Journal of
Inflammatory Diseases
(Previous Title: The Journal of Qazvin University of Medical Sciences)

Winter 2022. Vol 25. Num 4

Short Communication

Knowledge About Human Papilloma Virus Among Medical Students of Tabriz University of Medical Sciences

Maryam Baradaran-Binazir[1*]

1. Social Determinants of Health Research Center, Health Management and Safety Promotion Research Institute, Tabriz University of Medical Sciences, Tabriz, Iran.

Use your device to scan and read the article online

Citation Baradaran-Binazir M. Knowledge About Human Papilloma Virus Among Medical Students of Tabriz University of Medical Sciences. Journal of Inflammatory Diseases. 2022; 25(4):237-240. http://dx.doi.org/10.32598/JID.25.4.8

http://dx.doi.org/10.32598/JID.25.4.8

Article info:
Received: 13 May 2022
Accepted: 29 Jun 2022
Publish: 01 Jan 2022

Keywords:
Human papillomavirus, Knowledge, Students

ABSTRACT

Background: Physicians' knowledge and comments are important in the uptake of human papillomavirus (HPV) screening among women. We aimed to evaluate the knowledge of senior medical students on HPV as future physicians of Iran.

Methods: A cross-sectional study was performed between March 2021 and May 2021. All final-year medical students of Tabriz University of Medical Sciences were invited to complete an online standardized questionnaire through a mobile app. The Independent samples t test was performed for data analysis in SPSS software version 16.

Results: In the present study, 215 female medical students and 128 male ones participated, with an average age of 23.14 (SD=1.21) years. Most of the students (85.67%) were single. The average knowledge score of the students was 9.25 (SD=6.21), demonstrating their low level of knowledge of HPV. Furthermore, no significant score differences were observed between students regarding their gender and marital status.

Conclusion: Regarding the low scores of final-year medical students' knowledge of HPV, educational programs should be directed to HPV to improve medical students' knowledge about this virus and its related diseases.

*** Corresponding Author:**
Maryam Baradaran-Binazir, MD.
Address: *Social Determinants of Health Research Center, Health Management and Safety Promotion Research Institute, Tabriz University of Medical Sciences, Tabriz, Iran.*
Phone: *+98 (41) 33341705*
E-mail: *maryam_baradaran@hotmail.com*

Journal of
Inflammatory Diseases
(Previous Title: The Journal of Qazvin University of Medical Sciences)

1. Introduction

The relationship between the human papillomavirus (HPV) and the incidence of precancerous lesions that can cause cervical cancer is confirmed [1]. Cervical cancer is one of the avoidable human cancers and can be controlled through early detection of precancerous lesions [2]. Although, in developing countries, cervical cancer is the most common origin of cancer-related mortality among women [3]. Developing countries in the Middle East and Asia are generally considered traditional communities with a modest prevalence of sexually transmitted infections. However, nowadays, there is a considerable rising in the prevalence of HPV infections among Middle Eastern and Asian women [4].

In Iran, its prevalence was estimated as 9.4% (95% CI: 6.8%-12.02%) [5]. Physicians' knowledge and comments are important in the uptake of HPV screening among women. Multiple studies reported that the advice of the health workers had a determining effect on women's decision to do screening exams [6-8]. No information is presently available regarding the knowledge of HPV among medical students of Tabriz University of Medical Sciences. Thus, this study aimed to evaluate the knowledge of HPV in the final-year medical students as future physicians of Iran.

2. Material and Methods

This cross-sectional study was performed from March to May 2021. All final-year medical students of Tabriz University of Medical Sciences were invited to complete an online standardized questionnaire through a mobile app. The questionnaire included 14 items, and its validity and reliability had already been confirmed [9]. The questionnaire was in optional format with 3 options of "correct," "I do not know," and "incorrect." Participants selected the option that indicated their knowledge best. For scoring, each "correct" answer is rated 2, "I do not know" 1, and "incorrect" 0 points. Accordingly, the highest and lowest score was 28 and 0, respectively. Based on the accessible cut-off points, scores between 0-9, 10-18, and 19-28 indicated low, average, and high levels of knowledge, respectively. Data analysis was done by the Independent samples t-test in SPSS software version 16. $P<0.05$ was regarded as statistically significant. Completing the questionnaire in this study was non-obligatory, and all questionnaires would be anonymous and confidential.

3. Results

In the present study, 215 female medical students and 128 male ones participated, with Mean±SD age of 23.14±1.21 years. Most of the students (85.67%) were single. The Mean±SD knowledge score of students was 9.25±6.21, demonstrating their low knowledge of HPV. Furthermore, no significant score differences were between students' knowledge about HPV with regard to gender and marital status (Table 1). The following items were most often responded mistakenly: early sex is a risk factor for cervical cancer (56.12% responded falsely or did not know), most HPV infections are symptomatic (46.57%), and HPV is a cause of infertility (35.78%).

4. Discussion

Our study demonstrated a knowledge gap about HPV among final-year medical students. Although this study is performed just in Tabriz University of Medical Sciences, this knowledge gap may be generalizable to medical students nationally. Consistent with our study, medical students of the Islamic Azad University of Mashhad had a low level of knowledge about HPV [10]. Furthermore, the other study in Rasht City, Iran, showed that the knowledge of more than half of the students was poor in this topic [11]. The other study reported that medical students from southwest China had a low level of knowledge of HPV, but they were interested to learn more about this issue [12]. Although a similar investigation by Zargar et al. showed that

Table 1. Knowledge score about human papilloma virus in terms of gender and marital status (n=343)

Variables		No. (%)	Mean±SD Knowledge Score	P
Gender	Male	128(37.31)	8.69±2.52	0.21
	Female	215(62.69)	9.81±3.17	
Marital status	Married	49(14.33)	9.46±1.26	0.19
	Single	294(85.67)	9.04±3.19	

most medical students had a moderate to high level of knowledge on HPV infection (about 70%), which is inconsistent with our results. Also, factors such as gender and marital status had no significant influence on participants' knowledge [13]. Nevertheless, in the study by Ying Wen et al., female students knew more about HPV [12]. Overall, it is essential to improve both females' and males' HPV-related knowledge because they both play a key role in the spread of the infection [12]. There was no detailed information on medical students' knowledge of HPV infection. In our study, although all students had heard of HPV, most participants did not know simple facts that early sex is a risk factor for cervical cancer, most HPV infections are symptomatic, or HPV is a cause of infertility. This finding is consistent with other similar studies [14-17].

5. Conclusion

Regarding the low knowledge scores of final-year medical students of HPV, educational programs should be directed to HPV to improve medical students' knowledge about this virus and its related diseases. Educational programs should be combined with medicine curricula to improve medical students' knowledge of HPV-related diseases and prevention [18-20]. To increase HPV knowledge concerning the impact of it on the future of this infectious disease, medical students should be informed, and presentations and management of HPV infection should have priority in medical school educational programs.

Ethical Considerations

Compliance with ethical guidelines

Completing the questionnaire in this study was non-obligatory, and all questionnaires were nameless and confidential. This research project was approved by the Ethics Committee of Tabriz University of Medical Sciences (IR.TBZMED.REC.1398.513).

Funding

The current study did not receive any grant, such as financial, personal, political, or academic.

Conflict of interest

The author declared no conflicts of interest.

Acknowledgments

The author appreciates all participating medical students in the study.

References

[1] Marlow LA, Zimet GD, McCaffery KJ, Ostini R, Waller J. Knowledge of human papillomavirus (HPV) and HPV vaccination: An international comparison. Vaccine. 2013; 31(5):763-9. [DOI:10.1016/j.vaccine.2012.11.083] [PMID]

[2] Kling M, Zeichner JA. The role of the human papillomavirus (HPV) vaccine in developing countries. Int J Dermatol. 2010; 49(4):377-9. [DOI:10.1111/j.1365-4632.2010.04316.x] [PMID]

[3] Bello FA, Enabor OO, Adewole IF. Human papilloma virus vaccination for control of cervical cancer: A challenge for developing countries. Afr J Reprod Health. 2011; 15(1):25-30. [PMID]

[4] Malary M, Moosazadeh M, Hamzehgardeshi Z, Afshari M, Moghaddasifar I, Afsharimoghaddam A, et al. The prevalence of cervical human papillomavirus infection and the most at-risk genotypes among Iranian healthy women: A systematic review and meta-analysis. Int J Prev Med. 2016; 7:70. [DOI:10.4103/2008-7802.181756] [PMID] [PMCID]

[5] Liu A, Ho FK, Chan LK, Ng JY, Li SL, Chan GC, et al. Chinese medical students' knowledge, attitude and practice towards human papillomavirus vaccination and their intention to recommend the vaccine. J Paediatr Child Health. 2018; 54(3):302-10. [DOI:10.1111/jpc.13693] [PMID]

[6] Canon C, Effoe V, Shetty V, Shetty AK. Knowledge and attitudes towards human papillomavirus (HPV) among academic and community physicians in Mangalore, India. J Cancer Educ. 2017; 32(2):382-91. [DOI:10.1007/s13187-016-0999-0] [PMID]

[7] Narayana G, Suchitra J, Suma GK, Deepthi GN, Jyothi CD, Kumar BP. Physician's knowledge, attitude, and practice towards Human Papilloma Virus (HPV) vaccine recommendation in anantapur district, Andhra Pradesh, India. Arch Pharma Pract. 2020; 11(2):137-44. [Link]

[8] Anfinan NM. Physician's knowledge and opinions on human papillomavirus vaccination: A cross-sectional study, Saudi Arabia. BMC Health Serv Res. 2019; 19(1):963. [DOI:10.1186/s12913-019-4756-z] [PMID] [PMCID]

[9] Mirblook F, Asgharnia M, Kazemnejadlaili E, Mirblook F, Tajvar M, Dalil Heirati SF. [Medical student's knowledge, attitude and practice about cervical cancer screening method (Persian)]. Iran J Surg. 2015; 23(1):45-54. https://www.sid.ir/paper/503345/fa

[10] Kazerani M, Basiri A. [Study of knowledge and attitude of medical students toward Human Papilloma virus (HPV) in Mashhad (Persian)]. Med J Mashhad Univ Med Sci. 2021; 63(6). https://mjms.mums.ac.ir/article_17584.html?lang=en

[11] Pourkazemi A, Ghanbari A, Fakour F, Ghorbani S. [Knowledge and attitudes of medical students toward human papilloma virus in Rasht, 2013 (Persian)]. J Guilan Uni Med Sci. 2017; 25(100):1-10. https://www.sid.ir/paper/40102/en

[12] Wen Y, Pan XF, Zhao ZM, Chen F, Fu CJ, Li SQ, et al. Knowledge of human papillomavirus (HPV) infection, cervical cancer, and HPV vaccine and its correlates among medical students in Southwest China: A multi-center cross-sectional survey. Asian Pac J Cancer Prev. 2014; 15(14):5773-9. [DOI:10.7314/APJCP.2014.15.14.5773] [PMID]

[13] Zargar ZS, Darvishi M, Zangeneh M, Nazer M, Zargar A. [Investigating knowledge and attitude of medical students

Journal of
Inflammatory Diseases
(Previous Title: The Journal of Qazvin University of Medical Sciences)

and other medical staff about HPV vaccination (Persian)]. J Nurse Physician War. 2018; 6(19):23-31. [Link]

[14] Medeiros R, Ramada D. Knowledge differences between male and female university students about human papillomavirus (HPV) and cervical cancer: Implications for health strategies and vaccination. Vaccine. 2010; 29(2):153-60. [DOI:10.1016/j.vaccine.2010.10.068] [PMID]

[15] Makwe CC, Anorlu RI, Odeyemi KA. Human papillomavirus (HPV) infection and vaccines: Knowledge, attitude and perception among female students at the University of Lagos, Lagos, Nigeria. J Epidemiol Glob Health. 2012; 2(4):199-206. [DOI:10.1016/j.jegh.2012.11.001] [PMID] [PMCID]

[16] Bendik MK, Mayo RM, Parker VG. Knowledge, perceptions, and motivations related to HPV vaccination among college women. J Cancer Educ. 2011; 26(3):459-64. [DOI:10.1007/s13187-011-0200-8] [PMID]

[17] Wong LP, Sam IC. Ethnically diverse female university students' knowledge and attitudes toward human papillomavirus (HPV), HPV vaccination and cervical cancer. Eur J Obstet Gynecol Reprod Biol. 2010; 148(1):90-5. [DOI:10.1016/j.ejogrb.2009.10.002] [PMID]

[18] Genc RE, Sarican ES, Turgay AS, Icke S, Sari D, Saydam BK. Determination of knowledge of Turkish midwifery students about human papilloma virus infection and its vaccines. Asian Pac J Cancer Prev. 2013; 14(11):6775-8. [DOI:10.7314/APJCP.2013.14.11.6775] [PMID]

[19] McBride KR, Singh S. Predictors of adults' knowledge and awareness of HPV, HPV-associated cancers, and the HPV vaccine: Implications for health education. Health Educ Behav. 2018; 45(1):68-76. [DOI:10.1177/1090198117709318] [PMID]

[20] Reiter PL, Stubbs B, Panozzo CA, Whitesell D, Brewer NT. HPV and HPV vaccine education intervention: Effects on parents, healthcare staff, and school staff. Cancer Epidemiol Biomarkers Prev. 2011; 20(11):2354-61. [DOI:10.1158/1055-9965.EPI-11-0562] [PMID] [PMCID]