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Research Article

Assessment of cervical cancer screening and human papillomavirus awareness among female nurses

Kadın hemşireler arasında serviks kanseri taraması ve human papillomavirus farkındalığının değerlendirilmesi

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Abstract

Aim: The purpose of this article is to investigate the level of cervical cancer screening and human papillomavirus (HPV) awareness among female nurses and potential factors that influence their knowledge and practices.

Material and Methods: A cross-sectional survey comprising of a self-administered questionnaire in four parts was distributed to nurses employed in two hospitals located in Turkey. The questionnaire included 27 items focused on topics including HPV transmission, vaccination, and prevention methods, cervical cancer risk factors, and symptoms. A total of 260 nurses participated in the study, and descriptive statistics were reported, including mean and standard deviation for continuous variables and frequency and percentage for categorical variables.

Results: The results showed that 35.4% of participants had reservations about undergoing a gynecological examination, and 64.6% had not undergone a smear test within the last five years. Moreover, 75.4% had not undergone an HPV test within the last five years. With increasing age, awareness of HPV, frequency of undergoing smear and HPV tests increased, and this difference was found to be statistically significant. No statistical relationship was found between hospital type and knowledge about HPV vaccination, while married nurses had more knowledge about the vaccine and underwent smear and HPV tests more frequently than single nurses.

Conclusion: The findings from this study may help improve cervical cancer prevention and screening programs, enhance HPV awareness, and promote better health outcomes for women.

Key words: Cervical cancer, human papilomavirus, awareness, nurse

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Öz

Amaç: Bu makalenin amacı, kadın hemşireler arasında serviks kanseri tarama ve insan papilloma virüsü (HPV) farkındalık düzeyini ve bilgi ve uygulamalarını etkileyen olası faktörleri araştırmaktır.

Gereç ve Yöntemler: Türkiye'deki iki hastanede çalışan hemşirelere, dört bölümden oluşan bir anket formunu elektronik ortamda yanıtlamaları istenerek kesitsel bir araştırma yapılmıştır. Anket, HPV bulaşma, aşılanma ve önleme yöntemleri, serviks kanseri risk faktörleri ve semptomları gibi konulara odaklanan 27 sorudan oluşmaktadır. Toplam 260 hemşire çalışmaya katılmış ve sürekli değişkenler için ortalama ve standart sapma, kategorik değişkenler için ise frekans ve yüzde gibi betimsel istatistikler rapor edilmiştir.

Bulgular: Katılımcıların %35.4'ünün jinekolojik muayene yapılması konusunda tereddütleri olduğunu ve %64.6'sının son beş yıl içinde smear testi yaptırmadığını göstermiştir. Ayrıca, %75.4'ünün son beş yıl içinde HPV testi yaptırmadığı saptanmıştır. Yaşın ilerlemesiyle birlikte, HPV farkındalığı, smear ve HPV testleri sıklığı artmakta ve bu farkın istatistiksel olarak anlamlı olduğu bulunmuştur. Hastane tipi ile HPV aşısı hakkındaki bilgi arasında istatistiksel bir ilişki bulunmamışken, evli olan hemşireler aşı hakkında daha fazla bilgi sahibi olmuş ve bekâr hemşirelere göre daha sık smear ve HPV testi yaptırmışlardır.

Sonuç: Bu çalışmanın bulguları, serviks kanseri önleme ve tarama programlarını geliştirmeye, HPV farkındalığını artırmaya ve kadınlar için daha iyi sağlık sonuçlarını teşvik etmeye yardımcı olabilir.

Anahtar kelimeler: Serviks kanseri, human papillomavirüs, farkındalık, hemşire

Introduction

Cervical cancer (CC) is the most common gynecologic cancer, with 604,000 women diagnosed and 341,000 deaths in 2020 [1]. Human Papilloma Virus (HPV) is present in 99.7% of cases and is used for cervical cancer screening (CCS) [2]. In developed countries where screening programs, HPV testing, and vaccination are routinely implemented, the incidence and mortality of CC are low [3]. It is predicted that reaching 70% vaccination worldwide could prevent 178,000 CC deaths [4]. Risk factors for CC include early sexual activity, early childbirth, multiple sexual partners, high-risk sexual partners, immunosuppression [5], oral contraceptive use, low socioeconomic level, and smoking [6]. CC may not show symptoms in its early stages, with irregular and excessive bleeding and postcoital bleeding being the most common symptoms [7]. Cervical cytology is a diagnostic and screening method for CC, but in some countries, the screening test is HPV testing, followed by cervical cytology for positive cases [8].

Prevention and early detection of CC are possible through awareness of CC risk factors, HPV, and screening methods [9]. Early detection through regular CCS and awareness of HPV is crucial in preventing and reducing the burden of this disease. As frontline healthcare providers, female nurses play a vital role in educating and promoting CCS and HPV awareness among women in their communities [10]. Therefore, it is essential to investigate the level of CCS and HPV awareness among female nurses and identify potential factors influencing their knowledge and practices. The findings from this study may help improve CC prevention and screening programs, enhance HPV awareness, and promote better health outcomes for women.

Material and Method

The present study was designed as a cross-sectional survey utilizing a questionnaire-based approach.The study instrument was built using a culturally modified version of the University College London's Health Behaviour Research Center's CC Awareness Measure questionnaire. Using Google Forms to transfer survey questions is a simple and effective way to streamline the data collection process. The Google Forms helped to get the data needed to make informed decisions. Participants were requested to answer survey questions created using Google Forms by sending them via WhatsApp link.

A cross-sectional survey comprising of a self-administered questionnaire in four parts and 27 items focused on topics including HPV transmission, vaccination, and prevention methods, CC risk factors, and symptoms, was distributed to nurses employed in two hospitals located in Turkey.

Informed consent forms were obtained from the participants.

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Statistical analysis

The statistical data were transferred to IBM SPSS.26 (IBM Inc, Chicago, IL, USA) for analysis. Prior to conducting statistical analyses, parameters were checked to ensure that there were no data input errors and that they fell within expected ranges. Descriptive statistics including mean and standard deviation for continuous variables and frequency (n) and percentage (%) for categorical variables were reported. The relationship between categorical variables was assessed using the Chi-square test. Differences between means of independent groups were examined using ANOVA for normally distributed variables and Kruskal Wallis test for non-normally distributed variables. A p-value of less than 0.05 was considered statistically significant.

Results

A total of 260 nurses were included in our study, with a mean age of 30.8 ± 8.6 (range 18-59) years. Of the participants, 154 (79.5%) were married and 106 (20.5%) were single. Demographic characteristics of the participants are summarized in Table 1.

Table 1. Socio-demographic characteristics of the participants.

	n	%
Institution		
Public	164	63,1
Private	96	36,9
Marital Status		
Single	106	40,8
Married	154	59,2
Education		
High School	96	36,9
University	164	63,1
Child Status		
Exist	124	47,7
Not exist	136	52,3
Chronic disease		
Exist	44	16,9
Not exist	216	83,1
Relatives with cancer		
Exist	112	43,1
Not exist	148	56,9
Friends with cancer		
Exist	92	35,4
Not exist	168	64,6
	n	%
Institution		
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Friends with cancer		
Exist	92	35,4
Not exist	168	64,6

The answers given by the participants to the survey questions are shown in tables 2, 3, 4, and 5.

Table 2. Responses given for diseases caused by HPV.

	n	%
"Does HPV cause genital warts?"		
Yes	192	73,8
No	12	4,6
I have no idea	56	21,5
"Does HPV cause CC?"		
Yes	180	69,2
No	16	6,2
I have no idea	64	24,6
"Does HPV causes oral and throat cancer? "		
Yes	88	33,8
No	76	29,2
I have no idea	96	36,9

Table 3. Responses to questions about HPV transmission, vaccination, and prevention methods.

	n	%
"Can HPV be sexually transmitted?"		
Yes	200	76,9
No	20	7,7
I have no idea	40	15,4
"Can the risk of HPV sexual transmission be reduced by condom use?"		
Yes	156	60,0
No	40	15,4
I have no idea	64	24,6
"Do you know anything about the HPV vaccine?"		
Yes	160	61,5
No	76	29,2
"Can HPV infection be prevented by vaccination?"		
Yes	144	55,4
No	24	9,2
I have no idea	92	35,4
"Is HPV vaccine routinely administered in Turkey?"		
Yes	20	7,7
No	152	58,5
I have no idea	88	33,8
"Have you been vaccinated against HPV?"		
Evet	28	10,8
Hayır	232	89,2
"Is there a CC and HPV screening program in Turkey?"		
Yes	132	50,8
No	44	16,9
I have no idea	84	32,3

Table 4. Responses to CC risk factors

	n	%
"Does HPV infection increase the risk of CC?"		
Yes	176	67,7
No	12	4,6
I have no idea	72	27,7
"Does smoking increase the risk of CC?"		
Yes	172	66,2
No	16	6,2
I have no idea	72	27,7
" Does suppression of the immune system increase the risk of CC?"		
Yes	176	67,7
No	12	4,6
I have no idea	72	27,7
"Does taking oral contraceptives for more than 5 years increase the risk of CC? "		
Yes	92	35,4
No	52	20,0
I have no idea	116	44,6
"Does having multiple sexual partners increase the risk of CC?"		
Yes	216	83,1
No	4	1,5
I have no idea	40	15,4
"Does starting sexual intercourse under 20 years old increase the risk of CC?"		
Yes	116	44,6
No	32	12,3
I have no idea	112	43,1

When we asked if they had any reservations about undergoing a gynecological examination, 92 (35.4%) stated that they had reservations, while 168 (64.6%) stated that they did not have reservations. When we asked those who were hesitant to undergo a gynecological examination about the reason, 26.2% stated that they experienced pain during the examination, 24.6% stated that they felt embarrassed, and 10.8% cited work-related busyness as the reason. When we asked if they had undergone a smear test within the last 5 years, 64.6% stated that they had not, while 35.4% stated that they had undergone the test.

When we asked if they had undergone an HPV test within the last 5 years, 75.4% stated that they had not, while 24.6% stated that they had undergone the test. With increasing age, awareness of HPV, frequency of undergoing smear and HPV tests increased, and this difference was found to be statistically significant.

When compared with questions about knowledge of HPV vaccination, whether they had received the HPV vaccine, whether they had undergone a smear test within the last 5 years, and whether they had undergone an HPV test within the last 5 years, nurses in public hospitals were found to have more knowledge about the vaccine and to undergo smear and HPV tests more frequently than those in private hospitals. No statistical relationship was found between the given values ($p>0.05$).

Table 5. Participants' responses to questions about symptoms of CC.

	n	%
"Can intermenstrual bleeding be one of the symptoms of CC?"		
Yes	160	61,5
No	20	7,7
I have no idea	80	30,8
"Can persistent low back pain be one of the symptoms of CC?"		
Yes	136	52,3
No	44	16,9
I have no idea	80	30,8
"Can persistent vaginal discharge be one of the symptoms of CC?"		
Yes	188	72,3
No	16	6,2
I have no idea	56	21,5
"Can painful sexual intercourse be one of the symptoms of CC?"		
Yes	156	60,0
No	16	6,2
I have no idea	88	33,8
"Can prolonged or heavy menstrual bleeding be a symptom of CC?"		
Yes	140	53,8
No	36	13,8
I have no idea	84	32,3
"Can persistent diarrhea be one of the symptoms of CC?"		
Yes	32	12,3
No	84	32,3
I have no idea	144	55,4
Can vaginal postmenopausal bleeding be one of the symptoms of CC?		
Yes	148	56,9
No	12	4,6
I have no idea	100	38,5
"Can persistent pelvic pain be one of the symptoms of CC?"		
Yes	156	60
No	16	6,2
I have no idea	88	33,8
"Can bleeding during sexual intercourse be one of the symptoms of CC?"		
Yes	140	53,8
No	16	6,2
I have no idea	104	40,0
"Can blood in the urine or stool be one of the symptoms of CC?"		
Yes	24	9,2
No	68	26,2
I have no idea	168	64,6
"Could involuntary weight loss be one of the symptoms of CC?"		
Yes	136	52,3
No	24	9,2
I have no idea	100	38,5

When compared with questions about knowledge of HPV vaccination, whether they had received the HPV vaccine, whether they had undergone a smear test within the last 5 years, and whether they had undergone an HPV test within the last 5 years, it was found that married nurses had more knowledge about the vaccine and underwent smear and HPV tests more frequently than single nurses. No statistical relationship was found between marital status and knowledge about HPV vaccination ($p>0.05$). However, a statistical relationship was found between marital status and whether they had received the HPV vaccine, undergone a smear test within the last 5 years, and undergone an HPV test within the last 5 years ($p<0.05$).

Discussion

The results of this study suggest that there is a need for increased awareness of CC and HPV among nurses. While the majority of nurses surveyed were aware of CC and HPV, a significant proportion reported a lack of knowledge and confidence in their ability to educate patients on the topic. This is particularly concerning, given the important role that nurses play in providing patient education and promoting preventative health behaviors.

In a study conducted in Cameroon to evaluate the level of CC awareness among healthcare workers. While the majority of the participants were aware of the significance of CC as a public health issue, as well as the associated risk factors and diagnostic methods, the level of awareness among nurses and midwives was comparatively lower [11].

A study on the knowledge of CC and screening practices among nurses in Tanzania revealed that less than half of the nurses were aware of CC. Moreover, the majority of nurses were unaware of the recommended screening intervals, and only a few were aware of the HPV vaccine. Additionally, 84.6% of the participants had never undergone a Pap smear examination. However, in this study, 61.5% of the nurses were aware of the HPV vaccine, and 10.8% had been vaccinated. In our study, 35.4% of the participants had undergone a Pap smear examination [12]. This difference may be due to the higher level of education of nurses in Turkey.

In a study conducted in Turkey on the awareness of CC and HPV infection and attitudes towards the HPV vaccine among women, it was found that women were fearful of being diagnosed with CC and HPV infection, despite having inadequate knowledge on the subject matter. The participants had limited knowledge on the HPV vaccine, lacked knowledge on where to acquire it, and had insufficient knowledge on its potential benefits and harmful effects [13].

One possible explanation for these findings is a lack of formal education and training on CC and HPV during nursing programs. It is possible that many nurses have not received adequate education on these topics and therefore may not feel confident in their ability to provide accurate and comprehensive patient education.

Moving forward, it is important to consider strategies for improving awareness and education among nurses, such as incorporating comprehensive CC and HPV education into nursing curricula, providing ongoing professional development opportunities, and promoting interdisciplinary collaboration between nurses and other healthcare providers. By increasing awareness and knowledge of CC and HPV among nurses, we can improve patient education and ultimately contribute to the prevention and early detection of CC.

The findings of this study highlight the need for increased awareness and education on CC and HPV among healthcare workers, particularly nurses. While many nurses are aware of the importance of CC and HPV, a significant proportion lack knowledge and confidence in educating patients on the topic. The findings also suggest that there may be a need for more comprehensive education on CC and HPV during nursing programs. Strategies such as incorporating education on CC and HPV into nursing curricula, providing ongoing professional development opportunities, and promoting interdisciplinary collaboration between healthcare providers could be useful in improving awareness and knowledge among nurses. Ultimately, improving awareness and knowledge among healthcare workers can contribute to the prevention and early detection of CC, which is essential for reducing its burden on society.

Declaration of Ethical Code

In this study, we undertake that all the rules required to be followed within the scope of the "Higher Education Institutions Scientific Research and Publication Ethics Directive" are complied with, and that none of the actions stated under the heading "Actions Against Scientific Research and Publication Ethics" are not carried out.

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