84, as the calculated value of $\chi 2$ (0.06) was less than the table value that shows there was significant association between the level of knowledge on Prevention of Cervical cancer among Staff nurses with history of Menstrual problems. For post test the table value of $\chi 2$ at 0.05 level of significance with 1df is 3.84, as the calculated value of $\chi 2$ (0.07) was less than the table value that shows there was no significant association between the level of knowledge on Prevention of Cervical cancer among Staff nurses with History of Menstrual problems.

The association between pre test and post test knowledge scores on Prevention of Cervical cancer among Staff nurses with source of information. For pre test the table value of $\chi 2$ at 0.05 level of significance with 3df is 7.82, as the calculated value of $\chi 2$ (4.84) was less than the table value that shows there was no significant association between the level of knowledge on Prevention of Cervical cancer among Staff nurses with source of information. For post test the table value of $\chi 2$ at 0.05 level of significance with 3df is 7.82, as the calculated value of $\chi 2$ (2.90) was less than the table value that shows there was no significant association between the level of knowledge on Prevention of Cervical cancer among Staff nurses with source of information.

5. Findings of the Study

The demographic profile of the Staff nurses was out of 60 Staff nurses majority were with 31-35 years of age group (43.3%), Hindus (56.%), were with Post basic B Sc Nursing (43.3%), were from nuclear family (56.7%), getting Rs.10001-20000/- per month (50%), were married at the age of 21-25 years (56.7%), were with 5-10 years of marital life (36.7%), had not had family history of cancers (66.7%), were suffering from menstrual abnormalities (36.7%) and had information on Prevention of Cervical cancer from health personnel (36.7%).

The results of the present study revealed that in pre test 34 (56.7%) were under below average knowledge level in pre test whereas in post test were found nil, 26 (43.3%) were under average knowledge level in pre test whereas 12 (20%) were average knowledge level in post test, above average knowledge level in pre test were found nil whereas 48 (80%) were under above average knowledge level in post test. These differences indicate that Structured teaching programme was highly effected the Staff nurses.

The findings of the study explores that the pre test mean was 10.93 with 2.25 standard deviation and that of post test was 25.20 with 4.28 standard deviation. The calculated 't' value was 31.08, which is higher than the table 't' value 3.46 at 59df with 0.001 level of significance. It shows that there is significant difference (p<0.001) in pre test and post test knowledge scores.

Hence it concluded after Structured teaching programme on Prevention of Cervical cancer the knowledge scores of the Staff nurses have been increased. The positive result gives a clear indication of effectiveness of Structured teaching programme on Prevention of Cervical cancer. Hence H1 was accepted.

The results of the study also explains that there is significant association between knowledge of Staff nurses on Prevention of Cervical cancer with demographic variables such as age, educational status, type of family, monthly family income and duration of marital life where the obtained chi square values were significant at 0.05 level of significance. Hence H2 was accepted.

6. Conclusion

The following conclusions were drawn on the basis of the findings of the study:

1. Among 60 Staff nurses, in pre test 34 (56.7%) were under below average knowledge level in pre test whereas in post test were found nil, 26 (43.3%) were under average knowledge level in pre test whereas 12 (20%) were average knowledge level in post test, above average

knowledge level in pre test were found nil whereas 48 (80%) were under above average knowledge level in post test.

2. There is significant difference (p<0.01) in pre test and post test knowledge scores of Staff nurses on Prevention of Cervical cancer which was evident by the significant t values. Hence the Structured teaching programme was effective.

There is significant association between the knowledge of Staff nurses with selected demographic variables such as age, educational status, type of family, monthly family income and duration of marital life.

Acknowledgement

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