Knowledge, Attitude and Practice regarding Human Papilloma Virus Vaccine among Adolescents in Bharatpur Metropolitan City, Chitwan, Nepal

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Abstract

Background: Human papillomavirus (HPV) infection is a main cause of cervical cancer. Cervical cancer kills one woman every two minutes and those in low- and middle-income countries tend to bear a disproportionate burden (90%) of cervical cancer, most cases of which are caused by the human papillomavirus (HPV) that is preventable by vaccine.

Materials and Methods: A descriptive cross-sectional study was carried out to assess the knowledge, attitude and practice regarding Human Papilloma Virus Vaccine among 256 adolescents who were studying at Grade11 and 12 selected by non-probability purposive sampling technique. The setting of the study was two private and two public schools of Bharatpur metropolitan which were selected randomly. Data was collected by using self-administered structured questionnaires from June to August, 2024 and analyzed by using both descriptive and inferential statistics through Statistical Package for Social Science (SPSS) version 22.

Findings: Despite all of the school adolescents had positive attitude regarding HPV vaccine, more than four fifth of adolescents (83.6%) had poor level of knowledge, 12.9% had moderate level of knowledge and only 3.5% had good knowledge regarding HPV infection and HPV vaccine. About one fourth (25.4%) had received HPV vaccine so majority (74.6%) of adolescents had poor practice. The findings of this study also revealed that there was association between the level of knowledge and occupation of parents (p=0.000).

Conclusion: This study concludes that though all adolescents have positive attitude regarding HPV vaccine they have still poor knowledge and practice. As the study participants'knowledge on HPV and HPV vaccine is crucial, influencing their recommendations to the general public, their family, friends thus impeding the acceptance of the HPV vaccination.

Key Words: Knowledge, Attitude, Practice, HPV, HPV Vaccine, Cancer, Adolescents

Introduction

Globally, cervical cancer continues to be one of the most common cancers among females, being the fourth most common after breast, colorectal, and lung cancer. GLOBOCAN 2020 estimated that, worldwide, there were approximately 604 000 new cases of cervical cancer, with 342 000 deaths annually. Cervical cancer kills one woman every two minutes

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and those in low- and middle-income countries tend to bear a disproportionate burden (90%) of cervical cancer, most cases of which are caused by the Human Papilloma Virus (HPV) that is preventable by vaccine.[1]

Nowadays, HPV infections are regarded as the most common sexually transmitted infections in the world. Indeed, 80% of sexually active people will become infected at some point in their lifetime. However, most of these infections are typically controlled immunologically within 1–2 years, although if they persist, they can cause different types of cancer, such as cervical cancer or oropharyngeal cancer.[2] Many studies have proved that immunization has shown important results in reducing the rates of HPV infection in countries where vaccination coverage is high and already has proved the impact on reducing the incidence of cervical cancer.[3,4]

The WHO recognizes the enormous burden on cervical cancer on women living in LMICs (low middle-income countries). So, to address this global burden, the WHO launched" The Global Strategy for the Elimination of Cervical Cancer", with triple intervention target called 90-70-90 targets in 2019. This triple target to achieve are: vaccination of girls with HPV vaccine by age 15, screening of 70% of women by 35 and 45 years of age, and third target is treatment and management of 90% of women identified with the cervical pre- invasive and invasive cancer respectively. The vaccine is primarily used to avoid an HPV infection; thus, its administration before the onset of sexual activity gives the best chance of preventing the disease.[5] The GlaxoSmithKline produced an AS04-adjuvanted HPV-16/18 bivalent vaccine (Cervarix) that has proven effective in preventing HPV-16/18-related persistent infections and cervical intraepithelial neoplasia grade 2 and above.[6]

The incidence of cervical cancer is rising among women in low- and middle-income countries (LMICs), with an estimated 531,631 (88%) of 604,127 new cases yearly. In Nepal, cervical cancer continues to be the leading cancer among women, with an annual incidence of 2,244 new cases and 1,493 deaths. Nepal has a cervical cancer incidence of 16.4 per 100,000 women, in contrast to the WHO' s desired target of 4 per 100,000 women.[7]

In Nepal, the first attempt at HPV vaccination was started in 2008 using 3,300 vials of Gardasil with the assistance of the Australian Cervical Cancer Foundation (ACCF) making it a highly successful vaccination drive. The success of this collaboration also led to the establishment of the Nepal Australian Cervical Cancer Foundation (NACCF), which has been a strong advocate of public awareness at the community level and provides free-of-cost vaccines. In addition, collaboration with GAVI led to the HPV vaccine demonstration project in 2016–2017, launched in Chitwan (8,243 girls) and Kaski (6,500 girls) districts.[8] Being Encouraged by the success of the pilot projects, the Nepal Government launched an HPV vaccination drive in nine districts across the country but currently, Nepal does not have a national HPV vaccination program and has no vaccination coverage data in the country due to prevailing political scenario and lack of fund.[9]

cervical cancer continues to be the leading cancer among Nepalese women, with an annual incidence of 2,244 new cases and 1,493 deaths (estimations for 2020).[10] Cervical cancer is the 1st leading cause of cancer deaths in women aged 15 to 44 years in Nepal.[7] In this perspective, adolescents are the target audience of immunization and they must have knowledge about the HPV and positive attitude about the vaccination to increase vaccine uptake. Having HPV vaccine knowledge and accepting the vaccine are known to be keystones for increasing the utilization of the

HPV vaccine. So, considering the importance of HPV vaccination and the high risk of exposure of adolescents to the HPV virus, this study aims to assess the knowledge, attitudes, and practices of adolescent students regarding HPV vaccine.

Methods

A descriptive cross-sectional study design was used to assess the level of to assess the level of knowledge, attitude and practice regarding Human Papilloma Virus Vaccine among adolescents who were studying at Grade11 and 12. The setting of the study was two private (Balmiki Sikshya Sadan, Sunrise English School) and two public schools (Shree Prembasti Secondary School, Shree Laxmi Madhyamik Vidhyalay, Lanku) of Bharatpur Metropolitan which were selected randomly.

A total of 256 sample were selected through non-probability purposive sampling method. Only female students were included in the study. Sample size was calculated by using formula, Sample size (n) = z^2 pq/e^2.A study was conducted by Swarnapriya et.al., among students showed that 44% had good knowledge on Human Papilloma Virus.[11] By taking this as a prevalence with 95% confidence interval with 5% margin of error. The optimal sample size of this research was, sample size was calculated by using the formula (n= ==256).

A self- administered structured questionnaire was developed by the researcher consisting of three parts where, part I included questions related to Socio-demographic variables, Part II: questions related to knowledge regarding HPV, HPV infection, HPV vaccine, Part III: Attitude regarding HPV Vaccine and Part IV: questions related to practice of HPV vaccine uptake. Data was collected from June to august, 2024

Before data collection, ethical approval for the study was obtained from the Institutional Review Committee (IRC) of BP Koirala Memorial Cancer Hospital and administrative approval was obtained from concerned authority of Bharatpur Metropolitan city and from the related schools. Autonomy of the respondents was maintained by obtaining an informed written consent from their parents. Anonymity of the participants was maintained by giving the code number. Confidentiality was maintained by using the obtained information for the research purposes only.

The collected data were checked, reviewed and organized for completeness. Then all collected data were entered and analyzed by Statistical Package for Social Science (SPSS) version 22. Data was interpreted by using descriptive statistics in terms of mean, frequency and percentage and presented in different tables. Inferential statistics, Chi square test was used to find the association between level of awareness of cancer with some selected socio-demographic variables. *P*-value <0.05 was considered statistically significant.

Results

Table 1 reveals that 38.7% of the respondents were 17 years old and the least 3.5% were 19 years. The Mean age was 16.66 and SD was 1.011 with minimum age of 15 and maximum age of 19. Majority (67.20%) of respondents were Brahman/Chettri followed by Janajati (26.20), Madhesi (3.9) and Dalit (2.7) respectively. Likewise, majority of respondents were Hinduism followed by Buddhist (10.9), Christian (2.0) and the least were Islamic (1%) respectively.

Similarly, majority of respondents' mother (55.9%) were housemaker and the least were servicer (5.5%). Moreover, 43.8% of respondents' fathers had occupation of business and the least (2.3%) were homemaker.

Table 1: Sociodemographic Information: Age, Ethnicity, Religion (n=256)

Sociodemographic variables	Frequency	Percentage
Age in Years		
15.00	35	13.7
16.00	73	28.5
17.00	99	38.7
18.00	40	15.6
19.00	9	3.5
Mean± SD = 16.66(1.011)		
Min(Max) = 15(19)		
Ethnicity		
Brahman/Chhetri	172	67.2
Janjati	67	26.2
Madhesi	10	3.9
Dalit	7	2.7
Religion		
Hinduism	222	86.7
Buddhist	28	10.9
Christian	5	2.0
Islamic	1	0.4

Table 3: Respondents' Knowledge regarding HPV (n=256)

Knowledge Variables	Correct Response	
	Frequency	Percentage
Diseases caused by HPV are:		
Genital warts	29	11.3
Oral cancer	2	0.8
Throat cancer	2	0.8
Cervical cancer	151	59.0
Mode of transmission of HPV is sexual intercourse	116	45.3
Risk factors for HPV infections:		
Early sexual debut	32	12.5
Smoking	11	4.3
Poor hygiene	87	34.0
Multiple sexual partner	94	36.7

Table 2: Sociodemographic Information: Educational level, Occupation of Mother and Father, type of school, Heard of HPV Vaccine (n=256)

Sociodemographic Variables	Frequency	Percent
Educational Level of Mother		
No education	23	9.0
Primary	35	13.7
Some secondary	57	22.3
SLC and above	141	55.1
Educational Level of Father		
No Education	8	3.1
Primary	17	6.6
Some secondary	48	18.8
SLC and above	183	71.5
Occupation of Mother		
Agriculture	27	10.5
Home maker	143	55.9
Servicer	14	5.5
Business	45	17.6
Others	27	10.5
Occupation of Mother		
Agriculture	37	14.5
Home maker	6	2.3
Servicer	28	10.9
Business	112	43.8
Others	72	28.1
Type of school		
English	138	53.9
Nepali	118	46.1

Table 2 presents that more than half (55.1%) of respondent's mother had education of SLC and above, 22.3% had some secondary education, 13.7% had primary education and 9.0% were illiterate. Likewise, majority of respondents' father had education of SLC and above 18.8% had some secondary,6.6% had primary education and 3.1% were illiterate.

Table 3 depicts that 59.0% of respondents answered correctly that cervical cancer is caused by HPV followed by genital warts (11%), oral cancer (2%), throat cancer (2%) respectively. Similarly, less than half (45.3%) of respondents knew that sexual intercourse is the most known mode of transmission of HPV. Likewise, 36.7%

of respondents answered that having multiple sexual partners is the risk factor for getting HPV infections followed by poor hygiene (34.0%), early sexual debut (12.5%) and smoking (4.3%) respectively.

Table 4 reveals the respondents' knowledge regarding HPV infections. Out of 256 respondents, 35.9% responded correctly that men also can be infected with HPV. Majority of them (84.8%) answered that a person can be infected with HPV for many years without knowing it. More than half (57.4%) knew that HPV can be transmitted through oral sex. Similarly, regarding methods of preventing HPV infections, majority (80.9%) answered that HPV vaccination followed by use of condom (19.9%), regular HPV screening (11.3%) respectively.

Table 4: Respondents' Knowledge regarding HPV Infection (n=256)

Knowledge Variables	Correct Response Frequency	Percentage
Men also can be infected with HPV	92	35.9
A person can be infected with HPV for many years without knowing it.	217	84.8
HPV can be transmitted through oral sex	147	57.4
Methods of preventing HPV infections:		
HPV vaccination	207	80.9
Use of condom	51	19.9
Regular HPV screening	29	11.3

Table 5 presents respondents' knowledge regarding HPV vaccine. Among 256 respondents, majority (70.3%) knew that HPV vaccine can protect from cancers of cervix, vulva and anus. Only 12.9% knew that HPV vaccine also can protect from cancers of tongue & throat and the least (5.9%) knew that cancers of penis also can be protected from HPV vaccine. Most of the respondents answered that HPV vaccine is effective in preventing cancers associated with HPV. Similarly, majority (80.1%) knew that HPV vaccines are most effective when given to individual who have never had sex and less than half (49.2%) of respondents answered that the most recommended age for HPV vaccination by WHO is 9 to 14 years.

Table 5: Respondents' Knowledge regarding HPV Vaccine

Knowledge Variables	Correct Response Frequency	Percentage
Cancers that can be protected from HPV vaccine are:		
Cancers of cervix, vulva, anus	180	70.3
Cancers of tongue, throat	33	12.9
Cancers of penis	15	5.9
HPV vaccine is effective in preventing cancers associated with HPV	236	92.2
HPV vaccines are most effective when given to individual who have never had sex	205	80.1
The most recommended age for HPV vaccination by WHO is 9-14 years	130	49.2

Table 6 depicts respondents' attitude regarding HPV infection and HPV vaccination. Regarding the statement of "I feel the vaccine keep me safe from cervical cancer" less than half (48.0%) were agreed, 40.2% were strongly agreed. Whereas,10.2% remained uncertain and 1.6% were disagreed.

Similarly, with the statement of" I feel it is better to be vaccinated before being sexually active" more than half of respondents (53.5%) were agreed, 35.9% were strongly agreed, 8.6% remained uncertain and 2% were disagreed.

Similarly, in regard to the statement of" HPV

Table 6: School Adolescents' Attitude regarding HPV Infection and HPV Vaccination (n=256)

Statements	SD N (%)	D N (%)	U N (%)	A N (%)	SA N (%)
I feel the vaccine keep me safe from cervical cancer.	0.0(0.0)	4(1.6)	26(10.2)	123(48)	103(40.2)
I feel it is better to be vaccinated before being sexually active.	0.0(0.0)	5(2.0)	22(8.6)	137(53.5)	92(35.9)
HPV vaccine is effective in preventing cervical cancer	1(0.4)	3(1.2)	31(12.1)	142(55.5)	79(30.9)
HPV vaccine may have long negative effects on me. *	36(14.1)	104(40.6)	105(41.0)	10(3.9)	1(0.4)
More information on HPV and its vaccine is needed before taking the vaccine	0.0(0.0)	1(0.4)	20(7.8)	94(36.7)	141(55.1)
HPV vaccination should be included on the National Immunization Programme of Nepal	0.0(0.0)	3(1.2)	28(10.9)	92(35.9)	133(52.0)
HPV infection is not the serious problem, vaccination is the burden for women. *	124(48.4)	87(34.0)	37(14.5)	7(2.7)	1(0.4)
I will take the vaccine if it is easily available in nearby health facility with free of cost	0.0(0.0)	5(2%)	48(18.8)	94(36.7)	109(42.6)

vaccine is effective in preventing cervical cancer" more than half (55.5%) of the respondents were agreed,30.9% were strongly agreed,12.1% remained uncertain,1.2% were disagreed and the least (0.4%) were strongly disagreed.

Likewise, with the statement of" HPV vaccine may have long negative effects on me"41.6% remained uncertain, 40.6 %were disagreed and 14.1% were strongly disagreed whereas, 3.9 % were agreed and the least 0.4% were strongly agreed with the statement.

Regarding the statement of "More information on HPV and its vaccine is needed before taking the vaccine" more than half of respondents (55.1%) were strongly agreed followed by agree (36.7), uncertain (7.8%), and disagree (0.4%) respectively.

Similarly, regarding the statement of "HPV vaccination should be included on the National Immunization Programme of Nepal" more than half (52.0%) were strongly agreed,35.9% were agreed,10.9% remained uncertain, and 1.2% were disagreed with the statement.

Likewise, with the negative statement of "HPV infection is not the serious problem, vaccination is the burden for women" nearly half of respondents (48.4%) were strongly disagreed followed by disagree (34.0%), uncertain (14.5%), agree (2.7%) and strongly agree (0.4%) respectively.

Moreover, in regards to the statement of" HPV infection is not the serious problem, vaccination is the burden for women" 42.6% of respondents were strongly agreed, 36.7% were agreed, 18.8% remained uncertain and 2% were disagreed.

Negative Statement* NOTE: SD=Strongly Disagree D=Disagree U=Uncertain A=Agree SA=Strongly Agree

Table 7: Adolescents' Practice regarding HPV Vaccine Uptake

Statement	Yes N (%)	No N (%)
1. Have you received HPV vaccine?	65(25.4)	212(74.6)
If yes, (n=65)		
2.Dose is completed	44(67.7)	21(32.3)
3. Encouraged friends for HPV vaccine	60(92.3)	5(7.7)

Table 7 depicts the adolescents' practice regarding HPV vaccine uptake. Among 256 respondents, about one fourth 65 (25.4%) had received HPV vaccine. Out of 65 adolescents who have had vaccine, majority (67.7%) had completed the dose and most of them (92.3%) had encouraged their friend for vaccination.

Table 8 presents the level knowledge of school adolescents regarding HPV infection and HPV vaccine. More than four fifth of adolescents (83.6%) had poor level of knowledge, 12.9% had moderate level of knowledge and only 3.5% had good knowledge regarding HPV infection and HPV vaccine

Table 8: Level of Knowledge regarding HPV Infection and HPV Vaccine

Level of Knowledge	Frequency	Percentage
Poor	214	83.6
Moderate	33	12.9
Good	9	3.5

Table 9 depicts that all of the school adolescents had positive attitude regarding HPV vaccine.

Table 9: Level of Attitude regarding HPV Infection and HPV Vaccine

Level of Attitute	Frequency	Percentage
Positive	256	100.0
Negative	0.0	0.0

Table 10 shows that majority (74.6%) of adolescents had poor practice e and only four fifth (25.1%) of them had best practice regarding HPV vaccine uptake.

Table 11: Association between Levels of Knowledge with Selected Variables

Level of Practic		Frequency	Percentage
	Poor	191	74.6
	Best	65	25.4

Table 11 presents that there is no association of the level of knowledge with religion, ethnicity and mother's education(p= 0.203, 0.365, 0.447 respectively) *Level of significance p=<0.05*

Discussion

Knowledge regarding HPV and HPV Infection: Regarding knowledge on HPV, 59.0% of respondents answered correctly that cervical cancer is caused by HPV followed by genital warts (11%), oral cancer (2%), throat cancer (2%) respectively. Similarly, less than half (45.3%) of respondents knew that sexual intercourse is the most known mode of transmission of HPV. Likewise, 36.7% of respondents answered that having multiple sexual partners is the risk factor for getting HPV infections followed by poor hygiene (34.0%), early sexual debut (12.5%) and smoking (4.3%) respectively. In relation to knowledge regarding HPV infections, among 256 respondents, 35.9% responded correctly that men also can be infected with HPV. Majority of them (84.8%) answered that a person can be infected with HPV for many years without knowing it. More than half (57.4%) knew that HPV can be transmitted through oral sex. Similarly, regarding methods of preventing HPV infections, majority (80.9%) answered HPV vaccination followed by use of condom (19.9%), regular HPV screening (11.3%) respectivelyThese findings of the study are consistent with the findings of the study conducted in in Bahrain[12] which revealed that

70.9% of respondents knew HPV is sexually transmitted,80% answered that both men and women can get HPV infection, 69.1% said unsafe sexual activities can increase the risk of HPV infection, 72.7% correctly answered that prevention of HPV will prevent cervical cancer.

Knowledge regarding HPV Vaccine: Concerning Knowledge regarding HPV Vaccine, majority (70.3%) knew that HPV vaccine can protect from cancers of cervix, vulva and anus. Only 12.9% knew that HPV vaccine also can protect from cancers of tongue & throat and the least (5.9%) knew that cancers of penis also can be protected from HPV vaccine. Most of the respondents answered that HPV vaccine is effective in preventing cancers associated with HPV. Similarly, majority (80.1%) knew that HPV vaccines are most effective when given to individual who have never had sex and less than half (49.2%) of respondents answered that the most recommended age for HPV vaccination by WHO is 9 to 14 years. These findings of the study are higher than the findings of the study done by Alanazi et al.[13] on Knowledge and awareness toward human papillomavirus vaccination among Saudi female nursing students which indicated that 26.3% students said HPV vaccines offer protection against most cervical cancers, 37.7% knew one of the HPV vaccines protect against genital warts and 19.3% students answered that HPV vaccines are most effective when given to individual who have never had sex.

In this study, more than four fifth of adolescents (83.6%) had poor level of knowledge, 12.9% had moderate level of knowledge and only 3.5% had good knowledge regarding HPV infection

Table 10: Level of Practice

Variables	Level of Knowledge			Chi-square	P valve	p
Religion	Poor	Moderate	Good			
Hindu	188(84.7%)	27(12.2%)	7(3.2%)	8.518[a]	0.203	
Buddhist	22(78.6%)	4(14.3%)	2(7.1%)			
Christian	4(80.0%)	1(20.0%)	0(0.0%)			
Islamic	0(0.0%)	(100.0%)1				
Ethnicity Brahman/Chhetri	144(83.7%)	22(12.8%)	6(3.5%)	4.310[a]	0.365	
Janajati	56(83.6%)	9(13.4%)	2(3.0%)			
Mashesi	9(90.0%)	0(0.0%)	1(10.0%)			
Dalit	5(71.4%)	2(28.6%)	0(0.0%)			
Mother's Education No education	21(91.3%)	2(8.7%)	0(0.0%)	5.789[a]	0.447	
Primary	33(94.3%)	2(5.7%)	0(0.0%)			
Some secondary	46(80.7%)	8(14.0%)	3(5.3%)			
SLC and above	114(80.9%)	21(14.9%)	6(4.3%)			

Table 12: Association between Levels of Knowledge with Selected Variables

Father's Education No education	7(87.5%)	1(12.5%)	0(0.0%)	4.288[a]	0.368
Primary	15(88.2%)	2(11.8%)	0(0.0%)		
some secondary	43(89.6%)	5(10.4%)	0(0.0%)		
SLC and above	149(81.4%)	25(13.7%)	9(4.9%)		
Mother's Occupation Agriculture	26(96.3%)	1(3.7%)	0(0.0%)	31.511[a]	0.000*
Home maker	119(83.2%)	20(14%)	4(2.8%)		
Servicer	8(57.1%)	2(14.3%)	4(28.6%)		
Business	39(86.7%)	6(13.3%)	0(0.0%)		
others	22(81.5%)	4(14.8%)	1(3.7%)		
Father's Occupation Agriculture	34(91.9%)	3(8.1%)	0(0.0%)	28.579	0.000*
Home maker	5(83.3%)	1(16.7%)	0(0.0%)		
Servicer	16(57.1%)	7(25%)	5(17.9%)		
Business	93(82.3)	17(15.0%)	3(2.7%)		
Others	66(91.7%)	5(6.9%)	1(1.4%)		

Table 12 revealed that there is no association between the level of knowledge and father's education (p= 0.368) but there is strong association between the level of knowledge with occupation of parents (P=0.000). Level of significance* p=<0.05

and HPV vaccine. This finding of the study is similar to the study conducted in Saudi Arabia[13] on Knowledge and awareness toward human papillomavirus vaccination among Saudi female nursing students in which, overall mean HPV knowledge was 10.0 (SD 7.08). It showed poor levels of knowledge of HPV infection, screening, and vaccines: 5.15 (SD 3.87), 1.39 (SD 1.34), and 2.06 (SD 1.87) respectively. These findings are also consistent with another research by Farsi et al.[14] who reported poor knowledge of HPV and HPV vaccines among medical students

Attitude regarding HPV Infection and HPV Vaccination: In relation to level of attitude regarding HPV infection and HPV vaccination, all of the school adolescents had positive attitude regarding HPV vaccine. This finding is higher than the finding of the study conducted by Chowdhury et al.[15] which reported 75.88% of respondents had positive attitude towards HPV vaccination. Another study conducted in Malasia[17] on Knowledge, attitude and practice of Malaysian medical and pharmacy students towards human papillomavirus vaccination revealed that the overall level of knowledge on HPV infection, cervical cancer and its prevention among respondents was high and the majority of them had positive attitude towards HPV vaccination.

Practice on HPV Vaccine Uptake: Regarding Practice on HPV Vaccine Uptake, among 256 respondents, about one fourth 65 (25.4%) had received HPV vaccine. Out of 65 adolescents who have had vaccine, majority (67.7%) had completed the dose and most of them (92.3%) had encouraged their friend for vaccination. Present study reveals that majority (74.6%) of adolescents had poor practice and only four fifth (25.4%) of them had best practice regarding HPV vaccine uptake. This finding is lower than the study of Chowdhury et al.[16] (88.18 % poor practice) and study of Oluwole et al.[17] where only 2.6% of the respondents had received a single dose of HPV vaccine.

Association between Levels of Knowledge with Selected Variables: This study also found that there is no association between level of knowledge with ethnicity, religion, educational status of parents but there is association between level of knowledge with occupation of parents (p = 0.000).These findings are contrary to the findings of the study of Ethiopia [18] which reported that parents' educational status ($\chi 2$ = 1.479, P = .003)was significantly associated with knowledge of the HPV vaccine.

Conclusion:

Based on the findings of the study it can be concluded that though school adolescents have positive attitude regarding HPV vaccine they have still poor knowledge and practice. As the study participants'knowledge on HPV and HPV vaccine is crucial, influencing their recommendations to the general public, their family, friends thus impeding the acceptance of the HPV vaccination. Educational / awareness champion, educational sessions for the school adolescents are highly recommended to enhance their understanding of HPV infection and vaccinations. As they are the key means for motivating and conveying awareness regarding HPV vaccines, the concerned authority should plan and implement awareness initiatives thereby increasing their knowledge regarding cancer and HPV vaccination so that there may be decrease in the morbidity and mortality of cancers and other diseases related to HPV.

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