

Original Research Article

Health Literacy on Human Papillomavirus, its Vaccination and Risk Factor of Cervical Cancer among Adolescent Girls

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Abstract: Human Papilloma Virus is a group of >150 related viruses and precursor to nearly all cervical cancers and genital warts. Cervical cancer ranks 1st most frequent cancer in Nepal among 15-44 years of age women. World Health organization recommends vaccination for 9–13-year-old girls as most cost-effective public health measure to diminish the risk of HPV transmission against cervical cancer. The study aimed to assess the level of knowledge and attitude on HPV, its vaccination and risk factor of cervical cancer among adolescent girls. A descriptive cross-sectional research was conducted among 400 adolescent girls at selected schools of Dharan through Systematic Random Sampling. Data were collected using Self-administered questionnaire and analyzed using descriptive and inferential statistics at the level of significance 0.05 in SPSS version 16. Majority (83.0%) of the respondents were of Middle Adolescence (14-16yrs) with mean age 15.48 years and standard deviation of ± 1.031 . More than half (52.8%) of respondents had adequate knowledge whereas more than half (55.5%) of respondents had negative attitude. There was no association between knowledge and attitude with socio-demographic variables. The correlation between levels of knowledge and attitude was positively significant with P value 0.01 ($r=0.243$). The study revealed that more than half of adolescent girls had adequate knowledge where as less than half of respondents had positive attitude and there was no association between knowledge, attitude and socio-demographic variables but correlation between knowledge and attitude was found to be positive.

Keywords: HPV, health literacy, vaccination, cervical cancer, adolescent girls.

BACKGROUND

The HPV is a group of >150 related viruses and precursor to nearly all cervical cancers and genital warts. More than 40 HPV types can be transmitted from person to person through sexual contact and can occur in the genitals, anal, or oral regions (A. Hussain *et al.*, 2016). Due to inadequate investments in screening, diagnosis, and treatment, one-third of the cervical cancer burden worldwide occurs in south Asian countries including Nepal, India, Bangladesh, and Sri Lanka. In Nepal, the most recent data 2016 indicates that 2,332 women are diagnosed with cervical cancer and 1,367 died from the disease annually with a peak incidence between 45 to 65 years of age (Thapa *et al.*, 2018).

The incidence and problems associated with sexually transmitted diseases (STDs) are of great concern, especially among adolescents and young adults. In America, 48% of STDs occur in people aged 15-24 years old and the three most common ones are HPV infection, Chlamydia and Herpes. However, because most of the HPV infections do not show any symptoms, most adolescents would not realize it until they become pre-cancerous. Studies have shown that adolescents lack knowledge about cervical cancer and HPV. In a study done in China, only 7.8% of women under 20 years old had heard about HPV while in Canada, only 13% of high school adolescents had heard about HPV, sexually transmitted diseases and pap smear test (Rashwan *et al.*, 2013). An Indian study conducted in 12-22 years aged students, 62.5% had knowledge about HPV infection that causes genital cancer (S. Hussain *et al.*, 2014). Likewise in Nepalese study done in Pokhara depicted that only 51.8% of female undergraduate students knew about the HPV vaccine and they

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were willing to be vaccinated. Over one-third of them knew risk (37.5%), transmission (44.1%) and measures to control of HPV (40.4%) (Sathian *et al.*, 2017).

According to WHO, with up to 70% coverage, the HPV vaccine can prevent >4 million deaths in women in low to middle-income countries over the next decade (A. Hussain *et al.*, 2016). The two HPV vaccines (Cervarix, and Gardasil) currently available in India, have demonstrated high efficacy in clinical trials. The efficacy of the vaccines is almost 100% against persistent cervical infection and pre-cancerous cervical lesions associated with HPV types 16 and 18 in girls/women who are free from HPV infection at baseline. A recently published study in India observed high immunogenicity and protection against persistent HPV infection among Indian girls in the age group of 10-18 years. The study found that the protection offered by 2 doses (separated by 6 months or more) of the HPV vaccine was similar to the 3-dose regimen. Although the infection will clear in a majority of women through their natural immunity, there is no reliable method to predict and identify those who will go on to develop cancer. That is why universal primary prevention with the HPV vaccine is essential (Providers, n.d.).

Several researches have shown low level of knowledge and the acceptance of the HPV vaccine among adolescents. As per Centers for Disease Control and Prevention (CDC), if these groups are vaccinated in-between 9-26 years, HPV infection can be highly prevented (Vaccination, 2020). This is only possible if these adolescents have good knowledge and positive attitude and practices towards HPV vaccine and cervical cancer screening. There are also limited studies conducted on Nepalese adolescents’ knowledge on HPV, vaccination and cervical cancer. Deficiency of knowledge of causal relationship between HPV vaccination and cervical cancer might adversely affect the vaccine acceptance. Therefore, the researcher wants to conduct the research study on the above mention topic.

METHODOLOGY

A descriptive cross-sectional research design was carried out in selected government and private schools of Dharan Sub-metropolitan city. Total 400 adolescent girls of grade 9 and 10 from selected schools who met the eligibility criteria were enrolled through systemic random sampling technique. Equal numbers of Government and Private schools was selected by random sampling method. Population was selected by proportionate sampling method. Ethical approval was obtained from the institutional Review committee BPKIHS, Dharan (IRC /1747/019). Informed written consent was obtained from each participant prior to data collection. A semi-structured self-developed questionnaire was used to assess the knowledge and attitude of the participants which was divided into 3 parts: Part I consist of 11 questions related to socio- demographic characteristics. Part II consisted of 26 score related questions to assess knowledge on HPV, its vaccination and risk factors of cervical cancer. Each correct response was given 1 score and incorrect response was given 0. Mean standard deviation was considered as cutoff point. Less than SD was considered as inadequate knowledge and more than SD as adequate knowledge. Part III consisted of 16 questions on 5 Likert scale to assess attitude towards knowledge on HPV, its vaccination and risk factors of cervical cancer. Likert scale was scored as 5 to 1 and vice-versa in positive and negative statements. Cutoff point was considered as mean standard deviation. Less than SD was considered as negative attitude and more than SD was considered as positive attitude. Instrument was pretested among 10% of the sample size in the same setting to identify the feasibility, completeness, comprehensiveness and appropriateness. Necessary modifications were made as per the inconvenience faced during pretest. Data was collected by self-administered questionnaire to the participants in a separate Classroom. The collected data was checked on the same day for completeness to find out errors and missing of information. Data obtained were coded and entered in SPSS 16 for statistical analysis. Descriptive statistics was used to describe the socio-demographic and other related variables. Inferential statistics; Pearson’s Chi Square test was used to elucidate the association between the outcome variable with various independent variables. Correlation between knowledge and attitude was assessed with the pearsons correlation test.

RESULTS

Table 1: Socio-demographic characteristics of adolescent girls, n=400

Characteristics	Frequency	Percentage
Age in Years		
Early Adolescence(10-13yrs)	9	2.2
Middle Adolescence(14-16yrs)	332	83.0
Late Adolescence(17-19 yrs)	59	14.8
Religion		
Hindu	272	68.0
Buddhist	30	7.5
Christian	35	8.8
Muslim	3	0.8

Characteristics	Frequency	Percentage
Kirat	60	15.0
Types of Family		
Nuclear Family	264	66
Joint Family	128	32
Separated Family	8	2
History of Cervical Malignancy		
Yes	3	0.8
No	378	94.5
Don't Know	14	4
Profession of Father		
Service	130	32.5
Businessman	122	30.5
Labour	26	6.5
Abroad	48	12
Farmer	39	9.8
Social worker	3	0.8
Retired	1	0.2
Death	31	7.8
Profession of Mother		
Service	43	10.8
Businesswomen	40	10.0
Labour	6	1.5
Abroad	5	1.2
Homemaker	302	75.5
Farmer	1	0.2
Death	3	0.8
Received HPV Training		
None	400	100

Table 1 depicts that majority(83.0%) of the respondents were in the age group Middle Adolescence(14-16yrs) with mean age 15.48 years and standard deviation of ± 1.031 . Most of the respondents (68%) were Hindu whereas only 15% respondents belonged of Kirat. More than half (66%) respondents were residing in nuclear family and least (2%) respondents belonged to separated family. More than one third (32.5%) of the respondents Father's profession was service and majority (75.5%) respondents mothers were homemaker. Least (0.8%) had a history of cervical malignancy in their family. None of the respondents had received any type of training related to HPV and cervical cancer.

Table: 2 Knowledge of Adolescent girls on HPV, its vaccination and risk factor of cervical cancer, n=400

Characteristics	Yes (%)	No (%)
HPV is caused by Human Papilloma Virus.	210(52.5)	190(47.5)
HPV is the most common sexually transmitted infection.	149(37.2)	251(62.8)
HPV can cause cervical cancer.	320(80.0)	80(20.0)
HPV also causes other cancers including cancer of the vulva, vagina, penis, or anus.	186(46.5)	214(53.5)
The types of HPV that can cause genital warts are not the same as the types of HPV that can cause cancers.	40(10.0)	360(90.0)
Some types of HPV infections are asymptomatic and resolve spontaneously.	144(36.0)	256(64.0)
It affects both man and woman.	170(42.5)	230(57.5)
HPV infection is transmitted through sexual skin- to- skin contact.	115(28.8)	285(71.2)
HPV can be transmitted to infant during birth.	274(68.5)	126(31.5)
HPV can infect anyone who is sexually active.	209(52.2)	191(47.8)
It is important for woman to be screened for HPV.	226(56.5)	174(43.5)
HPV infection can be reduced by practicing safer sex.	211(52.8)	189(47.2)
HPV infection can also be reduced by not having sex while there are visible genital warts.	150(37.5)	250(62.5)
HPV can be cured by taking antibiotics.	84(21.0)	316(79.0)
Treatments are available for the conditions caused by HPV, but not for the virus itself.	149(37.2)	251(62.8)
HPV infection can be prevented through vaccination.	205(51.2)	195(48.8)
HPV vaccine is highly safe and effective to non-infected people with HPV.	126(31.5)	274(68.5)
HPV vaccine is given to 9-26 years females.	115(28.8)	284(71.0)

Characteristics	Yes (%)	No (%)
The most recommended age for HPV vaccination by World Health Organization (WHO) is 9-13 years.	79(19.8)	321(80.2)
2 doses of HPV vaccine is given to those less than 15 years.	73(18.2)	327(81.8)
3 doses of HPV vaccine is given to those above 15 years.	79(19.8)	321(80.2)
The vaccines provide protection for at least 5 to 10 years.	100(25.0)	300(75.0)
Cervical cancer screening is still required following vaccination.	280(70.0)	120(30)
Nepal is having pilot program on HPV vaccine in two districts (Kaski & Chitwan).	88(22.0)	321(78.0)
Cervical cancer is caused by HPV types 16 & 18.	128(32.0)	272(68.0)
Cervical cancer can be controlled.	275(68.8)	125(31.2)
Screening and early detection are essential in preventing deaths.	294(73.5)	106(26.5)
Vaccines are available against cervical cancer.	194(48.5)	206(51.5)

Table 2 shows that respondents have comparatively greater knowledge on (80%) HPV can cause cervical cancer, (73.5%) Screening and early detection are essential in preventing deaths, (70%) Cervical cancer screening is still required following vaccination, (68.8%) Cervical cancer can be controlled. (68.5%) HPV can be transmitted to infant during birth, (56.5%) It is important for woman to be screened for HPV, (52.8%) HPV infection can be reduced by practicing safer sex, (52.5%) HPV is caused by Human Papilloma Virus, (52.2%) HPV can infect anyone who is sexually active, (51.2%) HPV infection can be prevented through vaccination whereas respondents have least knowledge on HPV infection, its transmission and its vaccination. More than half (68%) of the respondents have less knowledge on Cervical cancer is caused by HPV types 16 & 18. Majority of the respondents (78%) didn't know that Nepal is having pilot program on HPV vaccine in two districts (Kaski & Chitwan).

Table: 3 Attitude of Adolescent girls on HPV, its vaccination and risk factor of cervical cancer, n= 400

Characteristics	SA (%)	A (%)	N (%)	D (%)	SD (%)
All females below 30 years must have HPV test.*	160(40.0)	170(42.5)	54(13.5)	11(2.8)	5(1.2)
All females above 30 years must have HPV test.	126(31.5)	178(44.5)	78(19.5)	15(3.8)	3(0.8)
Woman should have HPV test done only if her Pap Smear test results abnormal.*	53(13.2)	81(20.2)	189(47.2)	58(14.5)	19(4.8)
Only females should be vaccinated against HPV.*	71(17.8)	106(26.5)	94(23.5)	106(26.5)	23(5.8)
Both boys and girls should be vaccinated against HPV.	104(26.0)	108(27.0)	102(25.5)	65(16.2)	21(5.2)
HPV vaccine should be routinely prescribed to young people in Nepal.	145(36.2)	150(37.5)	84(21.0)	16(4.0)	5(1.2)
Schools are the ideal place for maximum coverage against HPV	99(24.8)	116(29.0)	107(26.8)	58(14.5)	20(5.0)
HPV vaccine may encourage people to have start sex at early age.*	21(5.2)	28(7.0)	174(43.5)	105(26.2)	72(18.0)
Adolescent sex education should be given prior to vaccination.	128(32.0)	102(25.5)	122(30.5)	30(7.5)	18(4.5)
Teachers and parents should be informed about HPV infection and its vaccination.	261(65.2)	116(29.0)	13(3.2)	5(1.2)	5(1.2)
The cost of HPV is very high to get vaccinated.	38(9.5)	63(15.8)	208(52.0)	63(15.8)	28(7.0)
If I get the opportunity to vaccinate against HPV, I will be willing to get vaccinated.	134(33.5)	127(31.8)	112(28.0)	16(4.0)	11(2.8)
Cervical cancer screening is good for early detection of cervical cancer.	178(44.5)	129(32.2)	77(19.2)	9(2.2)	7(1.8)
All women above 30 years need to be screened for cervical cancer.	143(35.8)	130(32.5)	109(27.2)	13(3.2)	5(1.2)
Women who have received HPV vaccine don't need cervical cancer screening.*	93(23.2)	83(20.8)	130(32.5)	71(17.8)	23(5.8)
Women above 65 years do not need cervical cancer screening.	27(6.8)	61(15.2)	172(43.0)	97(24.2)	43(10.8)

* Negative Statement

Keys: SA= strongly agree, A=agree, N= Neutral, D= disagree, SD= strongly disagree

Table 3 depicts that 42.5% respondents agreed that all females below 30 years must have HPV test done. Similarly, 44.5% respondents agreed that all females above 30 years must have HPV test done. Nearly half of the (47.2%) respondents was neutral to woman should have HPV test done only if her Pap Smear test results abnormal.

Likewise, 43.5% respondents disagreed that HPV vaccine may encourage people to have start sex at early age. More than one third (32.2%) of respondents strongly agreed that adolescent sex education should be given prior to vaccination. More than half (65.2%) respondents strongly agreed that teachers and parents should be informed about HPV infection and its vaccination. Similarly, more than half (52%) respondents was neutral regarding the cost of HPV, very high to get vaccinated. Nearly half (44.5%) of respondents strongly agreed to Cervical cancer screening is good for early detection of cervical cancer.

Table: 4 Overall Knowledge and attitude among adolescent girls on HPV, its vaccination and risk factor of cervical cancer, n=400

Characteristics Level	Frequency (%)	Mean±SD
Knowledge Adequate	211(52.8%)	1.5275±0.49987
Inadequate	189 (47.2%)	
Attitude Positive	178(44.5%)	1.4450±0.49759
Negative	222(55.5%)	

Table 4 shows that more than half (52.8%) of respondents had adequate knowledge with Mean±SD equal to 1.5275±0.49987 whereas more than half (55.5%) of respondents had negative attitude with Mean±SD equal to 1.4450±0.49759.

Table: 5 Association between Knowledge and Socio-demographic variables, n=400

Characteristics	Knowledge		p- value
	Adequate	Inadequate	
Age group			
Early Adolescent	3	6	0.397
Middle Adolescent	179	153	
Late Adolescent	29	30	
Religion			
Hindu	150	122	0.374
Buddhist	11	19	
Christian	18	17	
Muslim	1	2	
Others	31	29	
Types of Family			
Nuclear Family	138	126	0.445
Joint Family	67	61	
Separated Family	6	2	
History of Cervical Malignancy			
Yes	3	3	0.163
No	204	174	
Don't Know	211	189	
Profession of Father			
Service	70	60	0.721
Businessman	66	56	
Labour	10	16	
Abroad	28	20	
Farmer	20	19	
Social worker	1	2	
Retired	1	0	
Death	15	16	
Profession of Mother			
Service	25	18	0.185
Businesswomen	21	19	
Labour	2	4	
Abroad	4	1	
Homemaker	156	146	
Farmer	0	1	
Death	3	0	
Types of school			
Government	95(47.5%)	105(52.5%)	0.035
private	116(58%)	84(42%)	

Table 5 depicts that there was no association between knowledge and socio-demographic variables like age, religion, types of family, history of malignancy and profession of parents except types of school.

Table: 6 Association between Attitude and Socio-demographic variables, n=400

Characteristics	Attitude		p- value
	Positive	Negative	
Age group			
Early Adolescent	3	6	0.781
Middle Adolescent	148	184	
Late Adolescent	27	32	
Religion			
Hindu	125	147	0.321
Buddhist	8	22	
Christian	12	23	
Muslim	2	1	
Others	31	29	
Types of Family			
Nuclear Family	110	154	0.093
Joint Family	62	66	
Separated Family	6	2	
History of Cervical Malignancy			
Yes	2	1	0.095
No	165	213	
Don't Know	8	8	
Profession of Father			
Service	69	61	0.503
Businessman	58	64	
Labour	4	22	
Abroad	21	27	
Farmer	10	29	
Social worker	3	0	
Retired	0	1	
Death	13	18	
Profession of Mother			
Service	23	20	0.731
Businesswomen	16	24	
Labour	0	6	
Abroad	3	2	
Homemaker	135	167	
Farmer	1	0	
Death	0	3	
Types of school			
Government	55(27.0%)	145(72.0%)	0.035
Private	123(61.0%)	77(38.0%)	

Table 6 depicts that there was no association between attitude and socio-demographic variables like age, religion, types of family, history of malignancy and profession of parents except types of schools.

Table: 7 Correlation between Knowledge and Attitude scores on HPV, its vaccination and risk factor of cervical cancer, n= 400

	Knowledge	Attitude
Knowledge Pearson Correlation	1	0.243**
Sig. (2 tailed)		.000
Attitude Pearson Correlation	0.243**	1
Sig. (2 tailed)	.000	

** . Correlation is significant at the 0.01 level (2-tailed)

Table 7 depicts that correlation between levels of knowledge and attitude is positively significant ($p=0.001$).

DISCUSSION

The adequate knowledge and attitude about HPV vaccination are essential prerequisites for healthcare professionals to provide patient education about HPV 16. Increasing uptake of HPV vaccines should be a priority in developing countries since they contribute to 88 % of global cervical cancer burden (Arunachalam & Subash Chandrabose, 2019).

Socio-Demographic Characteristics of Adolescent Girls

Most (83%) of the respondents belongs to the age group of 14-16 years called middle adolescent, the mean age \pm SD being 15.48 ± 1.031 years. Majority (68%) of the respondents followed Hinduism followed by Kirat(15%), Christian(8.8%), Buddhism(7.5%) and Muslim(0.8%). Over half (66%) of the respondents belonged to nuclear family followed by 32% of joint family. Least percentage (0.8%) of respondent had a history cervical malignancy in their family members. Regarding the profession of parents, majority of mother (75.5%) were Homemakers and more than one third (32.5%) fathers had their services. The study also revealed that none of the respondent (100%) had received any kind of training regarding HPV and cervical cancer.

The findings was supported by the study conducted by Ramavath K K and Olyai R in five metro cities of India (Ahmedabad, Cuttack, Lucknow, Gwalior, and Visakhapatnam) revealed the mean age of adolescent girls as 16yrs. and majority of respondents(81.6 %) were Hindu (Kavita & Olyai, 2013). There was similarity in the mean age (15.92 years) of adolescent girls in the study conducted in Turkey by Orkun Cetin *et al.*, with the current study (Çetin *et al.*, 2014).

It contradicts with the study conducted in Pundechery by D. Arunachalam, G. Subash Chandrabose, the result was depicted as 50% of the adolescent girls were in age group 13-16 yrs. and the majority of respondent had joint family (65%) where as 26.7% of them had nuclear family. But, it supported the distribution of adolescent girls according to their religion. It revealed that majority of respondent were Hindu (83.3%) followed by Christians (10%) and Muslims (6.7%) (Arunachalam & Subash Chandrabose, 2019).

Knowledge and Attitude of Respondents towards HPV, its Vaccination and Risk Factors of Cervical Cancer

The findings in current study revealed that overall level of knowledge of adolescent girls was 52.8%. Similarly, more than half (54.7%) of the students had a high level of knowledge towards HPV vaccine where female respondents aged 20 years old and below showed good knowledge i.e.56.4% in the study conducted at University Tunku Abdul Rahman, Malaysia in 2013 (Tusimin *et al.*, 2019). This contradicts with the study findings of Andrew K T, *et al.*, study conducted in Western Uganda, revealed only 17.6% of the adolescent girls overall were knowledgeable (Turiho *et al.*, 2015). Similarly, study conducted by Ramavath K K and Olyai R in India only 28 % of the respondents knew about HPV in initial health talk (Kavita & Olyai, 2013). It was found that the only 22.2% adolescent girls had sufficient information about HPV and HPV vaccine in the study by Orkun Çetin, *et al.*, conducted in Turkey (Çetin *et al.*, 2014). Similarly, the results in the study conducted by Arunachalam D *et al.*, depicted a poor awareness and knowledge of the HPV vaccine. The statistical analysis shows that more than half (56.7%) of adolescent girls having inadequate knowledge, 36.7% of children having moderately adequate knowledge and only 6.6% of them had adequate knowledge. The mean and standard deviation of knowledge score was 13 ± 3.1889 where as Mean percentage was 52% (Arunachalam & Subash Chandrabose, 2019) that contradicts with the current findings of the study as mean and standard deviation 1.5275 ± 0.49987 . Another study conducted at the University of the Free State in South Africa, 2018; also deny with the result of the present study, it shows only 15.4% of female students had knowledge on HPV virus (Mofolo *et al.*, 2018).

The present study shows less than half (44.5%) of respondents had positive attitude towards HPV screening and test, its vaccination and preventive measures for risk minimization of cervical cancer with Mean \pm SD equal to 1.4450 ± 0.49759 . The study conducted by Tusimin M *et al.*, at University Tunku Abdul Rahman, Malaysia in 2013 supports the finding by depicting the result as 42.5% of the total respondents positive attitude towards HPV vaccine where female respondents aged 20 years old and below showed more positive attitude i.e.55.8% towards HPV vaccine 26. Whereas, 74.4 % of adolescent girls agreed to get vaccinated in the study conducted by Kavita RK and Roza O. in secondary schools and colleges of five metro cities of India—Ahmedabad, Cuttack, Lucknow, Gwalior, and Visakhapatnam. The study was conducted by Adolescent Health Committee of FOGSI from April 2009 to March 2010 under the project “protecting young girls.”(Kavita & Olyai, 2013).

In contrast with the study result conducted in secondary school female students in Kuala Lumpur, Malaysia, 69.3% agreed to take the HPV vaccination if the service was available in schools (Rashwan *et al.*, 2013). The study conducted in the schools in rural areas of Negeri Sembilan, Malaysia, depicted that the majority of respondents (86.6%) were positive towards HPV vaccines and willingness towards vaccination was significantly associated with the level of knowledge of cervical cancer (Fairuz Fadhilah Mohd Jalani, 2016). This also dispute with the result of the present study.

The study conducted in Bharatpur Teaching Hospital also had contrast result with the present study. Only 34.4% women had adequate knowledge and 100 percent women had favorable attitude towards HPV vaccination (Shrestha & Dhakal, 2017). Another study conducted among adolescent students from public schools in the municipality of Teresina, state of Piauí, result shows only 27.3% had sufficient knowledge and 34.1% had positive attitudes (Galvão *et al.*, 2022). This also varies with the current study result.

Again, a study done in North India also varies the result showing a low frequency (15%) of HPV and cervical cancer awareness. Additionally, only 13% participants were willing to accept HPV vaccination (S. Hussain *et al.*, 2014).

Association of Knowledge and Attitude with Socio- Demographic Variables

The result in present study depicts that there was no association between knowledge and socio-demographic variables like age, religion, types of family, history of malignancy and profession of parents except types of school. Similarly, the study conducted in India by Swarnapriya K *et al.*, documented that age of the participant and family history of malignancy had no significant influence on the knowledge about HPV vaccination (Swarnapriya *et al.*, 2016). Likewise, another study of Puducherry, India also depicts no association with type of family, religion and level of knowledge (Arunachalam & Subash Chandrabose, 2019).

The present study depicts that there was no association between attitude and socio-demographic variables like age, religion, types of family, history of malignancy and profession of parents except types of schools.

Correlation between Knowledge and Attitude of Respondents towards HPV, its Vaccination and Risk Factors of Cervical Cancer

The current study depicts that correlation between levels of knowledge and attitude is positively significant ($p=0.001$) and correlation is significant at the 0.01 level. Similarly, a study done among secondary school students in rural areas of Negeri Sembilan, Malaysia depicts that attitude towards HPV vaccination was significantly associated with knowledge about cervical cancer ($p=0.042$) (Fairuz Fadhilah Mohd Jalani, 2016).

CONCLUSION

The study provides the baseline data of class 9 and 10 adolescent girls about the knowledge on HPV, its vaccination and risk factor of cervical cancer. The findings indicate that more than half of adolescent girls had adequate knowledge where as less than half had positive attitude. There was no significant association between knowledge, attitude and socio-demographic variables but shows positive significance between knowledge and attitude.

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CONFLICT OF INTEREST

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