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Knowledge Level About HPV Infection and Cervical Cancer Screening Tests

HPV Enfeksiyonu ve Rahim Ağzı Kanseri Tarama Testleri Hakkında Bilgi Düzeyi

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Abstract

Aim: Understanding HPV and cervical cancer is vital for prevention, early diagnosis, and treatment. Nurses play a crucial role in implementing screening and are also at risk. This study examines nurses' knowledge and practices regarding HPV and cervical cancer screening in a tertiary center.

Material and Method: It is a prospective survey study conducted with nurses. A total of 191 nurses participated in the three-part and 53-item survey that evaluated demographic data, HPV knowledge levels and cervical cancer screening awareness.

Results: A total of 2895 nurses work at the hospital. The rate of participation in the research was 6.6% with 191 participants. The average age of the participants is 27.1. Majority of the participants are female (n: 171, 89.5%), only 20 (10.5%) are male. While 81.9% of the respondents had knowledge about sexually transmitted diseases, only 13.5% had gone to regular gynecological examinations. Despite 98.4% of the participants who had knowledge about cervical cancer and screening practices, only 11% (n:19) had undergone cervical cancer screening and 94.2% (n:180) had not received HPV vaccine. The most mis-answered question about HPV was whether current vaccines protect against both genital warts and cervical cancer.

Conclusion: In conclusion, nurses' knowledge level and screening practices about HPV and cervical cancer need to be improved. It is also important to increase awareness of the HPV vaccine and encourage more people to receive it. This effort could positively impact health outcomes related to cervical cancer and HPV.

Keywords: HPV, knowledge level, cervical cancer

Öz

Amaç: HPV ve rahim ağzı kanserini anlamak, önleme, erken teşhis ve tedavi için hayati öneme sahiptir. Hemşireler, taramanın uygulanmasında çok önemli bir rol oynar ve aynı zamanda risk altındadır. Bu çalışmada, üçüncü basamak bir merkezde hemşirelerin HPV ve rahim ağzı kanseri taramasına ilişkin bilgi ve uygulamalarını incelemeyi amaçladık.

Gereç ve Yöntem: Çalışma hemşirelerin HPV ve serviks kanseri ile ilgili bilgi düzeylerini ölçmek için gerçekleştirilen prospektif bir anket çalışmasıdır. Değerlendirme demografik verileri, HPV bilgi düzeylerini ve servikal kanser taraması farkındalığını değerlendiren, üç bölümden ve 53 sorudan oluşan bir anket ile yapılmıştır. Toplam 191 hemşire çalışmaya katılmıştır.

Bulgular: Hastanede toplam 2895 hemşire çalışıyordu. Araştırmaya katılım oranı 191 katılımcı ile %6,6 idi. Katılımcıların yaş ortalaması 27,1 idi. Katılımcıların çoğunluğu kadındı (n: 171, %89,5), sadece 20'si (%10,5) erkekti. Katılımcıların %81,9'u cinsel yolla bulaşan hastalıklar hakkında bilgi sahibiyken, sadece %13,5'i düzenli jinekolojik muayeneye gitmişti. Katılımcıların %98,4'ü rahim ağzı kanseri ve tarama uygulamaları hakkında bilgi sahibi olmasına rağmen, sadece %11'i (n:19) rahim ağzı kanseri taraması yaptırmış ve %94,2'si (n:180) HPV aşısı yaptırmamıştı. HPV ile ilgili en yanlış cevaplanan soru, mevcut aşıların hem genital siğillere hem de rahim ağzı kanserine karşı koruma sağlayıp sağlamadığıydı.

Sonuç: Sonuç olarak, hemşirelerin HPV bilgi düzeylerinin ve rahim ağzı kanseri ile ilgili tarama uygulamalarının geliştirilmesi gerekmektedir. HPV aşısı farkındalığını artırmak ve daha fazla insanı aşı olmaya teşvik etmek de önemlidir. Bu çaba, rahim ağzı kanseri ve HPV ile ilgili sağlık sonuçlarını olumlu yönde etkileyebilir.

Anahtar Kelimeler: HPV, bilgi düzeyi, serviks kanseri

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INTRODUCTION

Human papillomavirus (HPV) is considered the most common sexually transmitted agent worldwide.[1] While the 16 and 18 genotypes of HPV are the types most associated with cervical cancer, the 31, 33, 35, 39, 45, 51, 52, 56, 58, 59, and 66 genotypes are also high-risk genotypes that can cause cancer.[2] In the cervical cancer control process, HPV prevention and early detection of HPV-induced changes play a crucial role in reducing morbidity and mortality.[3] Studies have shown that approximately 79 million individuals worldwide are infected with HPV, approximately 14 million people in the United States of America (USA) are diagnosed with HPV positivity each year, and approximately 99.7% of cervical cancers in the USA are of HPV origin.[4]

In the female population, HPV infection peaks between the ages of 20 and 24 (44.8%) and gradually declines between the ages of 25 and 29 (19.6–27.5%).[5,6]

While the immune system typically clears the virus within two years in infected individuals, persistent HPV infection is known to cause cervical cancer and genital warts in some individuals.[7,8]

Studies on HPV show that the prevalence is much higher in women under the age of 25 compared to other age groups.[9] It is known that the risk of cervicovaginal HPV infection in women is directly related to the number of male sex partners. In addition, as with other sexually transmitted infections, it is known that having sex with a new partner poses a higher risk of transmission of HPV than having sex with the same partner for a long time.[10]

Cervical cancer, which is an essential problem for women's health, is a significant health problem to what extent the HPV test, pap smear test, and primary prevention HPV vaccine, which is used to detect cervical cancer early, is known and applied by the society.[11,12] Having knowledge about HPV and cervical cancer is extremely important in prevention, early diagnosis, and treatment. The knowledge, attitudes, and approaches of health professionals, especially nurses, are fundamental in the implementation and development of screening tests in the community. In addition, nurses are in the risk group in terms of HPV infection and related complications. Nurses have the responsibility and awareness to protect and improve the health of themselves and the patients they care for. This study, it was aimed to examine the knowledge and behaviors of nurses working in the tertiary center about HPV and cervical cancer screening tests.

MATERIAL AND METHOD

The study was carried out with the permission of Basaksehir Cam and Sakura State Hospital Clinical Researches Ethics Committee (Date: 14.04.2021, Decision No: 33). All procedures were carried out in accordance with the ethical rules and the principles of the Declaration of Helsinki.

This prospective survey-based study was conducted on hospital nurses between July 1, 2022 and July 1, 2023. A self-administered online questionnaire was developed using the Google Documents program.

Before starting the survey, the participants were informed that the survey was for research purposes and their participation would be anonymous. Those who accepted were directed to the questionnaire by the program. 191 nurses actively working in the hospital, who did not work in the gynecological oncology clinic before or currently, participated in the survey. Nurses working in the gynecological oncology clinic were excluded from the study. The questionnaire consisted of 3 parts and included 53 main questions in total. The survey took 10 minutes to complete. In the first part, there were demographic data consisting of 10 questions. The second part included the HPV knowledge scale and included 33 questions. In the last part, there was a 10-question test measuring awareness about cervical cancer screening tests. Participants did not have to answer all questions to complete the survey.

The data obtained from the completed questionnaires were recorded in the Google Documents database and analyzed through this database. Categorical data were defined using frequencies (percentages). The Cronbach's alpha coefficient of the questionnaire was 0.96 with an acceptable internal consistency.

RESULTS

A total of 2895 nurses has work in the hospital, 191 participants agreed to participate in the study with the 6.6% response rate. The median age was 27,1 (min:18, max:44). One hundred and seventy-one (n:171, %89.5) of the participants were women, whereas only 20 (%10.5) of the participants were male. Most of them were single (n:131, %68.9) and only 29 (%15.2) participants had child. While majority of participants had been working shorter than 5 years (n:151, %79.1), 5 (%2.6)of them had been working more than 20 years. The demographic characteristics of the respondents are shown in **Table 1**.

Knowledge of the Cervical Cancer Screening

When the participants had asked if they had a family member with gynecological cancer history, 25 of them answered positive and among of them endometrial cancer is the most common type. Whereas 188 (%81.9) respondents have information about sexually transmitted diseases, only 23 (%13.5) of them went to regular gynecological examination. Participants were also asked to knowledge of cervical cancer and their screening practice.

Although %98.4 of the respondents know cervical cancer, only %11 of them (n:19) had undergone cervical cancer screening and %94.2 of them (n:180) had no HPV vaccination. When asked the reason for not having smear testing, the leading answer was “having no complaint” (n:74, %53.6), followed by “having no sexual intercourse” (n:60, %43.5) and “fear of gynecological examination” (n:16, %11.6). (**Table 2**)

Table 1. Demographic characteristics of the participants

Age (mean)	27,1 (min:18, max:44)
Gender	
Female	171 (90%)
Male	20 (10%)
Educational Status	
High School	8 (4%))
University	162 (85%)
Degree	21 (11%)
Years of Work	
<5 years	151 (79%)
5-10 years	23 (12%)
10-20 years	12 (6%)
>20 years	5 (3%)
Smoker	
Yes	73 (38%)
No	118 (62%)
Alcohol	
Yes	46 (24%)
No	145 (76%)
Marital status	
Married	60 (31%)
Single	131 (69%)
Having child	
Yes	29 (15%)
No	162 (85%)
Please mark the region where you spent the longest part of your life	
Marmara	73 (38%)
Central Anatolia	22 (12%)
Black Sea	20 (10%)
Mediterranean	27 (14%)
Aegean	21 (11%)
Eastern Anatolia	13 (7%)
Southeast Anatolia	16 (8%)

Table 2. Knowledge of the Cervical Cancer Screening

Do you know anything about sexually transmitted diseases?	
Yes	188 (98%)
No	3 (2%)
Do you regularly go for gynecological examinations?	
Yes, every year	23 (13%)
I only go when I have complaints	140 (82%)
I don't go for gynecological examinations even if I have complaints	8 (5%)
Have you ever heard of cervical cancer before?	
Yes	188 (98%)
No	3 (2%)
Have you undergone a Pap Smear or HPV test as part of the cervical cancer screening program? (If you are male, please skip this question.)	
I have had both of them done	13 (8%)
I haven't had them done	138 (80%)
I have had a smear test done	19 (11%)
I have had an HPV test done	2 (1%)
If your answer to the previous question was no, what is the reason for that?	
I have never had sexual intercourse	63 (41%)
I'm afraid of getting a bad result	4 (3%)
I have no complaints	72 (47%)
I'm afraid of vaginal examinations	13 (9%)

Table 2. Knowledge of the Cervical Cancer Screening

Have you received the HPV vaccine so far?	
Yes	11 (6%)
No	180 (94%)
It can only be performed by gynecologists in hospitals.	
Yes	81 (42%)
No	88 (46%)
I don't know	22 (12%)
It is a paid service.	
Yes	32 (17%)
No	142 (74%)
I don't know	17 (9%)
It has no benefit in early cancer detection.	
Yes	17 (9%)
No	167 (87%)
I don't know	7 (4%)
It is a painful procedure.	
Yes	23 (12%)
No	139 (73%)
I don't know	29 (15%)
After the test is done, sexual intercourse is prohibited for 1 week.	
Yes	36 (19%)
No	75 (39%)
I don't know	80 (42%)
It is not advisable to undergo these tests during pregnancy.	
Yes	60 (31%)
No	61 (32%)
I don't know	70 (37%)
Getting screened once is sufficient for a lifetime protection against cancer.	
Yes	9 (5%)
No	166 (87%)
I don't know	16 (8%)
HPV infection only affects women and causes diseases.	
Yes	23(12%)
No	135(71%)
I don't know	33(17%)
HPV testing can also be performed in male patients.	
Yes	106(55%)
No	34(18%)
I don't know	51(27%)
Smear and HPV tests should be done annually.	
Yes	95 (50%)
No	66 (35%)
I don't know	30 (16%)
Cancer screening tests should be repeated every 3-5 years.	
Yes	161 (84%)
No	10 (5%)
I don't know	20 (10%)
HPV enfeksiyonu ileri yaş kadınlarda saptanmamaktadır	
Yes	11 (6%)
No	147 (77%)
I don't know	33 (17%)
Screening tests are recommended for women between the ages of 30 and 65.	
Yes	120 (63%)
No	51 (27%)
I don't know	20 (10%)

Table 2. Knowledge of the Cervical Cancer Screening	
Since HPV is not observed in women under 30, this age group is screened only with a smear test.	
Yes	54 (28%)
No	79 (41%)
I don't know	58 (30%)
Since HPV is commonly seen in women under 30, it is not recommended to perform HPV testing in this age group.	
Yes	27 (14%)
No	122 (64%)
I don't know	42 (22%)
When HPV test is negative and abnormalities are detected in the smear, no further investigation is needed.	
Yes	11 (6%)
No	139 (73%)
I don't know	41 (21%)
When HPV test is positive, regardless of the smear result, further investigation is required.	
Yes	129 (68%)
No	15 (8%)
I don't know	47 (25%)
Women who have had their uterus removed can be excluded from cervical cancer screening programs, regardless of their HPV infection history.	
Yes	38 (20%)
No	95 (50%)
I don't know	58 (30%)
Even in women who have had their uterus removed, cervical cancer screening should be conducted using HPV and smear tests.	
Yes	99 (52%)
No	33 (17%)
I don't know	59 (31%)
HPV infection can be transmitted from women to men.	
Yes	79 (41%)
No	62 (32%)
I don't know	50 (26%)
HPV infection can be transmitted from men to women.	
Yes	102 (53%)
No	37 (19%)
I don't know	52 (27%)
It is possible to determine from which partner the HPV infection was acquired.	
Yes	56 (29%)
No	62 (32%)
I don't know	73 (38%)
Once HPV infection is contracted, it persists for a lifetime.	
Yes	73 (38%)
No	62 (32%)
I don't know	56 (29%)
HPV infection often causes temporary infections.	
Yes	65 (34%)
No	60 (31%)
I don't know	66 (35%)
Removing the uterus protects against diseases related to HPV infection.	
Yes	31 (16%)
No	101 (53%)
I don't know	59 (31%)

Knowledge of the HPV

In our cohort, median calculated knowledge of HPV score was 18.1. According to subtitles of questionnaire, the first section about of the general knowledge of HPV mean score was 10.3, the second section about knowledge of HPV screening tests mean score was 2.8, the third section of knowledge of HPV vaccination mean score was 4, and the last section of national HPV vaccination programme mean score was 1. The examples of the most wrong and correct questions in the 4 separate sections of the test are given in **Table 3**.

Table 3 Knowledge of the HPV		
	Mostly True	**Mostly False**
General Knowledge of HPV		
	Having many sexual partners increases the risk of getting HPV	HPV usually doesn't need any treatment
	T n:175 (92%) F n: 16 (8%)	T n: 10 (5%) F n:181 (95%)
Knowledge of HPV Screening Test		
	If a woman tests positive for HPV she will definitely get cervical cancer	If an HPV test shows that a woman does not have HPV, her risk of cervical cancer is low
	T n:126 (66%) F n: 65 (34%)	T n:67 (35%) F n: 124 (65%)
Knowledge of HPV vaccination		
	Girls who have had an HPV vaccine do not need a Pap test when they are older	The HPV vaccines are most effective if given to people who have never had sex
	T n: 141 (74%) F n: 50 (26%)	T n: 73 (38%) F n: 118 (62%)
HPV vaccination schedule information		
	HPV vaccine is recommended for all females ages 11-26 years	Both HPV vaccines that are available (Gardasil&Cervarix) protect against both genital warts and cervical cancer
	T n: 111 (58%) F n: 80 (42%)	T n: 3 (2%) F n: 188 (98%)

DISCUSSION

HPV is a common sexually transmitted infection worldwide and is particularly common among young women.[13] The importance of HPV in the prevention and early diagnosis of cervical cancer is always emphasized in studies.[5,14] It is noted that certain HPV genotypes increase the risk of cervical cancer.[15] According to the results of our study, it is seen that nurses generally have good knowledge about HPV and cervical cancer screening tests. However, despite this information, the number of people who do not have cervical cancer screening tests or who are not vaccinated against HPV seems to be quite high.

There are many studies examining the most common reasons for women not having cervical cancer screening tests, and these reasons may differ by country, culture, and health system.[16,17] However, in general, the reasons frequently encountered in the literature include ignorance

or lack of awareness, fear of gynecological examination, absence of symptoms, difficulties in accessing health services, inability to find opportunities due to time and work problems, factors such as social norms, cultural beliefs and family pressure, cost, and finally It can be counted as lack of communication with health professionals or poor quality of health services.[18,19] In our study, it is stated that the most common reason for those who do not have cervical cancer screening tests is "not having any complaints". In addition, fear of gynecological examination stands out as an obstacle.

In a study by Satilmisoglu et al. in 2018 that included nurses, although 88% of the participants knew how to screen for cervical cancer, 68% did not have regular cervical cancer screening. According to the same study data, although cervical cancer was heard by 98% of the participants, cervical cancer screening was not performed by 80% of the participants.[20] Levels of knowledge about HPV and cervical cancer varied among participants. In particular, there are misunderstandings and incomplete information about the HPV vaccine. According to the results of the study, the majority of the participants do not go to regular gynecological examinations. In addition, the rate of participation in cervical cancer screening is low. And unfortunately, most of the participants did not have the HPV vaccine.

CONCLUSION

This study helps us to understand the knowledge level and behaviors of nurses about HPV and cervical cancer screening tests. There is a need to raise awareness of nurses about HPV and cervical cancer more, as they play an important role in the implementation of screening tests in the society and they are the occupational group that stays in contact with the patient for longer periods of time. Thus, it will contribute to a further reduction in the incidence of cervical cancer in the community.

ETHICAL DECLARATIONS

Ethics Committee Approval: The study was carried out with the permission of Basaksehir Cam and Sakura State Hospital Clinical Researches Ethics Committee (Date: 14.04.2021, Decision No: 33).

Informed Consent: All patients signed the free and informed consent form.

Referee Evaluation Process: Externally peer-reviewed.

Conflict of Interest Statement: The authors have no conflicts of interest to declare.

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