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Knowledge about Human Papilloma Virus (HPV) and HPV Vaccine at Reproductive Age in Primary Care

Birinci Basamağa Başvuran Doğurganlık Çağındaki Kadınların Human Papilloma Virus (HPV) ve HPV Aşısı Hakkındaki Bilgi Düzeyleri

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ABSTRACT

Purpose: The aim of this study was to identify the knowledge and awareness about human papilloma virus (HPV) and human papilloma virus (HPV) vaccine of women in reproductive age.

Material and Methods: The study covered 294 women aged between 15 and 49. A questionnaire was prepared by the researchers based on the literature review.

Results: The mean age of the participants was 30.5±8.9 years. Only 24.5% had heard about HPV infection and 28.2% had heard HPV vaccine. Of the participants, 188 (63.9%) got zero point from the knowledge questions.

Conclusion: This study indicates that the women who apply primary care units have low knowledge levels; it is apperent that personal and social education is needed. Paying importance to patient education on HPV and cervical cancer in primary care health politics will increase knowledge and awareness for HPV infection and HPV vaccination.

Key words: HPV, HPV Vaccine, Primary Care, Knowledge

ÖZET

Amaç: Bu çalışmanın amacı doğurganlık çağındaki kadınların HPV ve HPV aşısı hakkındaki farkındalık ve bilgi düzeylerini ortaya çıkarmaktır.

Materyal ve Metod: Çalışmaya 15-49 yaş aralığındaki 294 kadın dahil edildi. Yazarlar tarafından literatür taranarak hazırlanan anket formunun doldurulması istendi.

Bulgular: Katılımcıların ortalama yaşı 30.5±8.9 idi. Yalnızca %24.5'i HPV enfeksiyonundan, %28.2'si ise HPV aşısından haberdardı. Katılımcılardan 188'i bilgi sorularından sıfır puan aldı.

Sonuç: Bu çalışma birinci basamağa başvuran kadınların düşük bilgi düzeyinde olduklarını , bireysel ve toplumsal eğitimin gerekliliğini göstermiştir. Birinci basamak sağlık politikalarında hasta eğitimine önem verilmesi toplumun bilgi ve farkındalık düzeylerini artıracak ve kanser insidansının düşmesini sağlayacaktır.

Anahtar kelimeler: HPV, HPV aşısı, Birinci Basamak, Bilgi Düzeyi

INTRODUCTION

As well as being the second cancer type that is the most common among women in the world, cervical cancer is the second most common reason for the cancer deaths[1-4]. According to the data revealed by Turkish Ministry of Health, while

cervical cancer incidence rate was 0.7/100000 in 1996, it increased up to 3.87/100000 in 2007[5].

Human papilloma virus (HPV) is the viral infection that is the most common sexually transmitted and it is responsible for approximately 90% of cases of invasive cervical cancer[6-8]. It was demonstrated that the well organised screening programmes influentially decreases disease incidence and mortality[9]. In the studies, it was indicated that getting vaccinated against HPV 16 and 18 infections can enable protection against invasive cervical cancer at the rate of 70%[6]. It was also observed that HPV vaccine acceptability increased when the groups that were under risk were instructed about HPV and its related disease the knowledge level about HPV and HPV vaccine acceptability increased[10].

In most studies, HPV prevalance and frequency of HPV types which have a great potential for cervical cancer like HPV type 16 is high in our country contrary to what is often supposed. Also, frequency of risk behavior is high in terms of servical cancer such as early sexual intercouse, sexual partners more than one[4,11-13]. Therefore, increasing level of knowledge about HPV and HPV vaccine has a great importance to battle against cervical cancer.

In this study we aimed to identify the knowledge level in a group of women who are between the ages of 15 and 49, the age group accepted as in era of fertility and under the risk of HPV infection.

MATERİAL AND METHODS

This cross sectional study was conducted in five primary care centres during six months period. Each center serves to populations that have similar socio-cultural features. All of the centers were under administration of Dışkapı Yıldırım Beyazıt Teaching and Research Hospital, Ankara.

The women who were volunteer between the ages of 15 and 49 that present to the outpatient unit with any complaints other than gynaecological related symptoms and/or HPV vaccine demand were informed about the study and their oral consent was obtained. The patients who are illiterate, have communication disabilities, are with severe visual or hearing impairments to fill out questionnaire were not included in the study.

Participants were asked to fill out socio-demographic data form that include questions about their ages, marital status, age at first marriage, duration of last marriage, number of children, number of miscarriage and abortion, smoking status, age at first birth, level of education of themselves and of their parents, centers which are frequently used to get healthcare. They were asked if they ever heard about HPV and HPV vaccine. Afterwards, they were asked to give answers for 9 statements like “True”, “False” or “ I don’t know” that measure their level of knowledge about HPV and HPV vaccine, which was prepared by the researchers in the light of literature review. The participants had 1 point for each statement answered correctly. In case that all statements were answered correctly, they had 9 points.

The participants were requested to fill out questionnaire in an empty room not including their names on the forms, and then asked to put them in the closed box where questionnaire forms collected.

Descriptive statistics (frequency, percentage distribution, median±standard deviation), Chi Square Test for comparing groups and Dunn test for comparison among groups, Mann-Whitney U Test for comparison of continuous numerical variables were used on the data that was obtained from the study.

RESULTS

During the study period, 445 questionnaire forms were collected in total. One hundred fifty one of the forms had missing items so these forms were excluded from the study. Two hundred and ninety four participants that met the inclusion criteria of the study and wholly filled out the given forms were included in the study. The mean age of the participants was 30.5±8.9 years. The average

age at first marriage was 20.99±4.12 years (range:14-36).

Among all the participants, 33% were married at the age 18 or before . The average age at first birth was 22.5±4.3 years. The participant who gave the earliest birth was 14 years old and the one who gave the latest birth was 36. 16.8% of births were given under age 18 and 39.8% were given under age 20. Other socio-demographic characteristics are demonstrated in Table 1.

While 35% of the participants never had gynaecological examination; 36.7% of them had a dozen examinations.

Answers given to questions to measure level of knowledge related to HPV and HPV vaccine are demonstrated in Table 2.

One point was given for each true answer from the participants and point average of their knowledge related to HPV and HPV vaccine was found as 1.31±2.13. Of the participants, 188 (63.9%) got zero point.

The factors that effected knowledge scores are demonstrated in Table 3.

Among participants, 72 (24.5%) heard about HPV infection and 83 participants(28.2%) heard HPV vaccine.

The resources that the participants were aware about HPV and HPV vaccine are demonstrated in Table 4.

Awareness of HPV was significantly increasing with level of education, the place where health care service was provided and the frequency of gynaecological examination ($p<0.05$).

Awareness rate of HPV vaccine was meaningfully increasing with level of education and the place where health care service was provided ($p<0.05$).

Table 1. Sociodemographic Characteristics of Participants

Variable	Percent (n)
Marital Status	
Single	29.6% (87)
Married	65.3% (192)
Divorced	5.1% (15)
Years of marriage	
Not married	29.6% (87)
0-3 years	9.9% (30)
≥ 4 years	60.5% (177)
Number of children	
0	34.7% (102)
1	18.4% (54)
2	29.2% (86)
3	12.6% (37)
≥ 4	5.1% (15)
Number of D&C* or abortus	
0	67.3% (198)
1	19.7% (58)
2	8.2% (24)
3	3.4% (10)
≥4	1.4% (4)
Education	
Primary school	34.4% (101)
High school	27.2% (80)
University	38.4% (113)
Most frequent source of health care	
Family Health Center	34.0% (100)
State& Training Hospital	52.0% (153)
Faculty of Medicine	9.5% (28)
Private Hospital/Office	4.5% (13)

*D&C: Dilatation and Curettage

Table 2. Answers Given to Questions of HPV and HPV Vaccine

	True	False	I don't know
HPV causes cervical cancer and genital warts. (T)	21.4%	1.4%	77.2%
HPV transmits sexually. (T)	24.5%	1.4%	74.1%
Using oral contraceptive pills protects from HPV. (F)	5.4%	10.9%	83.7%
HPV infection is only seen in women. (F)	11.2%	9.5%	79.3%
HPV infection is always symptomatic. (F)	13.9%	3.7%	82.4%
There is a vaccine against HPV. (T)	24.5%	1.0%	74.5%
HPV vaccine protects from cervical cancer and genital warts. (T)	21.4%	0.3%	78.3%
HPV vaccine provides life-long protection. (F)	8.8%	3.4%	87.8%
After the vaccine made side effects like pain and rash in injection area, headache can be seen. (T)	12.2%	1.4%	86.4%

Table 3. Association Between Knowledge Scores And Classificatory Variables.

	n	X2 Value	P Value
Education			
Elementary	101	36,038	,000
High School	80		
University*	113		
Frequency of Gynaecologic Follow-Ups			
At least once in three years*	108	6,530	,038
Rare	73		
None	113		
Type of Mostly used Medical centre			
Primary Care Physician	100	13,678	,003
State & Training Hospital	153		
Faculty of Medicine*	28		
Private Hospital/Office	13		
Years Of Marriage			
Not Married	88	3,15	,207
0-3 years	29		
≥4 years	177		

*Group with significantly higher levels of knowledge

Table 4. Awareness sources of HPV and HPV vaccine

	HPV	HPV Vaccine
Healthcare staff	72.2%	53.0%
Television	37.5%	50.6%
Internet	31.9%	30.1%
Friends/ Neighbours	19.4%	26.5%
Newspaper	19.4%	24.1%
Magazines	11.1%	13.2%

CONCLUSIONS

In our study, the ones who knew that HPV could be sexually transmitted were 24.5%. When the other studies were checked, there were high rates like 86% in the study which Giles and others carried on[6], 86.5% in the study of Kahn and others[14], 63% in the study of Tiro and others in USA [15] and 57% in a study that Hughes and others conducted among parents[16]. In our country, the rates were 10.8% and 22.6% in the studies that was conducted on college students[5,17]. The rates of right answers in our study was lower than the studies above while it was higher by comparison to the outcomes of other studies in our country[5,17]. Absence of education about safe sex and sexually transmitted diseases in adolescence is seen as a significant reason for it.

In a study in USA, 39% of the participants knew the relation between HPV and cervical cancer, 33.8% of them knew that genital warts were caused by HPV infections[18]. In the study that was carried out in Malaysia, the participants who linked HPV with cervical canser were at a rate of 51.2%[19]. In the other study, the participants who concluded that cervical cancer are caused by HPV infections were at a rate of 84% and those who linked HPV infections with genital warts were at a rate of 6%[16]. In a study that was done in Italy; 23.3% of the participants knew that infection at the vaginal mucosa is caused by HPV and cervical cancer is associated with HPV infection[20]. In one of the studies that were done in our country, while the participants who knew HPV-related lesions were at a rate of 17.2%[5] , in another study 32.3% of the students were able to link HPV with cervical cancer[17]. The result that we obtained from our study was 21.4%. The value which is close to the studies that were conducted in our country is lower in comparison with the studies in literature. Therefore, it stands out as a different title to focus on when training on this topic.

The rates for knowledge of asymptomatic HPV infection were 17% and 81% in some studies[14,21]. In our study, the rate was 3.7%. More people will be able to receive a curative and an efficient treatment by being diognased at an early period. As the individuals who show risky behaviour will not have to wait for a symptom or lesion to go to a health care organization for necessary screening owing to awareness of asymptomatic infection. Thus, it is important that the individuals are informed on this point.

In our study, another statement that we pointed out to the participants was concerning that using oral contraceptive prevented from HPV transmission. Of the participants, 10.9% indicated that this statement was false. On the other hand, in the study that was done in Italy the value was 36.3%[20]. This low rate that was obtained from our study is significant in terms of showing that it is necessary to inform the people about which oral contraceptive does not have a protective effect against the sexually transmitted infections.

There are different studies related to awareness rate of HPV in literature. In two studies conducted in Turkey, HPV awareness was found 21.3% and 24.1% respectively[5,17]. On the other

hand, this rate in the studies abroad was between the values 8% and 93%[6,15,16,18,20-28]. When the countries were checked where the studies were conducted, in developed countries in terms of socio-economical aspects, high awareness rate was clearly observed, which had community based-screening programme and where vaccination was at high rates. In our study, the participants being aware of HPV infection were found as 24.5% and an outcome occured which was similar to the previous studies in our country[5,17]. In comparison to the various countries in the world, awareness rate of HPV was low in Turkey. In the current study, level of knowledge, frequency of gynecologic examination, the place where health care service was offered and to be registered for pap-smear significantly affected the percentage of HPV awareness ($p<0.05$). In a study, it was observed that level of education, to go to medical centres and to be registered for pap-smear had positive effects on this situation[15,22,23]. Apart from our study when literature is reviewed, it is understood that university training affected HPV awareness in a positive way. That the rise in frequency of gynecologic examination increased HPV awareness reveals that the examination is an opportunity to raise awareness and provide education apart from its physical aspect. That the rate was higher with the patients who especially went to university and private hospitals to get healthcare can be related to family planning, the presence of healthcare professional who provide education in Gynecology Units as well as enough time to take care of patient.

In this study, the main source related to HPV awareness was healthcare staff(72.2%). TV and internet were subsequent resources. Healthcare staff come first or second in literature, too[20,21,24]. Although we have a low rate, healthcare staff are precious in terms of the correct orientation of society when they are meant to be the main source. In-service training about this topic will both increase the awareness of doctors and enable them to check their knowledge.

Also, the awareness rate of which HPV infection doesn't occur only in women was diagnosed as 9.5%. To change the perception about which the infection only occurs in women that can be formed due to women oriented screening programmes is important in terms of keeping the infection under control.

In our study 22% of the participants heard about HPV vaccine. On the other hand, the awareness rate was between 33% and 82% [6,16,28]. When we search the studies that were carried out in our country, rates 17.1% , 16.1% and 25.1% were obtained [5,17,29]. However the rate in our study is lower in comparison with the results in the world, it is at the relative level with the studies of our country. That the awareness rate of HPV infections is low naturally leads to the low awareness rate of HPV vaccine.

The most frequent answer given to the question "Where did you hear about HPV vaccine?" was healthcare staff (53%). TV (50.6%) and internet (30.1%) came subsequently. However in the studies that were done in our country and the other countries healthcare staff did not come first[16,17,20]. In the literature, it was diagnosed that the most important factor that directed women to ask for getting vaccinated for both themselves and their daughters was the offer of a doctor [10,30]. The information and offer about vaccination which is given by the medical staff have vital importance in terms of vaccination acceptance by a great majority of the society.

This study was carried out in family medicine clinics belonged to the biggest teaching and research hospital in Ankara thus it covers primary care samples from a large geographical area. The patients who are illiterate, have troubles in communicating and that are visually, hearing or physically impaired at high levels to fill out questionnaire were not included in our study. Therefore, the values we found in our study may reflect the numerical values which are higher than the society.

Comparative studies that will be carried out by different primary care units will provide distinct data about knowledge of society and empower need assessment studies.

As it seen clearly in our study, women who applies primary care units has low knowledge levels; it is apperent that personal and social education is needed. Paying importance to patient education on HPV and cervical cancer in primary care health politics will increase knowledge and awareness for HPV and HPV vaccination.

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