International Journal for Multidisciplinary Research (IJFMR)
E-ISSN: 2582-2160 ● Website: www.ijfmr.com ● Email: editor@ijfmr.com

Women Knowledge Regarding Cervical Cancer- Effectiveness of Structured Teaching Programme

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Abstract

Cervical cancer is one of the most common cancers among women worldwide, with highest mortality in India. The incidence and mortality of cervical cancer can be reduced by screening women for precancerous lesion and by administration of human papilloma virus vaccine to adolescent girls. Knowledge of the women about cervical cancer and awareness about its prevention are the key factors that determine their utilization of screening services. Therefore, health professionals must aware of this condition and its clinical presentations, complications and potentially to death. The aim of the study was to assess the pre-test knowledge scores, to assess the post-test scores, to determine the effectiveness of structured teaching programmed and its association with the demographic variables regarding cervical cancer among women in selected community, Bengaluru, Karnataka, India. A pre-experimental design included 60 women in Yellachenahalli, Bengaluru by non-purposive sampling technique. Results of the study showed that, the overall post-test mean score was 28.35 with standard deviation 3.20 and the post-test knowledge score were significantly higher than the mean pre-test knowledge scores 14.35 with standard deviation 5.51. And computed area wise paired_t' value for the first area was 13.74, t-value for the second area was 16.29, t-value for the third area was 18.87 and the fourth area was 23.54 which indicates the area wise effectiveness of the structured teaching programme on knowledge regarding cervical cancer. The overall 't' value was 24.79 which is higher than table value 1.96, which shows the structured teaching programme was effective at $P<0.05$ level. The study result revealed that the structured teaching programme was effective in terms of gain in knowledge of women regarding cervical cancer.

Keywords: Effectiveness; Cervical Cancer; Women; Bengaluru; Karnataka.

Background

Cancer that forms in the tissues of the cervix is known as cervical cancer. In India carcinoma of the cervix is the most common malignancy in female and a major public health problems, it is one of the leading causes of mortality among women accounting for 23.3% of all cancer deaths. The main causes of cervical cancer is due to certain high-risk HPV types that can cause the cells in the lining of the cervix to change from normal to precancerous lesions. The risk factors for cervical cancer are anything that increases the chance of getting a disease. Such as smoking and sexual behavior that can lead to HUMAN PAPILLOMA VIRUS infection HVP is spread by direct skin-to-skin contact, including sexual intercourse, oral sex, anal sex, or any other contact involving the genital area. India accounts for about

20% of cervical cancer cases reported from the world. More than three-fourth of these patients are diagnosed in advanced stages leading to poor prospects of long term survival and cure. In Karnataka state rate of 98.2 per 1, 00000 cervical cancers were seen in 60-64 years age group, in this 40% of all cervical cancer patients seen in Bangalore. Cervical cancer is a serious disease that can be life-threatening. According to world health organization, cervical cancer is the fourth most frequent cancer in women with estimated 570,000 new cases in 2018 representing 6.6% of all female cancers. Approximately 90% 0f deaths from cervical cancer occurred in low and middle-income countries.

The objectives of this study was the pre-test level of knowledge scores regarding cervical cancer among women, the posttest level of knowledge scores regarding cervical cancer among women, to determine the effectiveness of STP regarding cervical cancer among women, to find out the association between pretest level of knowledge scores among women regarding cervical cancer with selected demographic variables.

Research hypotheses

The study was designed with the following hypotheses

H1: There will be significant difference between pre-test and post-test knowledge scores among women regarding cervical cancer.

H2: There will be significant association between pre-test knowledge scores regarding cervical cancer among women with their selected demographic variables.

Materials and methods

In view of the nature of the problem selected for the study and the objectives to be accomplished, an evaluative research approach with pre-experimental design (one group pre-test post-test) was adopted. The study was carried out in Yellachenahalli, Bengaluru. The sample for the research study is women. The sample size taken for the study was 60 women. In this study non-purposive sampling technique was used for selecting the samples. Paired‘t’ test was used to compared pre-test and post-test knowledge scores. Chi-square () test was used to study the association between pre-test and post-test knowledge scores with selected demographic variables. The tool consisted of 35 structured interview questionnaires on cervical cancer. Each item has three options and only one correct answer is given. For each correct answer, the score was 1 and for the wrong answer the score was 0. The highest score was 35.

Statistical analysis

Descriptive statistics such as Frequency and percentage distribution was used to present the socio-demographic data. Range, mean and standard deviation percentage was used to assess the level of back pain.

Inferential statistics Para metric such as Paired’t‘test was used to compare pre-test knowledge scores and post-test knowledge scores.

Non parametric Chi λ-square was used to find out the association between the pre-test knowledge scores with selected demographic variables. The P-value <0.05 was considered as statistically significant.

Ethical clearance

The ethical clearance for the study was obtained from the ethical Board of committee. The written permission to conduct research was obtained from the concerned authorities of PHC Yellachanahalli,

Bengaluru. Informed consent was obtained from the women who are willing to participate in the study.

Results and Discussion

Table – 1

Classification of Respondents by Age, Marital status and Educational status

N=60

Characteristics	Category	Respondents	
		Number	Percent
Age group (years)	31-40	41	68.3
	41-50	19	31.7
Marital status	Married	58	96.7
	Widow	2	3.3
Educational status	Middle	7	11.7
	High school	28	46.7
	Higher secondary	25	41.6
Total		60	100.0

Table 1 shows the classification of respondents by age group, marital status and educational status. Majority of the age group are higher in 31-40yrs which is 68.3%. Majority of the marital status are married which is 96.7% and majority of the educational status are high school which is 46.7%.

TABLE – 2

Classification of Respondents by Religion, Locality and Family income

N=60

Characteristics	Category	Respondents	
		Number	Percent
Religion	Hindu	16	26.7
	Muslim	44	73.3
Locality	Rural	0	0.0
	Urban	60	100.0
Family income/month	Rs.15,000-20,000	15	25.0
	Rs.20,001-30,000	24	40.0
	Above Rs.30,000	21	35.0
Total		60	100.0

Table 2 shows that the classification of respondents' by religion, locality and family income. Majority of the religion are Muslim which is 73.3 % and 26.7 % are Hindu. All the respondents' are from urban area which is 100%. Majority of the family income/month is between Rs20, 001-30,000 which is 40.0% and the least is between Rs15, 000-20,000 which is 25.0%.

TABLE – 3

Classification of Respondents by Age at Menarche, Age at Marriage and Number of Children

N=60

Characteristics	Category	Respondents	
		Number	Percent
Age at Menarche (years)	12-13	51	85.0
	14-15	9	15.0
Age at Marriage (years)	19-21	34	56.7
	22-24	26	43.3
Number of Children	One	8	13.3
	Two	28	46.7
	Three	24	40.0
Total		60	100.0

Table 3 shows that the classification of respondents by age at menarche, age at marriage and number of children. Majority of the respondents' age at menarche are 12-13 years which is 85.0 % and 15.0% are 14-15 years.

Majority of the respondents' age at marriage are 19-21yrs which is56.7% and 43.3% are 22-24 yrs. 13.3% of the respondents are having 1 child, 46.7% are having 2 children and 40.0% are having 3 children.

TABLE – 4

Classification of respondent's response on Family history, previous knowledge and Source of Information on Cervical cancer

N=60

Characteristics	Category	Respondents	
		Number	Percent
Family history of Cervical cancer	Yes	6	10.0
	No	54	90.0
Previous knowledge on Cervical cancer	Yes	23	38.3
	No	37	61.7
Source of Information	Health personnel	8	13.3
	Family members/Relatives	9	15.0
	Friends/Neighbors	6	10.0
	No	37	61.7
Total		60	100.0

Table 4 shows that classification of respondents' response on family history, previous knowledge and source of information on cervical cancer. 10.0% of the respondents are having family history of cervical cancer and 90.0% are not having family history of cervical cancer. 38.3% of the respondents have previous knowledge on cervical cancer and 61.7% are not having previous knowledge on cervical cancer. 13.3% of the respondent source of information is health personnel, 15.0% are having information

from family members/relatives, 10.0% are having information from friends/neighbors and 61.7% are not having any information.

TABLE – 5

Classification of Respondent Pre-test Knowledge level on cervical cancer

Knowledge Level	Category	Respondents	
		Number	Percent
Inadequate	≤ 50 % Score	38	63.3
Moderate	51-75 % Score	22	36.7
Adequate	> 75 % Score	0	0.0
Total		60	100.0

Table 5 shows that the classification of respondent pre test knowledge level on cervical cancer. Majority of the knowledge level are inadequate which is 63.3 %, 36.7% are moderate and 0.0% are adequate.

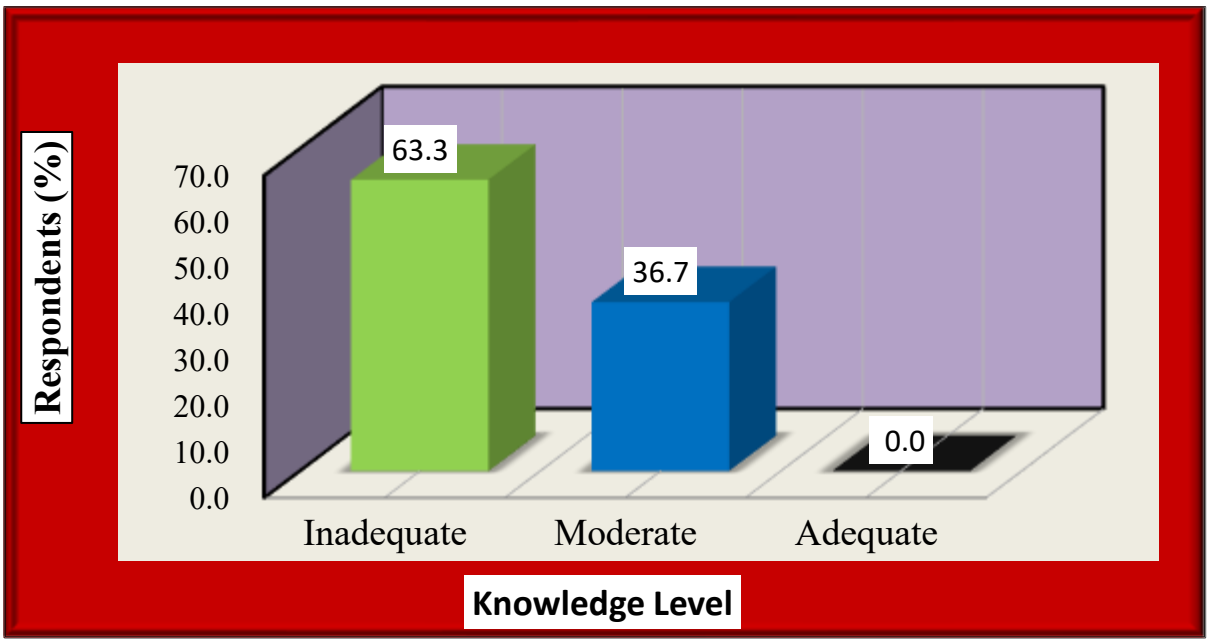

Figure .6: Classification of Respondent Pre-test Knowledge level on Cervical

TABLE -6

Aspect wise Pre-test Mean Knowledge scores of Respondents on Cervical cancer

N=60

No.	Knowledge Aspects	Statements	Max. Score	Knowledge Scores			
				Mean	SD	Mean(%)	SD(%)
I	Introduction, Definition and	5	5	1.92	1.00	38.3	20.1

	Incidence						
II	Causes and Mode of Spread	6	6	2.47	1.12	41.1	18.6
III	Clinical manifestation and Diagnosis	8	8	3.57	1.50	44.6	18.7
IV	Complications, Management and Prevention	16	16	6.40	2.57	40.0	16.1
	Combined	**35**	**35**	**14.35**	**5.54**	**41.0**	**15.8**

Table 6 indicates that the mean pre-test respondents scores in which mean value is 1.92 and the standard deviation is 1.00, the mean percentage is 38.3% and standard deviation is 20.1% in introduction, definition and incidence.

Related to causes and mode of spread the mean value is 2.47 and standard deviation is 1.12, the mean percentage is 41.1% and standard deviation is 18.6%.

Related to clinical manifestation and diagnosis the mean value is 3.57 and standard deviation is 1.50, the mean percentage is 44.6% and standard deviation 18.7%.

Related to complications, management and prevention the mean value is 6.40 and standard deviation is 2.57, the mean percentage is 40.0 and standard deviation is 15.9%.

TABLE -7

Classification of Respondents of Post-test Knowledge level on cervical cancer

Knowledge Level	Category	Respondents	
		Number	Percent
Inadequate	≤ 50 % Score	0	0.0
Moderate	51-75 % Score	25	41.7
Adequate	> 75 % Score	35	58.3
Total		60	100.0

Table 6 shows that the classification of respondent post-test knowledge level on cervical cancer. In which majority of the knowledge level are adequate which 58.3 %. 0.00% is inadequate and 41.7% are moderate.

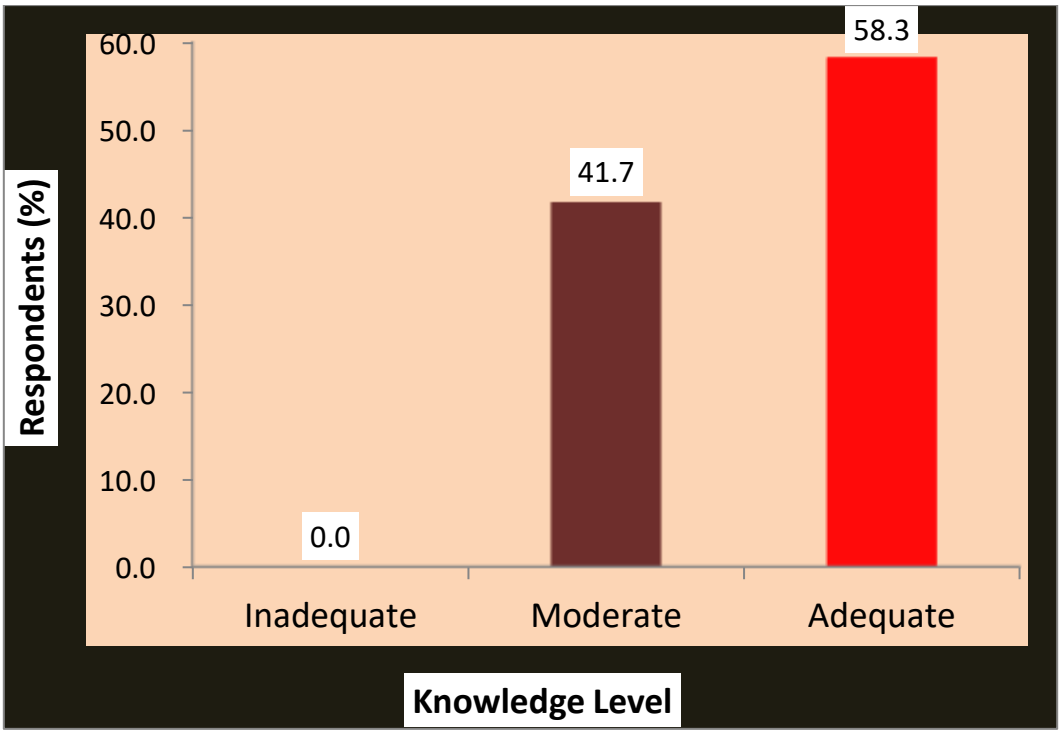

Figure .7: Classification of Respondents of Post- test Knowledge level on cervical cancer

TABLE -8

Aspect wise Post-test Mean Knowledge scores of Respondents on knowledge on cervical cancer

N=60

No.	Knowledge Aspects	Statements	Max. Score	Knowledge Scores			
				Mean	SD	Mean (%)	SD (%)
I	Introduction, Definition and Incidence	5	5	3.57	0.96	71.3	19.1
II	Causes and Mode of Spread	6	6	5.28	0.78	88.1	12.9
III	Clinical manifestation and Diagnosis	8	8	6.78	0.91	84.8	11.4
IV	Complications, Management and Preventive	16	16	12.72	1.76	79.5	11.0
	Combined	**35**	**35**	**28.35**	**3.20**	**81.0**	**9.1**

Table 8 indicates that the mean post-test respondents scores in which mean value is 3.57 and the standard deviation is 0.96, the mean percentage is 71.3% and standard deviation is 19.1% in introduction, definition and incidence.

Related to causes and mode of spread the mean value is 5.28 and standard deviation is 0.78, the mean percentage is 88.1% and standard deviation is 12.9%.

Related to clinical manifestation and diagnosis the mean value is 6.78 and standard deviation is 0.91, the mean percentage is 84.8% and standard deviation 11.4%.

Related to complications, management and preventive the mean value is 12.72 and standard deviation is 1.76, the mean percentage is 79.5 and standard deviation is 11.0%.

TABLE – 9

Over all Pre-test and Post-test Mean Knowledge scores on cervical cancer

N=60

Aspects	Max. Score	Knowledge Scores				Paired 't' Test
		Mean	SD	Mean (%)	SD (%)	
Pre-test	35	14.35	5.51	41.0	15.8	24.79*
Post-test	35	28.35	3.20	81.0	9.1	
Enhancement	35	14.00	4.37	40.0	12.5	

* Significant at 5% level, t (0.05, 59df) = 1.96

Table 9 indicates that the mean pre-test and post-test knowledge scores on cervical cancer in which the mean value is 14.35 and standard deviation value is 5.51 in pre-test whereas in post-test the mean value is 28.35 and standard deviation is 3.20.

The mean percentage is 41.0% and the standard deviation percentage is 15.8% in pre-test whereas in post-test the mean percentage is 81.0% and the standard deviation percentage is 9.1%.

Therefore the't'-calculated value 24.79 is greater than the't'-table value. Hence, there is difference in knowledge scores between the pre-test and post-test.

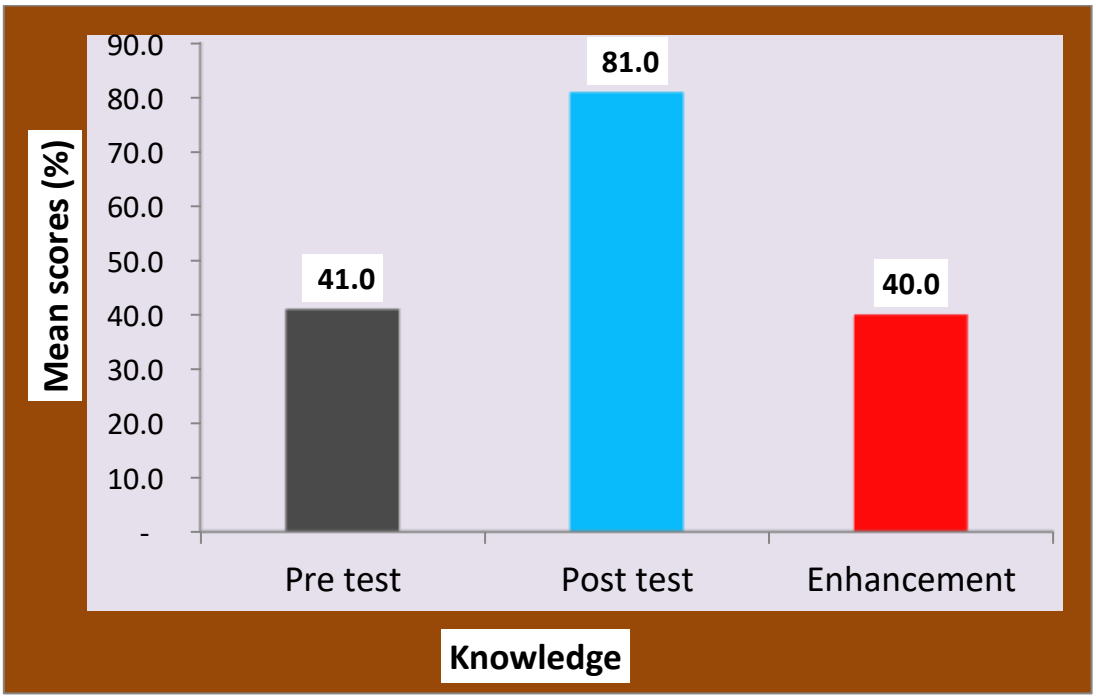

Figure .8: Overall Pre-test and Post-test Mean Knowledge scores on cervical cancer

TABLE – 10

Aspect Mean Pre-test and Post-test Knowledge scores on cervical cancer wise

N = 60

No.	Knowledge Aspects	Respondents Knowledge (%)						Paired 't' Test
		Pre test		Post test		Enhancement		
		Mean	SD	Mean	SD	Mean	SD	
I	Introduction, Definition and Incidence	38.3	20.1	71.3	19.1	33.0	18.6	13.74*
II	Causes and Mode of Spread	41.1	18.6	88.1	12.9	46.9	22.3	16.29*
III	Clinical manifestation and Diagnosis	44.6	18.7	84.8	11.4	40.2	16.5	18.87*
IV	Complications, Management and Preventive	40.0	16.1	79.5	11.0	39.5	13.0	23.54*
	Combined	**41.0**	**15.8**	**81.0**	**9.1**	**40.0**	**12.5**	24.79*

* Significant at 5% level, t (0.05, 59df) = 1.96

Table 10 shows the aspect wise Mean Pre-test and Post-test Knowledge scores on cervical cancer With regard to pre-test, the highest mean is 44.6% and standard deviation is 20.1%. The lowest mean is 38.3% and standard deviation is 16.1% and overall mean is 41.0% and standard deviation is 15.8%.

With regard of post-test, the highest mean is 88.1% and standard deviation is 19.1%. the lowest mean is and standard deviation is 19.1% and overall mean is 81.0% and standard deviation is 9.1%.

The overall mean enhancement is 40.0% which shows that the effectiveness of STP in enhancing the knowledge regarding cervical cancer.

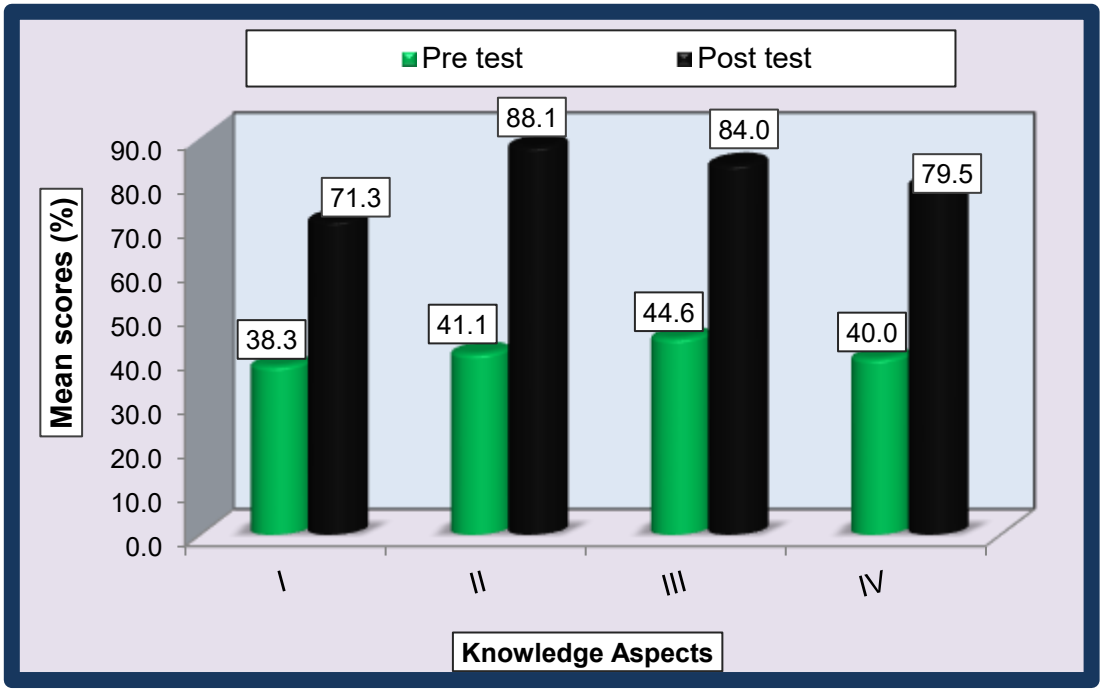

Figure .9: Aspect wise Mean Pre-test and Post-test Knowledge scores on cervical cancer

TABLE – 11

Classification of Respondents on Pre-test and Post-test Knowledge level on cervical cancer

Knowledge Level	Category	Classification of Respondents				χ^2 Value
		Pre test		Post test		
		N	%	N	%	
Inadequate	≤ 50 % Score	38	63.3	0	0.0	73.19*
Moderate	51-75 % Score	22	36.7	25	41.7	
Adequate	> 75 % Score	0	0.0	35	58.3	
Total		60	100.0	60	100.0	

* Significant at 5% level, χ^2 (0.05, 2df) = 5.991

Table 11 shows that the classification of respondents on pre-test and post-test knowledge level on cervical cancer in which 63.3% are inadequate in pre-test whereas 0.0% are inadequate in post-test, 36.7% are moderate in pre-test whereas 41.7% are moderate in post-test, 0.0% are adequate in pre-test whereas 58.3% are adequate in post-test.

Therefore chi^2-calculate value 73.19 is greater than chi^2-table value. Hence, there is Difference in knowledge level between the pre-test and post-test.

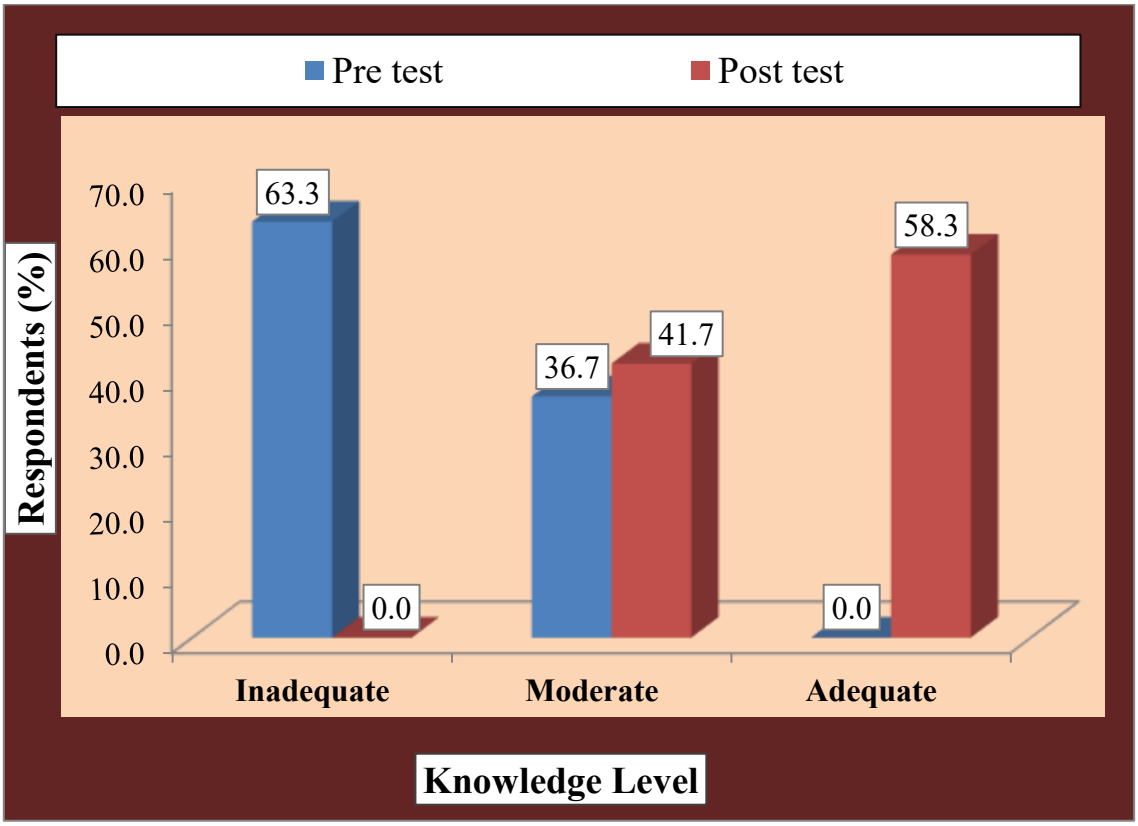

Figure .10: Classification of Respondents on Pre-test and Post-test Knowledge level on cervical cancer

TABLE – 12

Association between Demographic variables and Pre-test Knowledge level on cervical cancer

n=60

Demographic Variables	Category	Sample	Knowledge Level				χ^2 Value	P Value
			Inadequate		Moderate			
			N	%	N	%		
Age group (years)	31-40	41	30	73.2	11	26.8	5.40*	P<0.05 (3.841)
	41-50	19	8	42.1	11	57.9		
Marital status	Married	58	38	65.5	20	34.5	3.57 NS	P>0.05 (3.841)
	Widow	2	0	0.0	2	100.0		
Educational status	Middle	7	4	57.1	3	42.9	0.13 NS	P>0.05 (5.991)
	High school	28	18	64.3	10	35.7		
	Higher secondary	25	16	64.0	9	36.0		
Religion	Hindu	16	9	56.3	7	43.7	0.47 NS	P>0.05 (3.841)
	Muslim	44	29	65.9	15	34.1		
Family income/month	Rs.15,000-20,000	15	5	33.3	9	66.7	7.89*	P<0.05 (5.991)
	Rs.20,001-30,000	24	17	70.8	7	29.2		
	Above Rs.30,000	21	16	76.2	5	23.8		
Combined		**60**	**38**	**63.3**	**22**	**36.7**		

* Significant at 5% Level, NS: Non-significant

Note: Figures in the parenthesis indicate Table value

Table 12 shows that the pre-test knowledge level with selected demographic variables such as age group, marital status, educational status, religion, family income/month. It is evident from the above table there is significant association with variables like age group and family income/month and also there is no significant variables like marital status, educational status and religion.

TABLE – 13

Association between Demographic variables and Pre-test Knowledge level on cervical cancer

n=60

Demographic Variables	Category	Sample	Knowledge Level				χ^2 Value	P Value
			Inadequate		Moderate			
			N	%	N	%		
Age at Menarche (years)	12-13	51	29	56.9	22	43.1	6.13*	P<0.05 (3.841)
	14-15	9	9	100.0	0	0.0		
Age at Marriage (years)	19-21	34	17	50.0	17	50.0	6.01*	P<0.05 (3.841)
	22-24	26	21	80.8	5	19.2		
Number of Children	One	8	5	62.5	3	37.5	0.20 NS	P>0.05 (5.991)
	Two	28	17	60.7	11	39.3		
	Three	24	16	66.7	8	33.3		
Family history of Cervical cancer	Yes	6	6	100.0	0	0.0	3.86*	P<0.05 (3.841)
	No	54	32	59.3	22	40.7		

Previous knowledge on Cervical cancer	Yes	23	19	82.6	4	17.4	5.97*	P<0.05 (3.841)
	No	37	19	51.4	18	48.6		
Source of Information	Health personnel	8	6	75.0	2	25.0	7.04 NS	P>0.05 (7.815)
	Family members/ Relatives	9	7	77.8	2	22.2		
	Friends/Neighbors	6	6	100.0	0	0.0		
	No	37	19	51.4	18	48.6		
Combined		**60**	**38**	**63.3**	**22**	**36.7**		

* Significant at 5% Level, NS: Non-significant

Note: Figures in the parenthesis indicate Table value

Table 13 shows that the post-test knowledge level with selected demographic variables such as age at menarche, age at marriage, number of children, family history of cervical cancer, previous knowledge on cervical cancer and source of information. It is evident from the above table there is significant association with variables like age at menarche, age at marriage, family history of cervical cancer, previous knowledge on cervical cancer and also there is no significant variables like number of children and source of information.

Conclusions

The findings show that the respondent's knowledge level improved after implementation of the structured teaching programme on cervical cancer. The study concludes that the structured teaching programme is an effective method in providing moderate to adequate level of knowledge regarding reproductive health issues to the women to promote and to maintain their optimum level of health.

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