

A Study to Assess the Effectiveness of Structured Teaching Program on Knowledge regarding Prevention of Cervical Cancer among Girl Students in Selected Higher Secondary Schools of Guwahati, Assam

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Abstract: Cervical cancer is one of the leading causes of cancer death among female worldwide. Cervical cancer is mainly caused by Human Papilloma Virus infection. A Pre - experimental one group pretest posttest design was adopted to assess the effectiveness of structured teaching program on knowledge regarding prevention of cervical cancer among girl students in selected higher secondary schools of Guwahati, Assam. 84 girl students were selected using convenience sampling technique. Self structured questionnaire is used to collect data. Results shows in pre - test 54 (64.3%) of participants had moderately adequate knowledge, 19 (22.6%) had inadequate knowledge and 11 (13.1%) had adequate knowledge. In post - test 41 (48.8%) of participants had moderately adequate knowledge, 35 (41.7%) had adequate knowledge and 8 (9.5%) had inadequate knowledge. The pre - test mean knowledge score was 7.17 ± 2.122 and post - test mean knowledge score was 21.81 ± 1.787 with mean difference was 14.35. The comparison was tested using paired t test with obtained ($t=43.35$) at $df=83$ was statistically significant at $p<0.05$ level of significant. The study revealed that educational status of the students and previous knowledge were found significant association at $p<0.05$ level with pre - test knowledge. The study concludes that structured teaching programme was effective and a useful means of educating the girl students to improve their knowledge.

Keywords: Effectiveness, Structured Teaching Programme, Knowledge, Prevention, Cervical Cancer

1. Introduction

“You beat cancer by how you live why you live and in the manner in which you live.”

- Stuart Scott

Cancer is increasingly being recognized as a major cause of mortality and morbidity, with approximately 18.1 million new cases reported in 2018. Statistics suggest that about 527, 624 new cases of cervical cancers are added every year. To this, India contributes about 122, 844 cervical cancer cases every year.¹

Cervical cancer is mainly caused by Human Papilloma Virus infection. High - risk sub types of the human papilloma virus (HPV) are the cause of the disease in most cases. Cervical cancer is a multifactorial disease. A number of risk factors have been associate with cervical cancer, namely illiteracy, low socio economic status, long duration of contraceptive use, early menarche, early first childbirth, multiple sex partner, genital infection, poor genital hygiene.²

According to World Health Organization (WHO) Cervical cancer develops in a women’s cervix (the entrance to the uterus from the vagina). Almost all cervical cases (99%) are linked to infection with high risk human papilloma virus (HPV) an extremely common virus transmitted through sexual contact.³ When cervical cancer is found early, it is highly treatable and associated with long survival and good quality of life.⁴

2. Literature Survey

The introduction of Papanicolaou test led to significant reduction in mortality and morbidity in developed countries where proportion of women who are screened by Pap test vary from 68 - 84 percent. On the other hand, the screening coverage in Asian countries is low.⁵

Around 85% of cervical cancers cases and 90% of related deaths occur in low and middle income economy settings. Detection of cervical cancer at an early stage is associated with excellent survival but most women in developing countries present with advanced and often untreatable disease, with very poor survival.⁶ In many developing countries there is lack of access to prevention, early diagnosis, treatment and palliation for cancer related disease.⁷ Unlike developed countries, cervical cancer prevention program have failed to meet their objectives in developing countries due to financial, social and logistical problems.⁸

Every year in India, 122, 844 women are diagnosed with cervical cancer and 67, 477 die from the disease. India has a population of 432.2 million women aged 15 years and older who are at risk of developing cervical cancer.⁹

A study was conducted by I N, Jacqueline J, Mary, Xavier et al. on effectiveness of STP on prevention of cervical cancer among married women in selected rural areas of Kasaragod Dist, Kerala. Sample size is 50 Convenient sampling

technique was adopted for this study. The results of the study showed that 60% of the sample have poor knowledge, majority (50%) had very good attitude. 42% of samples were identified with the perceived barriers of screening. The study results indicated that there is a significant difference in the mean pre and post - test knowledge scores.¹⁰

3. Objectives

- To assess the pretest knowledge regarding prevention of cervical cancer among girl students in selected higher secondary schools of Guwahati, Assam.
- To assess the posttest knowledge regarding prevention of cervical cancer among girl students in selected higher secondary schools of Guwahati, Assam
- To evaluate the effectiveness of structured teaching program on knowledge regarding prevention of cervical cancer.
- To find out the association between pretest knowledge score with selected demographic variable.

Hypothesis:

All hypothesis were measure at 0.05 level of significance.

H₁: There is a significant difference between pre - test and post - test knowledge scores regarding prevention of cervical cancer.

H₂: There is significant association between pre - test level of knowledge regarding cervical cancer among higher secondary girl students with their selected demographic variables.

4. Methodology

The research approach adopted for the study was quantitative approach and the research design adopted was pre experimental one group pretest posttest design and it was used to assess the effectiveness of structured teaching program on knowledge regarding prevention of cervical cancer among girl students. The study was conducted after getting approval from the ethical committee. Formal permission was obtained from the Principal of Kamrup Academy H. S. School and Dispur Govt H. S School, Guwahati, Assam.

The study subjects were assured for confidentiality of the data obtained. Informed consent was taken before conducting the study. Using convenience sampling technique, 84 participants were selected for the study.

Tools used:

The tool used for the study are

Section I: Demographic Variables

This section includes age, class, stream of the student, father's education, mother's education, monthly family income, family history of cervical cancer, previous knowledge and Source of information etc.

Section II: Self structured questionnaire on knowledge on cervical cancer

It consists of structured multiple choice knowledge questionnaire to assess the level of knowledge regarding cervical cancer, which includes 25 multiple choice questions

to assess knowledge regarding meaning of cervical cancer, risk factors, signs And Symptoms, diagnosis, management and prevention.

5. Results/ Discussion

Table 1 depicts the frequency and percentage distribution of higher secondary girl students according to demographic variables where it shows that out of 84 samples majority of the girl students 38 (45.3%) were belonged to the age group 17 years, 64 (76.2%) were in class XI, 56 (66.7%) were belonged to arts stream. Regarding father's education of the samples 31 (36.8%) were middle school certificate passed and mother's education of the samples 40 (47.6%) were high school certificate passed, in view of monthly family income, 37 (44%) had family income of Rs.18, 497 - 30, 830. All participates i. e 100% reported that none of them had family history of cervical cancer. 55 (65.5%) had no previous knowledge about cervical cancer. Regarding source of information 12 (41.4%) reported the source of information from mass media.

Section I

Table 1: Frequency and percentage distribution of higher secondary girl students according to demographic variables
n=84

S No.	Demographic data	Frequency	Percentage (%)
1.	Age in years		
	a. 16 years	30	35.7
	b. 17 years	38	45.3
	c. 18 years	16	19
2	Educational status		
	a. Class XI	64	76.2
	b. Class XII	20	23.8
3	Stream of students		
	a. Science	28	33.3
	b. Arts	56	66.7
4.	Education of father		
	a. Profession or honors	0	0
	b. Graduate	3	3.6
	c. Intermediate or diploma	4	4.8
	d. High school certificate	22	26.2
	e. Middle school certificate	31	36.8
	f. Primary school certificate	22	26.2
	g. Illiterate	2	2.4
5.	Education of mother		
	a. Profession or honors	0	0
	b. Graduate	6	7.1
	c. Intermediate or diploma	0	0
	d. High school certificate	40	47.6
	e. Middle school certificate	24	28.6
	f. Primary school certificate	10	11.9
	g. Illiterate	4	4.8
6.	Monthly family income		
	a. $\geq 1, 23, 322$	0	0
	b. 61, 663 – 1, 23, 321	0	0
	c. 46, 129 – 61, 662	5	6
	d. 30, 831 – 46, 128	31	36.9
	e. 18, 497 – 30, 830	37	44
	f. 6, 175 – 18, 496	11	13.1
	g. $\leq 6, 174$	0	0

7.	Family history of cervical cancer		
	a. Yes	0	0
	b. No	84	100
8.	Previous knowledge		
	a. Yes	29	34.5
	b. No	55	65.5
9.	Source of previous knowledge		
	a. Mass media	12	41.4
	b. Family member	7	24.2
	c. Social media	5	17.2
	d. Others	5	17.2

Section II - a

Table 2.1 depicts the frequency and percentage distribution of pre - test level of knowledge of higher secondary girl students regarding prevention of cervical cancer. Results revealed that in pre - test majority 54 (64.3%) of participants had moderately adequate knowledge, 19 (22.6%) had inadequate knowledge and 11 (13.1%) of participants had adequate knowledge.

Table 2.1: Frequency and percentage distribution of pre - test level of knowledge of higher secondary girl students, n =84

Level of knowledge	Pre - test knowledge	
	f	%
Inadequate knowledge	19	22.6
Moderately adequate knowledge	54	64.3
Adequate knowledge	11	13.1

Table 3: Area wise pre test and posttest mean percentage knowledge score, mean percentage actual gain score and modified mean percentage gain score of higher secondary girl students, n=84

Selected area	Mean percentage		Gain in score		
	Pre - test (%)	Post -test (%)	Actual gain	Possible gain	Modified gain
Area I	31.6	87.8	56.2	59.5	*0.91
Area II	24	83	59	62.4	0.86
Area III	22	95	73	82.5	0.82
Area IV	27	86	59	65	0.84
Area V	16	94	78	86.8	**0.80
Area VI	32.8	87.8	55	63.4	0.81

Section IV

Table 4: Effectiveness of structured teaching programme of higher secondary girl students, n=84

Comparison of knowledge	Mean	SD	Mean Difference	t test value	df	p value
Pre - test	7.17	2.122	14.64	43.35	83	0.001**

Table 4 depicts Effectiveness of structured teaching programme of higher secondary girl students on knowledge regarding prevention of cervical cancer. pre - test mean knowledge score was 7.17±2.122 and post - test mean knowledge score was 21.81±1.787 with mean difference

was 14.64. The effectiveness of structured teaching program on knowledge regarding prevention of cervical cancer among girls students was tested using paired t test with obtained (t=43.35) at df=83 was statistically significant at p<0.05 level of significant, and H₁ is accepted.

Section V

Table 5: Association between pre - test level of knowledge of higher secondary girl students regarding prevention of cervical cancer with their selected demographic variables

S. No.	Demographic variables	Pre - test level of knowledge			χ ² value	df	p value
		Inadequate	Moderate	Adequate			
1	Age in years				0.934	4	0.920 ^{NS}
	a. 16 years	7	19	4			
	b. 17 years	8	24	6			
	c. 18 years	4	11	1			
2	Educational status						

Section II –b

Table 2.2 depicts the Frequency and percentage distribution of post - test level of knowledge of higher secondary girl students regarding prevention of cervical cancer. Results revealed that in post - test majority 41 (48.8%) of participants had moderately adequate knowledge, 35 (41.7%) had adequate knowledge and 8 (9.5%) of participants had inadequate knowledge regarding prevention of cervical cancer.

Table 2.2 Frequency and percentage distribution of post - test level of knowledge of higher secondary girl students n=84

Level of knowledge	Post - test knowledge	
	f	%
Inadequate knowledge	8	9.5
Moderately adequate knowledge	41	48.8
Adequate knowledge	35	41.7

Section III

Table 3 showed that post test mean percentage scores in all areas of the structured teaching program were higher than the pre test mean percentage score. The maximum modified gain score (0.91) were in the area I. Area I on related general information regarding cervical cancer. And minimum gain score (0.80) was in area Von treatment of cervical cancer. Since the modified gain in all areas were higher than 0.5 it can be concluded that there was gain in knowledge in all areas.

	a. Class XI	10	43	11	9.603	2	0.008*
	b. Class XII	9	11	0			
3	Stream of students				1.037	2	0.596 ^{NS}
	a. Science	8	16	4			
	b. Arts	11	38	7			
4	Education of father				7.388	10	0.688 ^{NS}
	a. Profession or honors	--	--	--			
	b. Graduate	0	3	0			
	c. Intermediate or diploma	0	4	0			
	d. High school	7	11	4			
	e. Middle school	8	19	4			
	f. Primary school	4	15	3			
g. Illiterate	0	2	0				
5	Education of father				8.531	8	0.383 ^{NS}
	a. Profession or honors	--	--	--			
	b. Graduate	1	4	1			
	c. Intermediate or diploma	--	--	--			
	d. High school	11	23	6			
	e. Middle school	4	19	1			
	f. Primary school	1	6	3			
g. Illiterate	2	2	0				
6	Monthly family income				6.081	6	0.414 ^{NS}
	a. ≥ 1, 23, 322	--	--	--			
	b. 61, 663 – 1, 23, 321	--	--	--			
	c. 46, 129 – 61, 662	1	3	1			
	d. 30, 831 – 46, 128	5	20	6			
	e. 18, 497 – 30, 830	8	25	4			
	f. 6, 175 – 18, 496	5	6	0			
g. ≤ 6, 174	--	--	--				
7	Family history of cervical cancer				NA	NA	NA
	a. Yes	--	--	--			
	b. No	19	54	9			
8	Previous knowledge of students regarding cervical cancer				10.29	2	0.005*
	a. Yes	6	32	10			
	b. No	13	22	1			

Table 5 depicts the association between educational status of the students and previous knowledge were found significant association at $p < 0.05$ level with pre - test knowledge and hence H_2 is accepted. $n=84$

6. Conclusion

Nursing personnel must have holistic knowledge regarding different aspects of prevention of cervical cancer. Nurses play a vital role in the teaching aspects of prevention of cervical cancer. The present study had been supported by a series of other studies which confirmed that the knowledge on prevention of cervical cancer is important to get healthy life. On the basis of the findings of the present study, it can be concluded the structured teaching programme on prevention of cervical cancer was found to be effective and an useful means of educating the girl students to improve their knowledge.

7. Future Scope

The study can be done in different settings. The same study can be done on a larger sample for more valid generalization.

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