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Investigation of awareness of human papilloma virus infection among female health workers at Ondokuz Mayıs University

Yunus KATIRCI[1,*], İbrahim YALÇIN[2], AbdülKadir BAKAY[2], Davut GÜVEN[2], İdris KOÇAK[2]

[1]Department of Obstetrics and Gynecology, Gümüşhacıköy State Hospital, Amasya, Türkiye
[2]Department of Obstetrics and Gynecology, Faculty of Medicine, Ondokuz Mayıs University, Samsun, Türkiye

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Abstract

Less developed areas have the highest incidence rates of cervical cancer, which vary by geographic region. If the right lifestyle changes are made, all cervical cancer risk factors can be avoided. Furthermore, vaccines have been created to guard against a number of the high-risk strains of the human papillomavirus (HPV). Not all women are aware of cervical cancer or how to prevent it, even though it is preventable. Therefore, every woman must assess level of knowledge regarding HPV prevention and cervical cancer. We applied a validated questionnaire between January and June 2021 to the female health workers at Ondokuz Mayıs University Hospital to assess their knowledge of cervical cancer and HPV protection as well as their attitudes toward it. Our findings indicate that women's knowledge on this topic is lacking, especially regarding the most recent advancements in HPV testing and vaccination-based cervical cancer prevention. Only 99% of the women who responded to the survey were actually aware that HPV testing was available. Although the incidence of cervical cancer is low, this figure is subject to change, particularly in light of the economic crisis and rising immigration rates, which could lead to higher rates of HPV infection in the population if no action is taken. Although the HPV vaccine has been available for some time, the Turkish government does not recommend it as a routine vaccine as part of the National Immunization Program. Even among the highly educated workforce in the healthcare industry, there is a lack of understanding about HPV vaccine. Healthcare professionals should be fully informed about the HPV vaccine for their own benefit so that they can discuss it with their patients. This study aimed to remove vaccination barriers and assess healthcare professionals' current knowledge of cervical cancer and HPV vaccination in a tertiary hospital.

Keywords: HPV, cervical cancer, smear, cervical pathology

1. Introduction

The fourth most common cancer in women overall is cervical cancer (1, 2). Cervical cancer is brought on by human papillomavirus (HPV) infection; HPV 16 and 18 strains, in particular, are responsible for 75% of cases (3). Having multiple sexual partners, having sex at a young age, smoking, taking oral contraceptives for an extended period of time, having more children, and giving birth at a young age are risk factors for HPV infection (4). Pregnant women and the fetus may be affected by infections like syphilis, gonorrhea, trichomoniasis, chlamydia, hepatitis B, HIV, herpes simplex viruses 1 and 2 (HSV-1-2), and human papillomavirus (HPV). (5). Although most genital HPV infections are asymptomatic, previous research has shown that high-risk HPV types are almost always the root of cervical cancer cases (6). The precursors of cervical cancer can be easily found at an early stage and effectively treated using screening methods like the Pap test, VIA (Visual Inspection with Acetic Acid), or efficient HPV-DNA detection procedures. Contrary to cancers that develop in other parts of the body, cervical cancer and its precursor lesions are treatable in the early stages of the disease and can be detected early. The majority of women do not typically exhibit symptoms until the disease has progressed, making cervical cancer screenings essential (7). Awareness of the condition, screening methods, and preventive measures are all essential to the prevention and control of cervical cancer (8). From local management to national management, the relationship between PAP smear results, HPV type distributions, colposcopic evaluations, and histopathological results is crucial in the fight against cervical cancer (9). The use of bivalent and quadrivalent HPV vaccines is authorized in Turkey (10). 9 to 12 years old is the recommended range for vaccination. Vaccination for breeding is permitted up until the age of 26 (11). Men have been tested for use of the tetravalent vaccine, which is currently licensed (12). Pregnant women are advised against receiving the vaccine (13, 14). Additionally, the vaccine is available for nursing mothers. Cervical cancer screening cannot be replaced by immunization. A further effort is being made to prevent cervical cancer in the country. Even though the HPV vaccine has been around for a while, the Turkish government still does not offer it as a routine

*Correspondence: yunuskatirci@msn.com

vaccination as part of the National Immunization Program. Even among the highly educated population working in the healthcare sector, ignorance of its dosage, schedule, and cost exists. For their own benefit, healthcare professionals should be fully informed about the HPV vaccine so they can discuss it with their patients. In order to remove vaccination barriers and assess current knowledge of cervical cancer and HPV vaccination among healthcare professionals working in a tertiary hospital, this study was conducted.

2. Material and Method

The study was approved by the ethics committee of Ondokuz Mayıs University clinical research (OMUKAEK:2020/744). 350 female employees working at Ondokuz Mayıs University Faculty of Medicine were included in the study. Written informed consent was obtained from the participants before the questionnaire was administered. Patients were asked to fill out a questionnaire containing questions about the HPV vaccine and the HPV-cancer link. The survey consisted of two parts. The first part was about social demographics, and the second part was about self-awareness about diseases. All questions were closed-ended yes or no or multiple choice for a more accurate assessment. The questionnaire is given in Table 1.

Table 1. Questions asked to participants

No	Questions	Answers
1.	What is your age?	
2.	What is your profession?	
3.	Can cervical cancer be diagnosed early with screening?	
4.	I know that cervical cancer is caused by the HPV virus.	
5.	HPV is a sexually transmitted virus.	
6.	Can men get HPV infection?	
7.	HPV causes genital warts.	
8.	HPV is not seen in women who doesn't have sexual intercourse.	
9.	Have you heard that the state makes HPV screening test free for cervical cancer screening?	
10.	Have you ever had a cervical cancer screening test (smear or HPV)?	
11.	Can you be vaccinated to protect yourself from cervical cancer?	
12.	Who gets the HPV vaccine?	
13.	I have had the HPV vaccine.	
14.	Have any of your relatives had the HPV vaccine?	

3. Results

The age distribution of health professionals included in the study is between 20 and 55 (Fig. 1). The majority of the participants included nurses (280 women, 37.1%) and physicians (280 women, 24.6%), and the remaining health workers (Fig. 2). While 98.3% of the 290 female participants answered yes to the question of whether the early diagnosis of cervical cancer can be made by screening, the remaining 1.7% answered no (Fig. 3). When asked "I know that the HPV virus causes cervical cancer", 87.2% of participants answered "I know", and 12.8% answered "I don't know" (Fig. 4). Responding to the question of HPV is a sexually transmitted virus, a total of 86.9% of participants said "yes", 3.8% said "no" and, "9.3%" had no idea (Fig. 5). In our study, about the sexual transmission of HPV virus, 86.9% of the participants said yes, 9.3% had no idea and 3.8% answered no (Fig. 6). It was determined that the awareness of male HPV infection was high among the female health workers of Ondokuz Mayıs University. The level of awareness of the possible cause of genital warts was found to be high. To the question that HPV is not seen in women who do not have sexual intercourse, 53.4% of the participants answered "yes", while 27.6% had "no idea" (Fig. 7). The question "Are you aware that cervical cancer screening is free of charge, Have you had this test before?" reveals that the awareness of the participants is high. To the question of who is vaccinated against cervical cancer, 29.7% of the participants replied to "women", 37.2% to "both women and men", and 13.1% had "no idea". While 96.2% of the participants were not vaccinated against HPV, 3.8% were vaccinated against HPV. When asked if they have had HPV vaccine soon, 54.8% of the participants answered "no", 13.8% "yes", and 31.4% had "no idea" (Fig. 8).

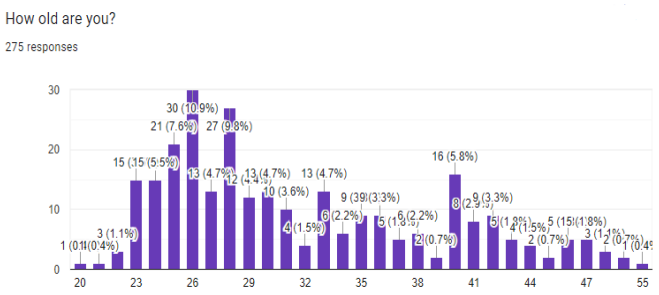

Fig. 1. Distribution of the answers given to the 1st question of the questionnaire

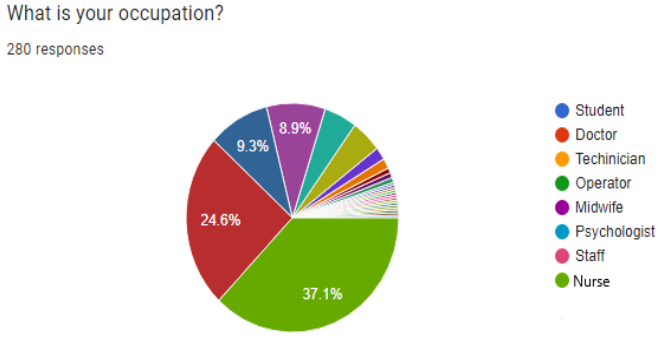

Fig. 2. Distribution of the answers given to the 2nd question of the questionnaire

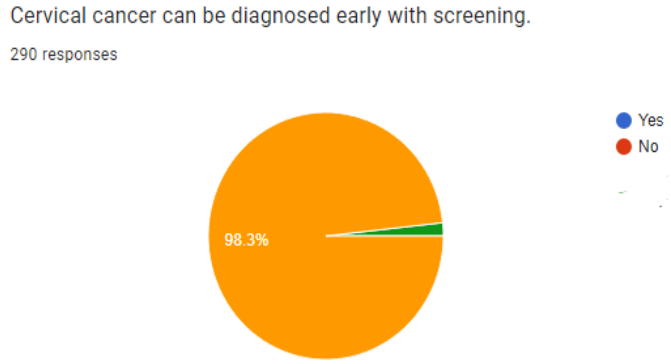

Fig. 3. Distribution of the answers given to the 3rd question of the questionnaire

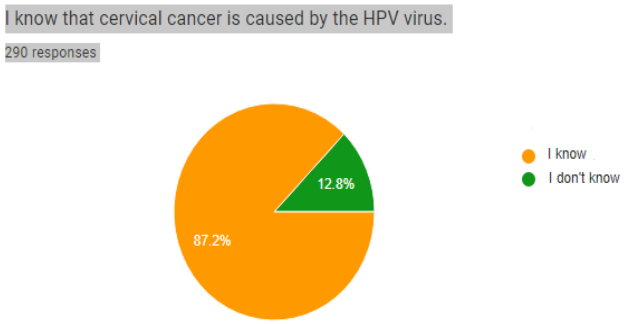

Fig. 4. Distribution of the answers given to the 4th question of the questionnaire

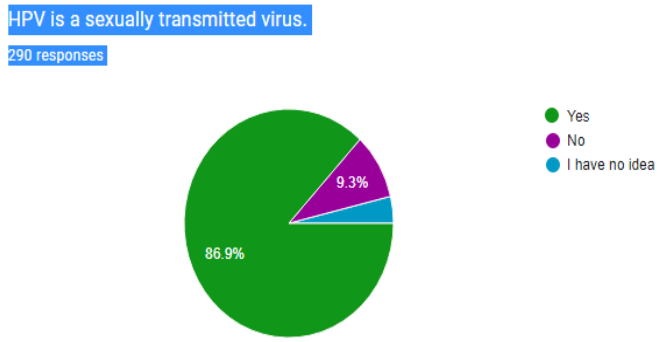

Fig. 5. Distribution of the answers given to the 5th question of the questionnaire

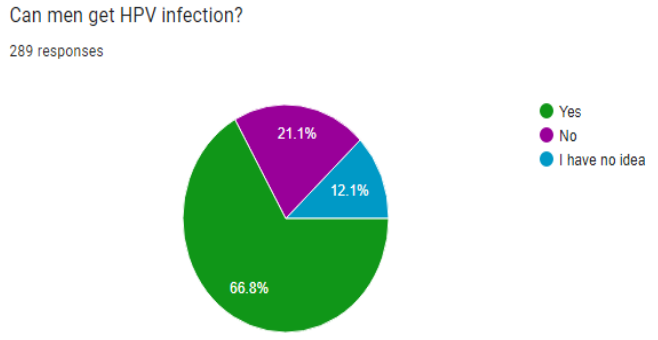

Fig. 6. Distribution of the answers given to the 6th question of the questionnaire

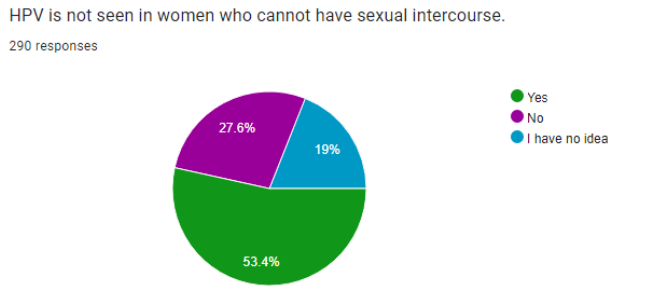

Fig. 7. Distribution of the answers given to the 8th question of the questionnaire

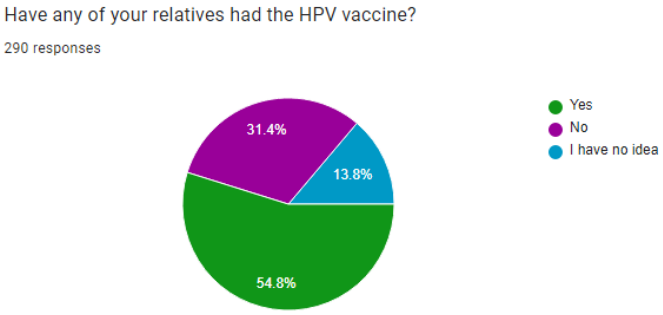

Fig. 8. Distribution of the answers given to the 14th question of the questionnaire

4. Discussion

In this study, the knowledge and attitudes of women over 20 years of age towards genital warts, cervical cancer, swab test, prevention method, HPV vaccine were evaluated. It was determined that most of the participants in the study did not know that the large HPV virus causes cervical cancer. Also, a large proportion of the participants had a high level of knowledge about the sexually transmitted disease of cervical cancer. 87.2% of them knew that HPV virus causes cervical cancer. However, 96.2% of them have not been vaccinated against HPV. We determined that most of the participants had sufficient knowledge about cervical smear test, HPV infection and male vaccines. A multicenter cross-sectional study was conducted with 1146 women and 557 undergraduate students in China and they showed that 320 (28%) of 1146 women and 66 (12%) of 557 students knew about HPV, and very few of them knew about the HPV-cancer link. (11). Even in societies where HPV vaccination is routine, awareness may be raised to a great extent, but information may still be insufficient. Bowyer et al. supported this view with the study they conducted on 1033 girls who had been vaccinated with HPV 3 years ago at 13 schools in London (12).

It is known that HPV causes cervical cancer, that vaccination is important, and that a cervical smear test is still required. In our study, 87.2% of the participants claimed to know the cause of cervical cancer, while 98.3% were aware that HPV cervical cancer could be diagnosed early with the screening method. There are other studies from Turkey about HPV infection and awareness of infection-cancer link. Ozyer et al. conducted a study with 408 participants in Turkey (8). In this study, it was shown that 41.6% of the participants were

aware of HPV, and 33% knew the link between HPV infection and cervical cancer. In the same study, only 27.9% of the participants knew about the HPV vaccine, and only 1.4% had been vaccinated. In another study, 520 nursing students working in a tertiary health institution in Ankara and a control group of 232 people were evaluated (7).

This study, which was conducted among female health workers about HPV, showed that awareness knowledge/ awareness of HPV is high among female health workers. The fact that our study was only among female health workers and in a primary health care institution may be counted among the limitations of the study. There is a need for larger-scale studies on HPV infection and vaccine to be conducted throughout Turkey.

In conclusion, we observed that the awareness rate of female health workers at Ondokuz Mayıs University was high about the connection between HPV infection and cervical cancer. We concluded that HPV infection causes cancer, vaccination prevents HPV infection to a large extent, and in-house training increases awareness about HPV infection.

Ethical statement

The study was approved by the ethics committee of Ondokuz Mayıs University clinical research (OMUKAEK:2020/744).

Conflict of interest

None to declare.

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None to declare.

Authors' contributions

Concept: Y.K., İ.Y., A.B., D.G., İ.K., Design: Y.K., İ.Y., A.B., D.G., İ.K., Data Collection or Processing: Y.K., İ.Y., A.B., D.G., İ.K., Analysis or Interpretation: Y.K., İ.Y., A.B., D.G., İ.K., Literature Search: Y.K., İ.Y., A.B., D.G., İ.K., Writing: Y.K., İ.Y., A.B., D.G., İ.K.

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