

# A Study to Assess Knowledge Regarding Human Papilloma Virus Infection and Cervical Cancer among College Girls in Selected Colleges of District Patiala, Punjab

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**Abstract:** Cervical cancer is the second most common cancer in women worldwide and the most common in women of under-developed and developing countries. This paper aims to assess knowledge regarding Human Papilloma Virus infection and Cervical Cancer among college girls. A descriptive research design is used in the present study. The sample size was 200 college girls (age 17-24 years) who were selected through purposive sampling technique from colleges of district Patiala of Punjab State of India. Demographic, self-structured questionnaire (multiple choice questions) and a checklist for assessing knowledge were used to collect the data for the present study. The knowledge score was  $8.88 \pm 4.217$ . There was a significant association of level of knowledge with religion. There was a nonsignificant association of level of knowledge with age, year of study, stream of graduation, marital status, family income, type of family, place of residence, the source of information and number of sexual partners. This study can further be used as a preventive measure for creating awareness and maintaining healthy behavior patterns in different settings among students.

**Keywords:** Human Papilloma Virus Infection, Cervical Cancer, Descriptive Study, College Girls, Punjab, India

## I. INTRODUCTION AND BACKGROUND OF THE STUDY

Cervical cancer is a serious public health problem. Globally, every year around 500,000 women develop cervical cancer and almost 274,000 of them die from the disease<sup>1,3</sup>. It is suggested that it is the second most common cancer in women worldwide and the most common in women of under-developed and developing countries which bear more than 80% of the global burden of the diseases<sup>2</sup>. This reflects the lack of effective control measures in these countries<sup>2</sup>. It is revealed that the epidemiological evidence includes a large and consistent body of studies indicating, beyond any reasonable doubt, strong and specific associations relating Human Papilloma Virus infections to cervical cancer<sup>4</sup>. It was indicated that cofactors such as tobacco smoking, use of oral contraceptives, immunosuppressant particularly related to HIV infection with other sexually transmitted diseases, parity, and poor nutrition have also been associated, to some extents, with the development of cervical cancer<sup>5</sup>. It has been done Case-control studies, case series, and prevalence surveys which have unequivocally shown that Human Papilloma Virus DNA can be detected in inadequate specimens of cervical cancer in 90–100% of cases, compared with a prevalence of 5–20% in cervical specimens from women identified as suitable epidemiological controls<sup>6</sup>.

## II. LITERATURE REVIEW

A study with a random sample of 1348 adolescents and young women aged 14-24 years in Italy. Only 23.3% have heard that HPV is an infection of the genital mucosa and about cervical cancer. Those older, with at least one parent who is a health care professional, with the personal, familiar, or friendly history of cervical cancer, and has undergone a health check-up in the last year with information about HPV vaccination were significantly more knowledgeable. Risk perception scores (range: 1-10) of contracting HPV infection and of developing cervical cancer were 5.8 and 6.5. Older age, not having a parent who is a health care professional, having had a personal, familiar, or friendly history of cervical cancer, and need of additional information were predictors of the perceived susceptibility of developing cervical cancer<sup>7</sup>. A study conducted among college-aged females (18-24) in California State University, Fullerton. There were 100 participants and out of which, one third (33.7%) had never heard of HPV before this study, only 12.1% thought their knowledge was “good” and 87.9% rated their subjective knowledge of HPV knowledge as “poor”. Participants further reported high perceived severity of (74%), and susceptibility to (88.9%) HPV infection. They also reported perceived benefits (75.3%) to preventative sexual behavior and perceived obstacles (81.4%) to initiating those

behaviors<sup>8</sup>. A study conducted among 650 ethnically diverse female university students' at University of Malaya, Malaysia. Knowledge regarding HPV, HPV vaccination, cervical screening, and cervical cancer was remarkably poor. Across the sample, the mean total knowledge score (14-items) was only 3.25 (S.D. +/-2.41; 95% CI 3.07-3.44). Only 10.3% had heard of the newly released HPV vaccine. Approximately 48% of participants indicated an intention to receive an HPV vaccine. Intention to receive an HPV vaccine was significantly associated with knowledge of HPV and genital warts (OR 1.53; 95% CI 1.25-1.88), and knowledge of cervical screening and cervical cancer risk factors (OR 1.21; 95% CI 1.11-1.33). Of those who refused HPV vaccination, 50.9% doubted the safety and efficacy of the new vaccine, and 41.5% perceived themselves as not at risk of HPV infection<sup>9</sup>.

### III. OBJECTIVES

1. To assess the knowledge on human papilloma virus infection and cervical cancer among college girls.
2. To find out the association of knowledge, regarding human papilloma virus infection and cervical cancer with demographic variables.

### IV. METHODOLOGY

#### Research Approach

A survey research approach was used for the present study.

#### Research Design

For the present study, the descriptive research design was used to accomplish the objectives of the study.

#### Selection & Description of Field for the Study

The study was conducted in selected colleges of district Patiala, Punjab, India.

#### Sample Size and Sampling Technique

200 college girls were selected as study subjects who are pursuing graduation degree programme in the selected colleges of district Patiala, India based upon the inclusion and exclusion criteria. The proposed sample was selected by purposive sampling technique as they were agreed to participate in the study.

#### Tools of Study

After comprehensive review of relevant literature, experts' opinion & researcher's own experience, a self-structured questionnaire (MCQs) was developed to assess knowledge regarding Human Papilloma Virus infection and cervical cancer. The formal written permission was obtained from the Principals of the selected colleges. The data collection was done during March 2015. The study was conducted on college girls pursuing graduation degree programme. Total 200 college girls were selected based on inclusion and exclusion criteria through purposive sampling technique. Informed written consent was also obtained.

### V. DATA ANALYSIS

The data analysis work was done by using descriptive and inferential statistics such as mean, percentage, standard deviation, paired and unpaired t-test, and ANOVA test. The results of the study were interpreted accordingly. A plan for data analysis was prepared by the investigator after the pilot study in terms of descriptive and inferential statistics which allowed the researcher to organize the data in ways that give meaning and facilitate insight. It was planned to find out the Mean, Standard Deviation, Mean percentage of the variables and Chi-square test to find out the association between knowledge with selected demographic variables.

### VI. RESULTS

Table 1 Frequency and percentage distribution of college girls according to selected demographic variables

S. No.	Demographic Variable	Range	Control Group (N=200)	
			Frequency (f)	Percentage (%)
1	Age (in Years)	17-18	25	12.50
		19-20	72	36.00
		21-22	59	29.50
		23-24	44	22.00
2	Stream of Graduation	Arts	64	32.00
		Commerce	68	34.00
		Non-medical	68	34.00
3	Year of Study	1 <sup>st</sup>	52	26.00

		2 <sup>nd</sup>	82	41.00
		3 <sup>rd</sup>	66	33.00
4	Religion	Hindu	43	21.50
		Muslim	6	3.00
		Christian	7	3.50
		Sikh	144	72.00
5	Marital Status	Unmarried	195	97.5
		Married	5	2.5
6	Family Income (INR per month)	Less Than 15,000	44.00	22.00
		15,000 - 30,000	64.00	32.00
		Above 30,000	92.00	46.00
7	Family Type	Nuclear	124.00	62.00
		Joint	76.00	38.00
8	Place of Residence	Rural	81.00	40.50
		Semi-Urban	45.00	22.50
		Urban	74.00	37.00
9	Source of Information	Mass Media	90.00	45
		Family Members	82.00	41
		Health Care Professional	28.00	14
10	Number of Sex Partner	One	5.00	2.50
		None	195.00	97.50

N=200

NS= Non-significant

Table 1 shows the basic demographic distribution of experimental and control group. In age wise distribution, a majority of students were belonged to 19-20 years, whereas least were from 17-18 years. College girls sample size evenly distributed as per stream of education. Commerce, Non-Medical (68 each) were little more than Arts (64) students. Sample have similar trend for year of stream, most of the students were from 2<sup>nd</sup> year then followed by 3<sup>rd</sup> year and least were from 1<sup>st</sup> year. Colleges selected were from Punjab which reflects in Religion demographics too, where substantial margin belong to Sikh (72%), Hindu are a distant second (around 21%). Muslim and Christians representation was below 5%. The number of unmarried students (97.5%) was very high; only 5 girls were married out of 200 students selected for the sample. Girls from poor income (below 15,000/-Month) family were 22% than higher income group girls number was bit high (46%) in comparison to 32% of the middle-income group. Girls from nuclear family (62%) were higher in numbers compared to joint family. Representation as per place of residence is consisting of 40.5% Rural, 37% Urban, Semi-Urban 22.5%. Source of information brought a different perspective, college girls getting their information from healthcare professionals were least (14%). Mass media and family members (above 40%) were the major source of their information.

Table 2 Frequency and percentage distribution according to level of knowledge.

Level Of Knowledge	Score	Group (n=200)	
		Pre-Test	
		(f)	%
Good	≥18	5	2.50
Average	10 – 17	72	36.00
Poor	≤09	123	61.50

N=200

Max. Score = 26

Min. Score =0

Table 2 reveals that the majority of girls i.e. 123 (61.5%) had poor knowledge followed by average knowledge with 72 (36%) responses and only 5 (2.5%) had a good level of knowledge.

Table 3. Association of the level of knowledge with selected demographic variable

Sr. No	Demographic Variable	Range/Type	Knowledge Score			Test Value		
			Good	Average	Poor	Df	$\chi^2$	P
1	Age (in Years)	17-18	1	12	12	6	39.76	0.6686 <sup>NS</sup>
		19-20	1	27	44			
		21-22	1	20	38			
		23-24	2	13	29			
2	Stream of Graduation	Arts	1	21	42	4	66.24	0.6547 <sup>NS</sup>
		Commerce	2	22	44			
		Non-medical	2	29	37			
3	Year of Study	1 <sup>st</sup>	1	23	28	4	52.41	0.7093 <sup>NS</sup>
		2 <sup>nd</sup>	2	27	53			
		3 <sup>rd</sup>	2	22	42			
4	Religion	Hindu	0	22	21	6	224.88	0.0313 *
		Muslim	0	5	1			
		Christian	0	2	5			
		Sikh	5	43	96			
5	Marital Status	Unmarried	5	70	120	2	0.123	0.9264 <sup>NS</sup>
		Married	0	2	3			
6	Family Income( INR Per Month )	Less Than 15,000	1	15	28	4	45.93	0.8293 <sup>NS</sup>
		15,000 - 30,000	2	20	42			
		Above 30,000	2	37	53			
7	Family Type	Nuclear	2	46	76	2	6.25	0.5659 <sup>NS</sup>
		Joint	3	26	47			
8	Place of Residence	Rural	3	27	51	4	78.12	0.4600 <sup>NS</sup>
		Semi-Urban	1	13	31			
		Urban	1	32	41			
9	Source of Information	Mass Media	2	28	60	4	65.53	0.5494 <sup>NS</sup>
		Family Members	3	32	47			
		Health Care Professional	0	12	16			
10	Number of Sex Partner	One	0	2	3	2	0.123	0.9264 <sup>NS</sup>
		None	5	70	120			

N = 200

NS = Non-significant

\* = Significant at 0.05 level of significance

Table 3 shows the association of the pre-test level of knowledge with the selected demographic variables of the control group. In this, there was a significant association of pre-test level of knowledge with the religion of college girls as statistically analyzed by a  $\chi^2$  value of 0.0313, 0 df=6 respectively at 0.05 level of significance. Hence, it concludes that there was no influence of selected demographic variables i.e. age, stream of graduation, year of study, marital status, family income, family type, place of residence, source of information and number of sex partners on pre-test level of knowledge regarding Human Papilloma Virus infection and Cervical Cancer among college girls.

## VII. DISCUSSION

The results of the study show that most of the respondents fall in the age group of 19-20 as mentioned in table 6.1 of the study. The education wise-distribution of respondents shows that most of the i.e. 34% were doing graduation in commerce and non-medical stream. Table 6.1 also shows that majority of the respondents belongs to rural areas with 40% responses. In accordance to the source of information, a majority of the respondents indicated mass media as their source of information with 45% responses. The similar study was conducted on the subject support the results showed that 243 (78.6%) had poor knowledge, 61(19.7%) had satisfactory knowledge and only 5(1.6%) had good knowledge. Overall 172 (55.7%) of the respondents were positive about

cervical cancer and screening for the premalignant cervical lesion. Among 309 respondents, 14.2% only have ever been screened. The study has shown that there is a lack of knowledge of cervical cancer and screening for the premalignant cervical lesion. There is also poor utilization of screening services available at the study area. The reason for poor practice among others was lack of knowledge and information (10) Studies support the results of this study as although awareness of the Human Papilloma Virus vaccine was high among the population, the benefit of the vaccine was not clear to them .

### VIII. CONCLUSION

The level of knowledge is very poor among college girls regarding human papilloma virus and cervical cancer. It can further be used as a preventive measure for creating awareness and maintaining healthy behavior patterns in different settings among students.

<b>Ethical clearance:</b>	Taken from College Ethical Committee of Swift Institute Nursing, Patiala, Punjab, India
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<b>Conflict of Interest:</b>	Nil

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