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Original Research Article

Effect of video- assisted teaching on knowledge regarding early detection and prevention of cervical cancer among women

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ABSTRACT

Introduction: Cancer is the second most common disease in India responsible for maximum mortality with about 0.3 million deaths per year. This is owing to the poor availability of prevention, diagnosis and treatment of the disease. Almost 9 out of 10 deaths occur from cervical cancer in less developed countries. Cancer of the cervix is largely preventable. The risk can be minimized by promotion of sexual risk reduction behavior and genital hygiene. Further prevention can be achieved by screening, using Visual Inspection with Acidic Acid (VIA) or Pap smear test, which can detect precancerous lesions early so as to prevent progress towards invasive cancer by timely treatment.

Materials and Methods: A pre-experimental, One-group pre-test post-test design was undertaken for the study. 300 women were selected as the sample, Non- probability convenient sampling technique was utilized to select the sample from the population. After assessing knowledge video assisted teaching was implemented. After intervention on 7th day the post-test knowledge was assessed. Chi-square was used to measure the association of background variables of patients. 't' test was used to assess the effectiveness of structured interventional programme of the patients. In the comparison between mean pretest and posttest knowledge score it is clear that during the pretest the knowledge score was poor (40%), fair (10%), good (40%) and excellent (10%), and after the administration of video assisted teaching, posttest was done and there was an improvement in the knowledge score of the female by poor (0%), fair (16.7%), good (23.3%) and excellent was(60%), so there was a great difference in the knowledge score between the pre-test and posttest.

Result: The mean pretest knowledge score was 13.67 ± 7.66, while the posttest knowledge score was 23.80 ± 5.53 and the computed t value was found to be 19.105, The difference was found to be statistically significant. There will be significant association between the pretest knowledge score and selected demographic variables at the level of P≤ 0.05. is accepted as there is significant association between pretest knowledge score and selected demographic variables like religion, marital status, Age of women at marriage, no. of times they have conceived, methods of contraception's, educational status, occupation, kinds of addiction, recurrent infections, history of cancer in family, previous information regarding cancer, history of pap test.

Conclusion: The study recommended the utilization of video assisted teaching programme by community health nurses, nurse researchers, nurse administrators, nurse educators and health care professionals to improve knowledge of early detection of cervical cancer.

1. Background of the Study

Cervical cancer is the 4^{th} most common cancer in women, with an estimated 5,60,505 new cases and 2,84,923 deaths

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in 2015, vast majority, approx. 85% of cervical cancer cases and 87% of cervical cancer deaths occur in the less developed regions. Cervical cancer records for roughly 12% of all female cancers and 10% of all female cancer death of poor to screening and treatment services. It is the 2^{nd} most common cancer and third most common cause of cancer deaths among women in the less developed regions. In India, cervical cancer is the 2nd most common cancer.

Infection with high-risk human papilloma virus (HPV) and its persistence are necessary though not sufficient causes of cervical cancer. HPV is the most common viral infection of the reproductive tract. It is generally acquired by young women after the onset of sexual activity. The majority of HPV infections do not cause symptoms or disease and resolve spontaneously within 2 years. HPV inoculation and ordinary cervical screening is the best method to for estimate cervical cancer growth.[1–5] Guardians/parental figures of youngster must be taught with respect to HPV inoculation before offering this chemoprophylaxis against cervical malignancy. Holes and obstructions to the entrance and conveyance of HPV immunization should be recognized, with the goal that logical and general well-being networks and common society can be activated to receive the inoculation policy.

2. Need For The Study

Cervical cancer growth deaths on the planet. Although the occurrence of carcinoma cervix has declined in the urban population, in the rural areas it continues to be highly prevalent. The usual 10-20 years of regular history of movement from gentle dysplasia to carcinoma cervix makes this cancer as moderately early preventable and gives the method of reasoning to screening Despite presence of national rules, the screening inclusion in India is shocking low. Carcinoma of the uterine cervix is a major medical issue faced by the Indian women, and consistently, around 120,000 women build up this infection India accounts 15.2 percent of the all-out cervical cancer growth deaths on the planet.[6–10]

2.1. Statement of problem

A study to assess the effectiveness of video-assisted teaching regarding early detection and prevention of cervical cancer among women from selected community areas of Madhya Pradesh.

3. Objectives

1. To assess the knowledge regarding early detection and prevention of cervical cancer among women from selected community areas of Madhya Pradesh before and after the administration of video-assisted teaching.
2. To determine the effectiveness of video – assisted teaching knowledge regarding early detection and prevention of cervical cancer among the women from selected community areas of Madhya Pradesh.
3. To find the association of the pre-test knowledge scores regarding early detection and prevention of cervical cancer among the women from selected community areas with their selected demographic variables.

3.1. Research Hypothesis

All the hypothesis of the study will be tested at 0.05 level of significance.

1. **H1:** There will be significant difference between the mean pretest and post test knowledge score regarding early detection and prevention of cervical cancer among women from selected community areas of M.P.at the level of $p<0.05$
2. **H2:** There will be significant association of the mean pretest knowledge scores regarding early detection and prevention of cervical cancer among women from selected community areas with their selected demographic variable.

3.2. Delimitation

The study is delimited to:

1. Women from selected rural community areas of M.P.
2. Women who are willing to participate in this study.
3. Same questionnaire will be used to assess the knowledge during pretest and posttest.

4. Research Methodology

4.1. Research approach

Here the researcher aims to assess the effect of video assisted teaching programme on knowledge regarding early detection and prevention of cervical cancer among women from selected community areas of M.P. here the group was observed before and after introducing the independent variables.

4.2. Research design

One group pre-test – post-test design was adopted for the study. This study was intended to a certain gain in knowledge by the women residing in community areas. Here only one group was observed twice, i.e. before and after introducing the questionnaire.[11–19]

4.3. Variable sunder study

1. *Independent variable:* The independent variable is manipulated by the researcher. It is the intervention or treatment that the researcher performs to see the change in resulting change on the dependent variable.

In this study independent variable is video assisted teaching on cervical cancer.

2. *Dependent variable:* The dependent variable usually is the variable that the researcher is interested in understanding explaining or predicting. It is the outcome variable which is measured or observed followed the instruction of independent variable. The present study gain in knowledge of women residing in community areas. In this study dependent variable is knowledge of women.

4.4. Setting of the study

The study was conducted in selected community areas of Madhya Pradesh.

Table 1: Comparison of mean pre-test and post-test knowledge score.

Group	No.	Knowledge Score Mean+ SD	t-value	p value
Pretest	30	6.80+2.265	14.010	p<0.05
Posttest	30	17.73+4.323	Df=29	

Comparison of mean pre-test and post-test knowledge score.

4.5. Population

1. *Target population:* Target population in the present study are the community areas in M P
2. *Accessible population:* 300 women from selected community areas of M.P. namely Awalda, Awaldi, Makadia, Jhalaria and Buranakhedi.
3. *Sample:* In this study, sample consists of women from selected from selected community areas of M.P.
4. *Sample size:* 300 women from selected community areas of M.P**.** i.e is Awalda, Awaldi, Makadia, Jhalaria and Buranakhedi. (60 from each village.)

4.6. Sampling technique

In the study the sample is selected through purposive sampling technique because of limited amount of the time and availability of subject according to sampling criteria.

5. Sample Selection Criteria

5.1. Including criteria

1. Women from selected community areas of M.P.
2. Women those who are willing to participate in the study.
3. Women who are available at the time of data collection.
4. Women who are able to speak either English or Hindi.

5.2. Exclusion criteria

1. Women who are not willing to participate in the study.
2. Women who are not available at the time of data collection.
3. Women who cannot understand either English or Hindi.

6. Description of The Final tool

The final tool comprised of 2 parts

1. *Part I: Demographic data:* It consisted of 11 items like age**,** Religion,. Marital status, Age of the woman at her marriage, No. of times you have conceived. Methods of contraception used, Educational status, Occupation Any kind of Addictions, Family income, History of cancer in family, History of recurrent infections, Previous information about Cervical Cancer, Have you ever done pap test.
2. *Part II: Structured knowledge questionnaire:* Structured knowledge questionnaire consisted of 32 questions covering early detection and prevention of cervical cancer. The items were of multiple-choice type with one correct answer. Each correct response carried a weightage of one score. Thus the maximum score was 32 and the minimum score was zero.

6.1. Scoring

1. (Total score -32)
2. Inadequate- less than 40% (0-11)
3. Moderate–41%-70% (12-24)
4. Adequate -70%-100 % (25-32)

7. Development of Video Assisted Teaching

One of the objectives of the study was to prepare and validate video assisted teaching program. It was prepared based on.

1. Literature review
2. Discussion with experts
3. Investigator's own experience

The Video Assisted Teaching was developed according to the objectives of the study. The investigator prepared overall plan of (VAT), which covered all areas dealt in the questionnaire.[20,21]

7.1. Pilot study

The investigator obtained formal consent from sarpanch of Begamkhedi, Indore for. The purpose of this study and confidentiality was explained to the women. The investigator selected 30 women as per the inclusion criteria for the pilot study. They were selected by convenient sampling technique. Group was assessed for the knowledge

Table 2: Distribution of women participants according to demographic variables

S. No.	Demographic Variable	Number	Percentage
1.	**Age**		
	a.21-30 years	70	23.3
	b.31-40 years	100	33.3
	c.41-50 years	80	26.7
	d.51 years and above	50	16.7
2.	**Religion**		
	a.Hindu	140	46.6
	b.Muslim	90	30.0
	c.Sikh	50	16.7
	d.Others	20	6.7
3.	**Marital Status**		
	a.Married	180	60.0
	b.Unmarried	20	6.7
	c.Widow	20	6.7
	d.Separated	80	26.6
4.	**Age of the woman at her marriage**		
	a.10-15 years	230	76.7
	b.15-20 years	40	13.3
	c.20-25 years	0	0.0
	d.25-30 years	30	10.0

Table 2. cont...

S. No.	Demographic Variable	Number	Percentage
5.	No. of times you have conceived		
	a. Never	30	10.0
	b. One time	180	60.0
	c.Two times	70	23.3
	d.Three times and above	20	6.7
6.	Methods of contraception used		
	a.Pills	70	23.3
	b.Condoms	40	13.3
	c.Copper-T	90	30.0
	d.Tubectomy	70	23.3
	e.None	30	10.0
7.	Educational Status		
	a.Primary	100	33.4
	b.Secondary	120	40.0
	c.Higher secondary and above	40	13.3
	d.Illiterate	40	13.3
8.	Occupation		
	a.House wife	90	30.0
	b.Labourer	90	30.0
	c.Working class	50	16.7
	d.Household worker	70	23.3
9.	Any kind of addictions		
	a.Smoking	20	6.7
	b.Alcoholism	18	6.0
	c.Tobacco chewing	160	53.3
	d.None	102	34.0
10.	Family Income:		
	a.BelowRs.10000	70	23.3
	b.Rs. 10000 – Rs. 20000	120	40.0
	c.Rs.20000 – Rs. 30000	69	23.0
	d.Rs.30000 and above	41	13.7

Table 2. cont...

S. No.	Demographic Variable	Number	Percentage
11.	History of cancer in family		
	a. Yes	96	32.0
	b. No	204	68.0
12.	History of recurrent infections		
	a.Yes	140	46.7
	b.No	160	53.3
13.	Previous information about cervical cancer	190	63.3
	a.Yes	110	36.7
	b.No		
14.	Have you ever done PAP test?		
	a.Yes	190	63.3
	b.No	110	36.7
	Total	300	100.0

of early detection and prevention of cervical cancer. The video assisted teaching programme was implemented and post-test was done on the seventh day. The analysis revealed that the overall pre-test mean was 6.80 and post-test mean was 17.73. Thet value was found to be 14.010 which was statistically significant.

The participants showed positive response towards the intervention and the pilot study helped the investigator to make modifications in the tool to precede it for the main study. In the knowledge questionnaire the number of items was reduced to 36 from 40 as the questions were difficult to answer for the participants.

Pilot study aided the investigator to check the feasibility of conducting the main study, to determine the method of statistical analysis and to assess the time required for data collection.

8. Method of Data Collection

The data collection was scheduled and prior permission was obtained from sarpanch from selected community areas. The investigator visited the rural areas on the given date and was introduced to the women. The purpose of the study was explained to the women. The confidentiality of their identity and responses was assured in order to ensure their cooperation and prompt response. After obtaining the consent for the study, the tool was administered to the group. The pre-test was conducted and video assisted teaching programme was administered, the average time taken to conduct pre-test was 60 minutes. Post-test was performed on the 7^{th} day using the same structured knowledge questionnaire. The respondents co-operated well with the investigator. At the end of data collection the investigator thanked the respondents for their co-operation. The investigator faced no problems during the data collection procedure.

8.1. Plan for data analysis

Data analysis is the systematic organization and synthesis of research data and testing of research hypothes is using those data. The data obtained in this study would be entered into a Master data sheet prepared by the investigator to analyze the data. The data would be analyzed in terms of descriptive (frequency, percentage, mean, range, median and standard deviation) and inferential ('t' test and X^2 test)statistics

9. Result

There were 70 (23.3%) women in the age group 21-30 years, 100 (33.3%) women were in the age group 31-40 years, 80 (26.7%) women were in the age group 41-50 years and 50 (16.7%) women were in the age group 51 years and above. Majority of the women were in the age group 31-40 years. 140 (46.6%) women belonged to Hindu religion, 90 (30.0%) women belonged to Muslim religion, 50 (16.7%) women belonged to Sikh religion and 20 (6.7%) women belonged to other religions. Majority of the women belonged to Hindu religion. 180 (60.0%) women were married, 20 (6.7%) women were unmarried, 20 (6.7%) women were widow and 80 (26.6%) women were separated. 230 (76.7%) women were of age 10-15 years at marriage, 40 (13.3%) women were of age 15-20 years at marriage and 30 (10.0%) women were of age 25-30 years at marriage. Majority of the women participants were in the 10-15 years of age at marriage. 30 (10.0%) women participants had never conceived, 180 (60.0%) women had conceived one time, 70 (23.3%) women had conceived two times and 20 (6.7%) women had conceived three and more than three times. Majority of the women had conceived one time. 70 (23.3%) women were using oral contraceptive pills, 40 (13.3%) were using condoms as contraception, 90 (30.0%) women were using Copper-T, 70 (23.3%) women had undergone tubectomy and 30 (10.0%) women were not using any contraceptive method. 100 (33.4%) women

had done their primary education, 120 (40.0%) women had done their secondary education, 40 (13.3%) women had done their higher secondary and above education and 40 (13.3%) women were illiterate. Majority of the women had done their secondary education. 90 (30.0%) women were housewives, 90 (30.0%) women were working as labourers, 50 (16.7%) women were working class and 70 (23.3%) women were household workers. 20 (6.7%) women were smoking, 18 (6.0%) women were addicted to alcohol, 160 (53.3%) women were addicted to chewing tobacco and 102 (34.0%) women were not addicted to any substance use. Majority of the women were tobacco chewers. 70 (23.3%) women were having a family income of below Rs. 10000, 120 (40.0%) women were having a family income between Rs. 10000 – Rs. 20000, 69 (23.0%) women were having a family income between Rs. 20000 – Rs. 30000 and 41 (13.7%) women were having a family income of Rs. 30000 and above. Majority of the women were having a family monthly income between Rs. 10000 – Rs. 20000. 96 (32.0%) women were having a family history of cancer, while 204 (68.0%) women were not having any such family history. Majority of the women were not having any family history of cancer. 140 (46.7%) women were having a history of recurrent infections, while 160 (53.3%) women were not having any such history of recurrent infections. Majority of women were not having any history of recurrent infections. 190 (63.3%) women were having previous information about cervical cancer, while 110 (36.7%) women were not having any previous information about cervical cancer. 190 (63.3%) women had under gone PAP test, while 110 (36.7%) women had never undergone PAP test. Majority of the women had undergone PAP test.

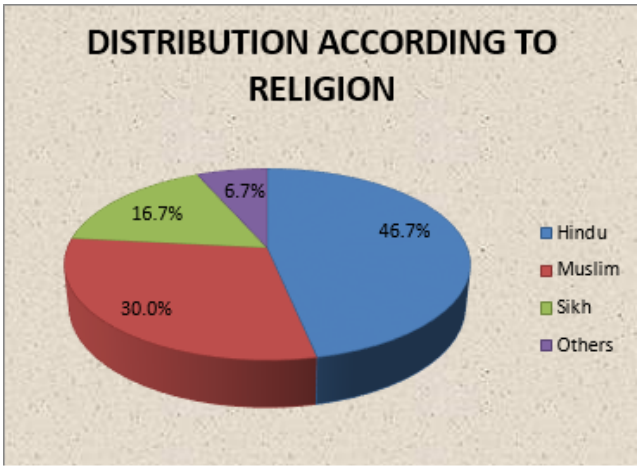

Fig. 1: Pie diagram showing distribution according to religion

In the pretest, 120 (40.0%) women had obtained poor knowledge score, 30 (10.0%) women had obtained fair knowledge score, 120 (40.0%) women had obtained good knowledge score and 30 (10.0%) women had obtained

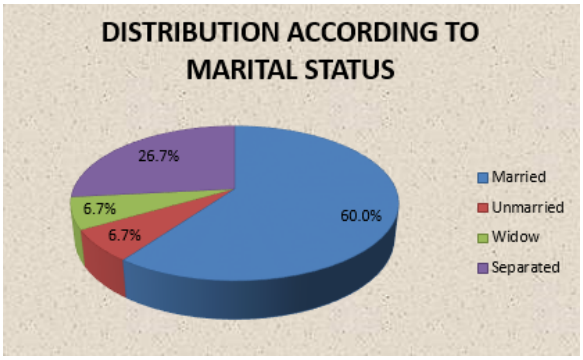

Fig. 2: Pie diagram showing distribution according to marital status

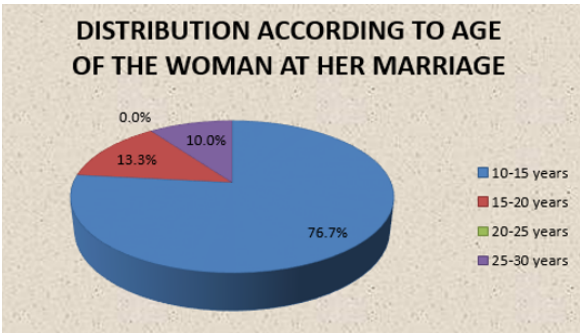

Fig. 3: Pie diagram showing distribution according to age of the woman at her marriage

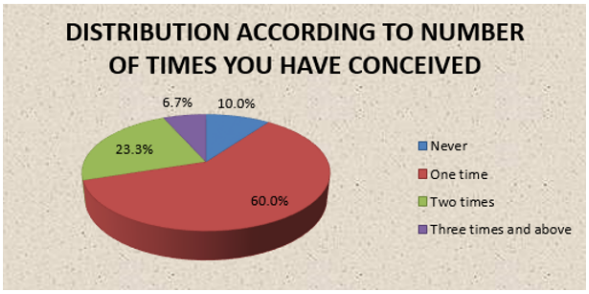

Fig. 4: Pie diagram showing distribution according to number of times you have conceived

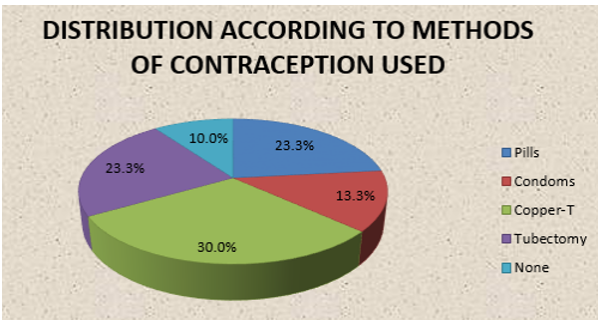

Fig. 5: Pie diagram showing distribution according to methods of contraception used

Table 3: Comparison of pretest and posttest knowledge score

S. No.	Knowledge Score	Pretest		Posttest	
		No.	%	No.	%
1.	Poor (0-8)	120	40.0	0	0.0
2.	Fair (9-16)	30	10.0	50	16.7
3.	Good (17-24)	120	40.0	70	23.3
4.	Excellent (25-32)	30	10.0	180	60.0
	Total	300	100.0	300	100.0

Table 4: Comparison of mean pretest and posttest knowledge score

Group	No.	Knowledge Score [Mean ± SD]	't' value	P value
Pretest	300	13.67 ± 7.66	-19.105, df=299	P<0.05
Posttest	300	23.80 ± 5.53		

Paired 't' test applied. P value < 0.05, Significant

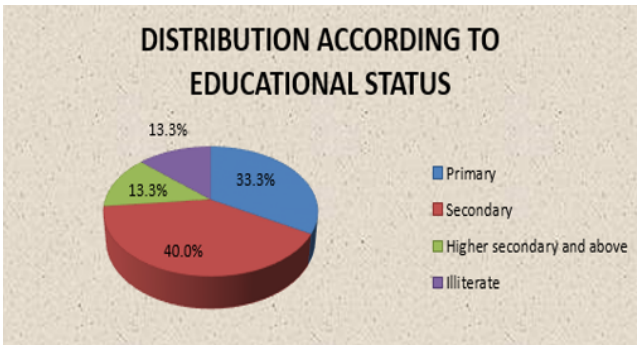

Fig. 6: Pie diagram showing distribution according to educational status

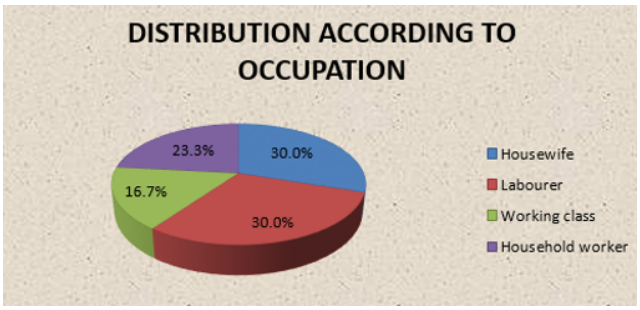

Fig. 7: Pie diagram showing distribution according to occupation

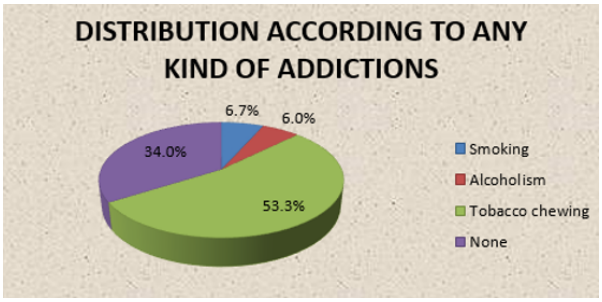

Fig. 8: Pie diagram showing distribution according to any kind of addictions

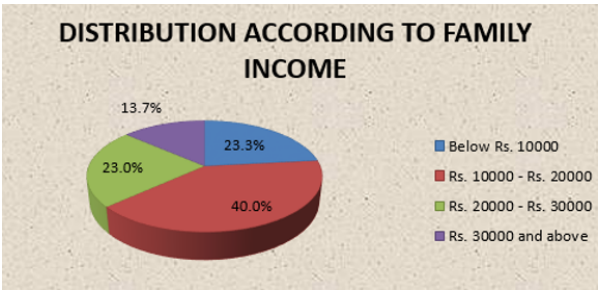

Fig. 9: Pie diagram showing distribution according to family income

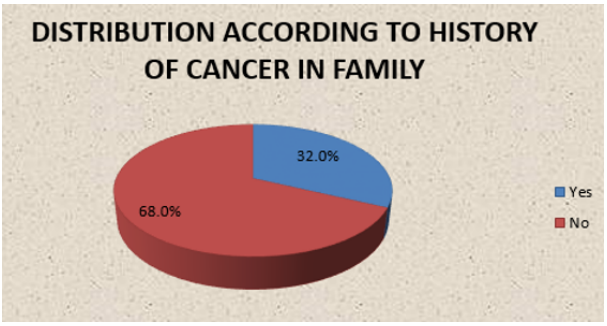

Fig. 10: Pie diagram showing distribution according to history of cancer in family

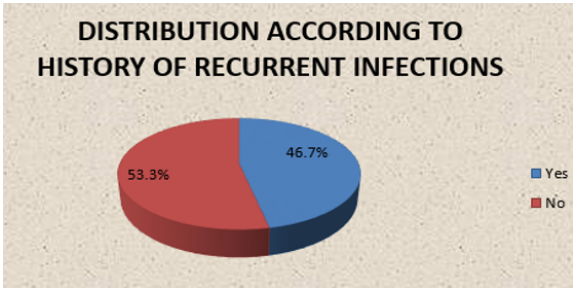

Fig. 11: Pie diagram showing distribution according to history of recurrent infections

Table 5: Association between age with pretest score. (N=300)

S. No.	Item	PretestScore Poor	Fair	Good	Excellent	χ2value	P value
1.	**Age**						
	a) 21-30years	30	10	10	20		
	b) 31-40years	40	20	30	10	84.893,	P>0.0
	c) 41-50years	30	0	50	0	df=9	5
	d) 51 years and above	20	0	30	0		
2.	**Religion:** a) Hindu b) Muslim c) Sikh d) Others	90 10 20 0	0 20 10 0	30 50 20 20	20 10 0 0	127.063, df=9	P<0.05
3.	**Marital Status**						
	a. Married b. Unmarried c. Widow	60 10 20	10 0 0	90 10 0	20 0 0	68.403, df=9	P<0.05
	d. Separated	30	20	20	10		
4.	**Age of the woman at her marriage**						
	a. 10-15years b. 15-20years	60 40	30 0	110 0	30 0	90.580, df=6	P<0.05
	c.20-25 years	0	0	0	0		
	d.25-30 years	20	0	10	0		
5.	**No.of times you have conceived**						
	a. Never b. One time c. Two times	10 80 20	10 20 0	0 80 40	10 0 10	123.214, df=9	P<0.05
	d. Three times and above	10	0	0	10		
6.	**Methods of contraception used:**						
	a. Pills	30	0	30	10		
	b. Condoms c. Copper-T	10 40	0 10	20 30	10 10	55.060, df=12	P<0.05
	d. Tubectomy	30	10	30	0		
	e. None	10	10	10	0		
7.	**Educational Status:**						
	a. Primary b. Secondary c. Higher secondary and above	30 60 20	10 10 10	60 40 0	0 10 10	78.750, df=9	P<0.05
	d. Illiterate	10	0	20	10		
8.	**Occupation**						
	a. Housewife b. Labourer c. Working class	30 50 20	20 0 0	30 40 10	10 0 20	110.159, df=9	P<0.05
	d. Household worker	20	10	40	0		
9.	**Any kind of addictions:**						
	a. Smoking b. Alcoholism c. Tobacco chewing	9 9 92	0 9 20	11 0 28	0 0 20	149.162, df=9	P<0.05
	d. None	10	1	81	10		
10.	**FamilyIncome:**						
	a.BelowRs.10000 b. Rs. 10000 – Rs. 20000 c. Rs. 20000 – Rs. 30000	30 50 20	0 0 19	30 50 30	10 20 0	70.492, df=9	P>0.05
	e. Rs.30000 and above	20	11	10	0		
11.	**History of cancer in family:** a. Yes b. No	27 93	10 20	38 82	21 9	24.916, df=3	P<0.05
12.	**History of recurrent infections:** a. Yes b. No	40 80	30 0	60 60	10 20	45.536, df=3	P<0.05
13.	**Previous information about cervical cancer:** a. Yes b. No	70 50	20 10	90 30	10 20	20.096, df=3	P<0.05
14.	**Have you ever done PAP test?** a. Yes b. No	50 70	20 10	90 30	30 0	48.804, df=3	P<0.05

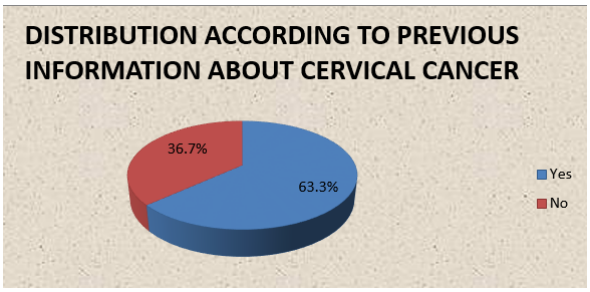

Fig. 12: Pie diagram showing distribution according to previous information about cervical cancer

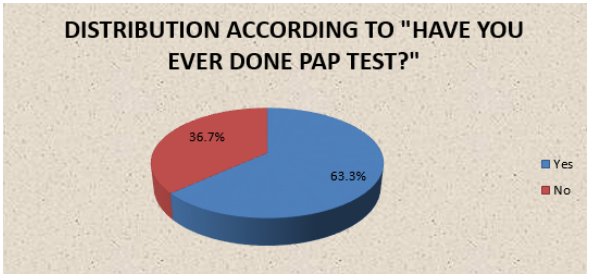

Fig. 13: Pie diagram showing distribution according to "Have you ever done PAP test?"

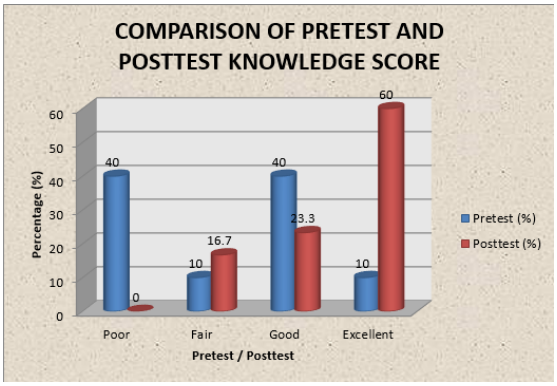

Fig. 14: Bar diagram showing comparison of pretest and posttest perceived stress grade

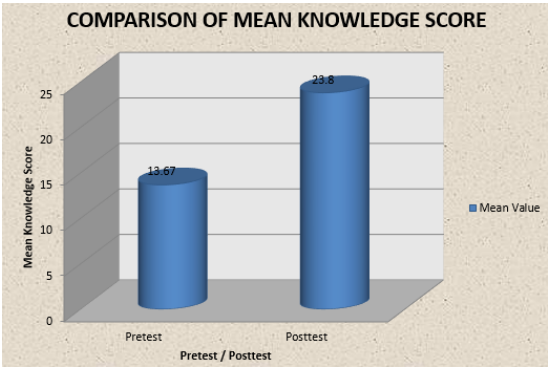

Fig. 15: Bar diagram showing comparison of mean pretest and posttest knowledge score

excellent knowledge score. Then an intervention in the form of video assisted teaching programme was given to these women and again the same set of knowledge questionnaire was read ministered and evaluated. In the posttest, 50 (16.7%) women had obtained fair knowledge score, 70 (23.3%) women had obtained good knowledge score and 180 (60.0%) women had obtained excellent knowledge score. Thus, the video assisted teaching programme was very helpful in improving the knowledge score of the women.

The above table shows the comparison of pretest and posttest knowledge score.

The mean pretest knowledge score was 13.67 ± 7.66, while the posttest knowledge score was 23.80 ± 5.53. The difference was found to be statistically significant ($p<0.05$), showing a significantly higher posttest knowledge in comparison to the pretest knowledge score.

Thus, the intervention was helpful in improving the knowledge score of the women.

Section III: Association between the pre- test knowledge score of woman from community areas and their selected demographic variables.

10. Summary

Human papillomavirus infection (HPV) causes more than 90% of cases; most people who have had HPV infections, however, do not develop cervical cancer. Other risk factors include smoking, a weak immune system, birth control pills, starting sex at ayoung age, and having many sexual partners, but these are less important. Cervicalcancer typically develops from precancerous changes over 10 to 20 years. About 90% of cervical cancer cases are squamous cell carcinomas,10% areadeno carcinoma, and a small number are other types.Diagnosis is typically by cervical screening followed by biopsy. Medical imaging is the done to determine whether or not the cancer has spread

HPV vaccines protect against two to seven high-risk strains of this familyof viruses and may prevent up to 90% of cervical cancers. As a risk of cancer still exists, guidelines recommend continuing regular Paptests. Other methods of prevention include having few or no sexual partners and the use of condoms. Cervical cancer screening using the Pap test or acetic acid can identify precancerous changes,which when treated, can prevent the development of cancer.

11. Conclusion

The study concluded that video assisted teaching programme was effective in improving the knowledge of women regarding early detection and prevention of cervical cancer from selected community areas.The study recommended the utilization of video assisted teaching programme by community health nurses,nurse researchers, nurse administrators, nurse educators and health care

professionals to improve knowledge of early detection of cervical cancer.

12. Source of Funding

None.

13. Conflict of Interest

None.

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