Section: Physiology & Pharmacology

Original Research Article

KNOWLEDGE AND AWARENESS TOWARDS CERVICAL CANCER AND HPV VACCINE AMONG COLLEGE STUDENTS

Ramya K[1], S Purushothaman[1], Thirumeni T[3], Preetha S[3]

[1]Associate professor, Department of Physiology, Sri Lalithambigai Medical College and Hospitals, Dr. M.G.R. Educational and Research Institute, Service Rd, Maduravoyal, Adayalampattu, Tamil Nadu, India.
[2]Associate professor, Department of Pharmacology, Sri Lalithambigai Medical College and Hospitals, Dr. M.G.R. Educational and Research Institute, Service Rd, Maduravoyal, Adayalampattu, Tamil Nadu, India
[3]Associate professor, Department of Physiology, Sri Lalithambigai Medical College and Hospitals, Dr. M.G.R. Educational and Research Institute, Service Rd, Maduravoyal, Adayalampattu, Tamil Nadu, India

Received : 18/12/2023
Received in revised form : 07/02/2024
Accepted : 21/02/2024

Keywords:
Awareness, Cervical cancer, College students, HPV, HPV vaccine

Corresponding Author:
Dr. Ramya K,
Email: ramyadinesh1211@gmail.com

DOI: 10.47009/jamp.2024.6.1.399

Source of Support: Nil,
Conflict of Interest: None declared

Int J Acad Med Pharm
2024; 6 (1); 2011-2015

Abstract

Background: In a developing nation like India, cervical cancer poses a serious public health problem. The cancer cervix cases in India accounts for almost one fourth of the global burden. It is the most common cause of cancer death among women in the reproductive age group. The Human Papilloma Virus (HPV) is found to be the leading etiological factor for cervical cancer. Not many people are aware of the fact that HPV is the most common cause of cervical cancer and that it can be prevented by HPV vaccination. **Materials and Methods**: The study was conducted through an online survey among College students. Around 220 college students participated in the survey conducted in the month of June - July 2023. The Questionnaire was designed to assess the knowledge and awareness about cervical cancer and HPV vaccine among college students. **Result:** Females (49%) were more aware that Pap smear was diagnostic test for CA cervix than males. 92 % of the participants were aware that CA cervix is preventable. 51% of the participants were aware about HPV vaccination against CA cervix. 83% of the participants were aware that age group of 30-50 years are susceptible for CA cervix. 74% of the participants were aware that HPV vaccination can prevent CA cervix. **Conclusion:** The present study concludes by demonstrating that there was better awareness about cervical cancer but lack of awareness about HPV vaccination that could prevent CA cervix. The study also found that the majority of male respondents were unaware of cervical cancer and HPV vaccine. The study created general awareness about cervical cancer and HPV vaccination and majority of the participants were willing to undergo vaccination.

INTRODUCTION

The cervical cancer is the most common malignancy in women and it is also an important cause of cancer death among women (Sung et al., 2021).[1] Cervical cancer accounts for roughly 6-29% of all malignancies in women in India. Cervical cancer is a public health issue in developing nations such as India, accounting for one-quarter of the global burden of cervical cancer (Bobdey S, et al, 2016).[2] In a developing nation like India, cervical cancer poses a serious public health problem. The cancer cervix cases in India accounts for almost one fourth of the global burden. It is the most common cause of cancer death among women in the reproductive age group (Ferlay J et al. 2012).[3]

The Human Papilloma Virus (HPV) is found to be the leading etiological factor for cervical cancer (Baer, et al, 2000).[4] The introduction of vaccinations marked a turning point in medicine. Vaccines are one of the most successful public health strategies to prevent infectious diseases. Certain types of cancer have been found to be linked with infections. Around 18% of cancer incidences worldwide are due to infectious agents, specifically viruses (Perlman et al., 2014).[5] Not many people are aware of the fact that HPV is the most common cause of cervical cancer and that it can be prevented by HPV vaccination. Cervical cancer has a good prognosis when it is detected earlier. Despite various steps made to minimize the risk of HPV infection, the HPV vaccine is the most effective means of prevention for women under the

ISSN (O): 2687-5365; ISSN (P): 2753-6556

age of 26, while Pap smear (screening) remains the recommended choice for those above the age of 26.

In higher-income nations, papanicolaou (Pap) testing and human papillomavirus (HPV) vaccination have lowered the incidence and mortality of cervical cancer cases by up to 80% (Ferlay, J, et al, 2015).[6] However, the burden has increased due to the difficulties in implementation of Pap screening programs and a lack of access and awareness to the HPV vaccine. Surprisingly only little research has directly studied the knowledge, awareness about human papillomavirus (HPV) vaccine in prevention of cervical cancer.

The cervix, unlike other cancer sites, can be tested for early identification and treatment. In spite of the availability of various cervical cancer screening methods and the significant disease burden, there is no public health policy on cervical cancer prevention through screening or vaccination. Hence the study was aimed at the assessing the knowledge, attitude and awareness about Human Papilloma Virus (HPV) and HPV vaccination among college students.

MATERIALS AND METHODS

The study was conducted through an online survey among College students. The advantages of online surveys is that it is time saving and involves only a selected group of people. Around 220 college students participated in the survey conducted in the month of June - July 2023. The Simple-random sampling method was used. The Questionnaire was designed to assess the knowledge and awareness about cervical cancer and HPV vaccine among college students. The questionnaire consisted of three parts which included participants' profile, around 20 questions to study the awareness and practice on cervical cancer and HPV vaccine. The checking of validity of the questionnaire was done by field experts. The data collection was done using Google forms and data manipulation, through Microsoft excel. Statistical analysis of the data was done using SPSS software. The results or observations were recorded in the form of tables [Table 1], pie charts and bar graph. The independent variables include age and education, whereas the dependent variable comprises knowledge and awareness among students. The correlation analysis was done through Chi square test, with the help of SPSS software, and was represented in the form of bar charts.

RESULTS

The result of the present study is expressed in the form of [Table 1]. The present study revealed that 56% of the total participants had knowledge about cervical cancer and 44 % were never ever been educated about cervical cancer [Figure 1]. When the participants were questioned about the most common cause of CA cervix, only 67% of the participants answered viral infection as a cause of CA cervix [Figure 2]. 86% of the total participants answered HPV as the causative organism of CA cervix. Females were more aware that HPV is the causative organism for CA cervix than the males which was evaluated by Chi square test ($p< 0.05$) and it is statistically significant [Figure 3]. 92% of the total participants were aware that cervical cancer can cause death. 80% of the participants were aware that virus causing CA cervix infects during Sexual intercourse. 83% of the participants were aware that age group of 30-50 years are susceptible for CA cervix. 92% of the participants felt that there is necessity for regular cervical cancer screening. 74% of the participants were aware that HPV vaccination can prevent CA cervix [Figure 4]. Females (44%) were more aware that HPV is the causative organism for CA cervix than the males. Chi square test - p - 0.8 ($p> 0.05$) and it is statistically not significant [Figure 5]. 67% of the participants were willing to indulge in cervical cancer screening regularly. 72% of the participants were aware that Pap smear was the diagnostic test for CA cervix. Females (49%) were more aware that Pap smear was diagnostic test for CA cervix than males. Chi square test - p - 0.01 ($p< 0.05$) and it is statistically significant. 92 % of the participants were aware that CA cervix is preventable [Figure 7]. 51% of the participants were aware about HPV vaccination against CA cervix. 75% of the participants were aware that unprotected sexual intercourse is a risk factor for CA cervix. Females (50%) were more aware that unprotected sexual intercourse is a risk factor for CA cervix. Chi square test - p - 0.01 ($p< 0.05$) and it is statistically significant [Figure 7]. 63% of the participants were aware that CA cervix as the most common cause of cancer related death among women. 61% of the participants were that HPV can affect men also. 86% of the participants found the survey to be useful and helpful in creating awareness about HPV and its vaccine against cervical cancer.

Table 1: The table represents the responses of the participants to the following questions.

S.No.	Question	Yes (%)	No (%)	NA
1.	Have you ever been educated about cervical cancer?	56	43.8	-
2.	Can cervical cancer cause death	92	8	-
3.	The virus leading to CA cervix infects during sexual intercourse.	80	20	-
4.	Necessity of regular cervical cancer screening	92	8	-
5.	Do you know that HPV vaccination can prevent CA cervix	74	26	-
6.	Are you willing to indulge in cancer screening regularly	67	24	9
7.	Is CA cervix preventable	92	8	-
8.	Have you ever been educated about HPV vaccination against CA cervix	51	49	-

ISSN (O): 2687-5365; ISSN (P): 2753-6556

9.	Are you aware that unprotected sexual intercourse is a risk factor for CA cervix		75	25	-
10.	Is CA Cervix, the most common cause of cancer related death among women		63	37	-
11.	Can HPV affect men		61	39	-
12.	Was this survey helpful for creating awareness about HPV causing CA cervix		86	14	-
	Questions				
13.	Which of the following is the most common cause of CA cervix	Viral 67	Bacterial 16	Genetic 4	Sedentary 13
14.	Which is the causative organism for CA cervix	HPV 86	HBV 8	HIV 6	-
15.	Age group susceptible for CA cervix	Younger than 20 yrs 13	30-50 83	Above 60 4	-
16.	What is the test used to diagnose CA cervix	Pap smear 72	Blood test 18	Urine test 14	Saliva 1

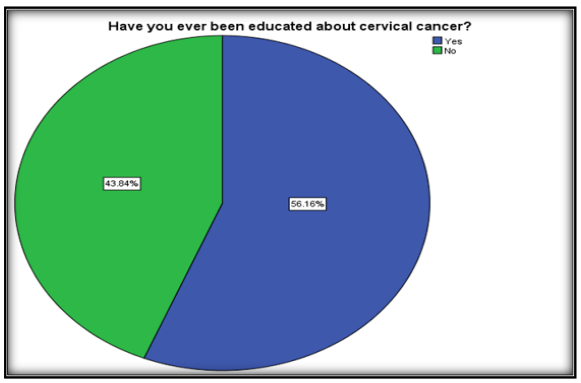

Figure 1: The pie chart represents the distribution of the responses about education about cervical cancer. Majority (56%) of the students were early been educated about cervical cancer

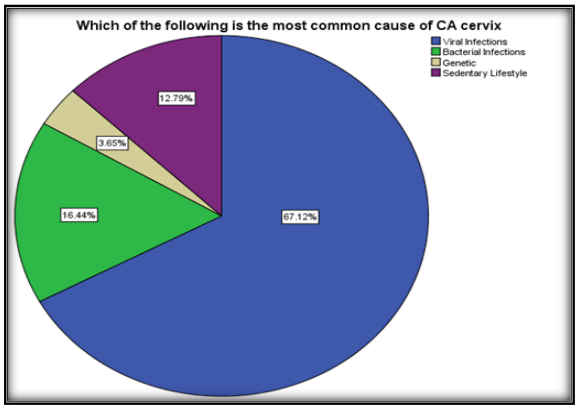

Figure 2: The pie chart represents the distribution of the responses about most common causes of cervical cancer. Majority (67%) of the students were aware that viral infections were the cause for cervical cancer

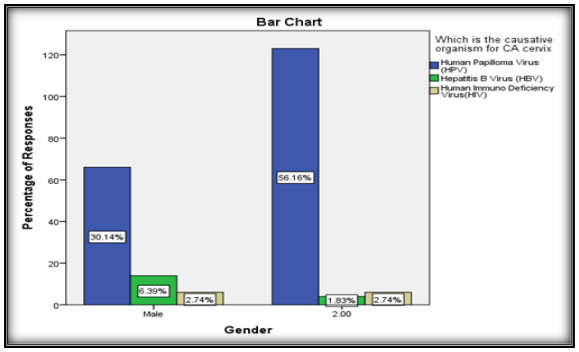

Figure 3: The graph depicts the association between gender and awareness of the causative organism for CA cervix. X axis - Gender, Y - axis - percentage of responses. Females were more aware that HPV is the causative organism for CA cervix than the males. Chi square test - p - 0.001 (p> 0.05) and it is statistically significant.

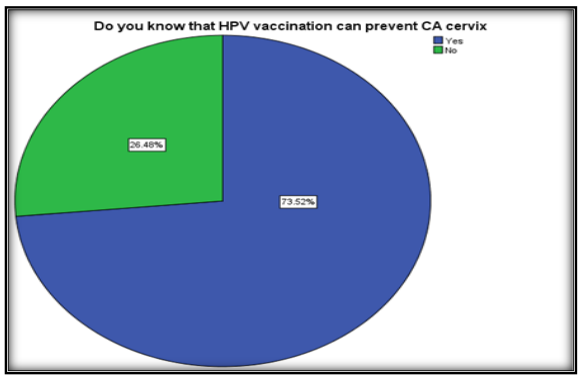

Figure 4: The pie chart represents the distribution of the responses whether HPV vaccination can prevent CA cervix. Majority (74%) of the students were aware that HPV vaccination can prevent CA cervix

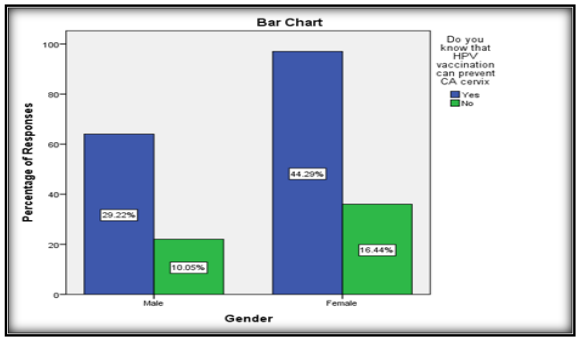

Figure 5: The graph depicts the association between gender and awareness of the HPV vaccination can prevent CA cervix. X axis - Gender, Y - axis - percentage of responses. Females (44%) were more aware that HPV is the causative organism for CA cervix than the males. Chi square test - p - 0.8 (p> 0.05) and it is statistically not significant.

ISSN (O): 2687-5365; ISSN (P): 2753-6556

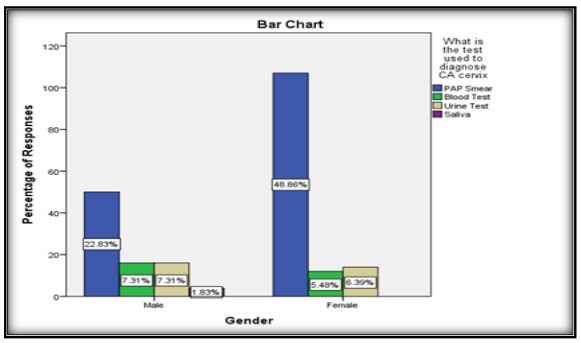

Figure 6: The graph depicts the association between gender and awareness of the test to diagnose CA cervix. X axis - Gender, Y - axis - percentage of responses. Females (49%) were more aware that Pap smear was diagnostic test for CA cervix. Chi square test - p - 0.01 (p< 0.05) and it is statistically significant.

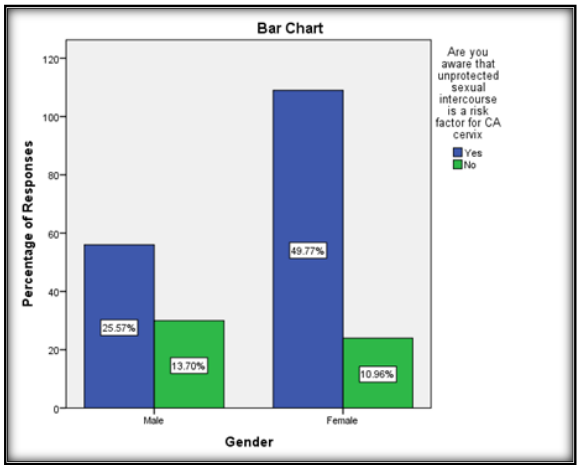

Figure 7: The graph depicts the association between gender and awareness on unprotected sexual intercourse as a risk factor for CA cervix. X axis - Gender, Y - axis - percentage of responses. Females (50%) were more aware that unprotected sexual intercourse is a risk factor for CA cervix. Chi square test - p - 0.01 (p< 0.05) and it is statistically significant.

DISCUSSION

Despite the availability of HPV vaccines and effective methods for the early detection and treatment of cervical cancer precursor lesions, yet cervical cancer poses a public health problem in our country. Due to low to moderate living standards, a high HPV prevalence and a lack of screening, there is a high incidence of cervical cancer in Southeast Asian and Indian countries (Bobdey S, et al. 2016).[2] A study conducted on awareness, attitudes and acceptability of the HPV vaccine among female university students in Morocco revealed that only 18.1% of participants were unaware of cervical cancer (Yacouti A, et al, 2022).[7] And this is in contrast to the present study which revealed that that 56% of the total participants had knowledge about cervical cancer and 44 % were never ever been educated about cervical cancer. Majority of the respondents were unaware about the cervical cancer. The present study also revealed that 86% of the total participants answered HPV as the causative organism of CA cervix. So majority of the study participants were aware that HPV is the causative organism for CA cervix. Females were more aware that HPV is the causative organism for CA cervix than the males.

We found in the current study that there was very little knowledge about HPV and the HPV vaccine. The lack of awareness could be due to the fact that 90% of HPV infections are asymptomatic and resolve on their own without medical intervention. The results were similar to the study conducted by the Mehta, et al on HPV and HPV vaccine awareness among medical students in New Delhi (Mehta et al, 2013).[8] According to Durusoy et al.'s study, first-year university students in western Turkey had little understanding of the HPV vaccine and were unwilling to receive it, with only 11.6% of females intending to have it (Durusoy R, et al. 2010).[9] This was in contrast to our study where 67% of the respondents had willingness to undergo HPV vaccination. In another study also, by the Mehta, et al, and Ahmad Saqer, et al, 2017, majority of the respondents had willingness to undergo HPV vaccination (Mehta et al, 2013 & Ahmad Saqer, et al, 2017).[8,10]

Thus, widespread acceptance of HPV vaccinations can provide significant health benefits by lowering cervical cancer-related morbidity and mortality. This truth should be put into practice by vigorous health education initiatives, group discussions, and especially focusing on the adolescent population. Hence it is essential to promote awareness and education about the numerous facts of HPV, cervical cancer, and its prevention.

CONCLUSION

This study emphasizes the significance of HPV awareness and knowledge among college students. The present study concludes by demonstrating that there was better awareness about cervical cancer but lack of awareness about HPV vaccination among college students. The study also found that though the majority of male respondents were unaware of cervical cancer and HPV vaccine, female students had better awareness than male students. The study also revealed the willingness of female students to get vaccinated against HPV causing cervical cancer. To achieve the WHO target of preventive care to reduce early cancer mortality by 25%, it is essential to increase knowledge and awareness about HPV vaccination. So the study tried to create awareness and improve the knowledge about preventable cause of cervical cancer through HPV vaccination among college students.

REFERENCES

1. Sung H, Ferlay J, Siegel RL, et al (2021). Global Cancer Statistics 2020: GLOBOCAN Estimates of Incidence and Mortality Worldwide for 36 Cancers in 185 Countries. CA Cancer J Clin, 71, 209-49.

ISSN (O): 2687-5365; ISSN (P): 2753-6556

2. Bobdey S, Sathwara J, Jain A, Balasubramaniam G. Burden of cervical cancer and role of screening in India. Indian J Med Paediatr Oncol 2016;37:278-85.
3. Ferlay J, Soerjomataram I, Ervik M, Forman D, Bray F, Dixit R, et al. GLOBOCAN 2012, Cancer Incidence and Mortality Worldwide in 2012: Lyon, France: International Agency for Research on Cancer; 2012. Available from: http://www.globocan.iarc.fr. [Last accessed on 2015 Dec 03].
4. Baer H, Allen S, Braun L (2000). Knowledge of human papillomavirus infection among young adult men and women: implications for health education and research. J Community Health, 25, 67-78
5. Perlman S, Wamai R, Bain P, et al (2014). Knowledge and awareness of HPV vaccine and acceptability to vaccinate in sub-Saharan Africa: A systematic review. PLoS One, 9, 1-14.
6. Ferlay, J.; Soerjomataram, I.; Dikshit, R.; Eser, S.; Mathers, C.; Rebelo, M.; Parkin, D.M.; Forman, D.; Bray, F. Cancer incidence and mortality worldwide: Sources, methods and major patterns in GLOBOCAN 2012. Int. J. Cancer 2015, 136, E359–E386
7. Yacouti A, Elkhoudri N, El got A, Benider A, Hadrya F, Baddou R, et al. (2022) Awareness, attitudes and acceptability of the HPV vaccine among female university students in Morocco. PLoS ONE 17(4): e0266081. https://doi.org/10.1371/journal.pone.0266081
8. Mehta S, Rajaram S, Goel G, Goel N. Awareness about Human Papilloma Virus and its vaccine among medical students. Indian J Community Med 2013;38:92-4
9. Durusoy R, Yamazhan M, Taşbakan MI, Ergin I, Aysin M, Pullukçu H, et al. HPV vaccine awareness and willingness of first year students entering university in western Turkey. Asian Pac J Cancer Prev 2010;11:1695 701.
10. Ahmad Saqer, Shaymaa Ghazal, Hiba Barqawi, Juman Adnan Babi, Ranya AlKhafaji, Mohamed Mohsen Elmekresh, Knowledge and Awareness about Cervical Cancer Vaccine (HPV) Among Parents in Sharjah, Asian Pac J Cancer Prev, 18 (5), 2017, 1237-1241

ISSN (O): 2687-5365; ISSN (P): 2753-6556