



ARAŞTIRMA / RESEARCH

Knowledge, attitudes and behaviors of sex workers about cervical cancer in a brothel from Adana

Adana genelevinde çalışan seks işçilerinin serviks kanseri hakkındaki bilgi, tutum ve davranışları

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Abstract

Purpose: Cervical cancer is the fourth most common cancer in women and the seventh overall, with an estimated 528,000 new cases worldwide in 2012. The highest prevalence of HPV has been described in female sex workers (FSWs). The aim of this study is determine the level of knowledge, attitudes and behaviors of FSWs about cervical cancer.

Material and Method: This is a descriptive study carried out on FSWs in a brothel located in the province of Adana, Turkey. A questionnaire consisting of 21 questions regarding the awareness of FSWs about cervical cancer was used as the data collection tool. The questionnaires were applied to 103 FSWs during their routine examinations in Adana Skin and Venereal Diseases Dispensary by the researchers with face to face interviews.

Results: Mean age of the participants was 43.8±8.6. 57.3% of FSWs knew smear is the screening method for cervical cancer, 89.3% had previously undergone smear test, 41.8% specified it should be done after the age of 18, 35.9% remarked it should be performed annually. In FSWs those who know more than one sexual partner increases the risk of cervical cancer, performing smear test was significantly higher in the 18-49 age group than the 49 or older group.

Conclusion: Active screenings and national cervical cancer prevention programs should primarily be administered to these women. Raising the level of knowledge, effective vaccine utilization in the young age group of FSWs can reduce the incidence of HPV infection and cervical cancer.

Key words: Sex worker, HPV, cervical cancer

Öz

Amaç: Serviks kanseri kadınlarda 2012 yılında dünya çapında tahmini olarak 528.000 yeni vaka ile en yaygın görülen dördüncü, genel olarak yedinci kanserdir. Cinsel temas ile seks işçilerinin HPV geçişinde katkıda bulunması nedeniyle bu popülasyonda serviks kanseri prevalansı yüksektir. Bu çalışmanın amacı seks işçilerinin serviks kanseri hakkındaki bilgi düzeyleri tutum ve davranışlarının belirlenmesidir.

Gereç ve Yöntem: Bu çalışma Türkiye’de, Adana Genelevlerinde çalışan seks işçilerine yapılan tanımlayıcı bir çalışmadır. Seks işçilerinin serviks kanseri hakkında farkındalığını belirlemek için 21 sorudan oluşan anket veri toplama aracı olarak kullanılmıştır. Anketler Deri ve Zührevi Hastalıklar Dispanserinde rutin muayene esnasında 103 seks işçisine araştırmacılar tarafından yüz yüze görüşme tekniği ile uygulanmıştır.

Bulgular: Katılımcıların yaşları ortalama 43.8±8.6 idi. Seks işçilerinin, % 57.3’ü serviks kanseri için yapılan tarama testini biliyordu, % 89.3’ü daha önce smear yaptırmıştı. % 41.8’i smearin 18 yaşından sonra yapılması gerektiğini belirtirken, %35.9’u da smearin yılda bir sıklıkla yapılması gerektiğini belirtmiştir. Birden fazla partnerin serviks kanseri riskini arttırdığını bilen 18-49 yaş arası seks işçilerinin smear yaptırma durumları 49 yaş üstü seks işçilerine göre anlamlı derecede yüksek bulundu.

Sonuç: Serviks kanserine yönelik, aktif tarama ve ulusal servikal kanser önleme programları, öncelikle bu kadınlar için uygulanmalıdır. Seks işçilerinin bu konuda bilgi düzeylerinin yükseltilmesi ve genç yaş grubundaki seks işçileri için aşının etkili kullanımlarını öğretmek ve etkin bir HPV ve serviks kanseri sıklığını azaltabilir.

Anahtar kelimeler: Seks işçisi, HPV, servikal kanser

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INTRODUCTION

Cancer is a major public health problem both in Turkey and worldwide due to its disease burden, fatality and tendency for increased incidence¹. Of all cancer types, cervical cancer is the fourth most common cancer in women and the seventh overall, with an estimated 528,000 new cases worldwide in 2012². The global burden of cervical cancer is disproportionately high among the developing countries where 85% of the estimated new cases occur³. It has been considered to be a preventable cancer type due to its lengthy preinvasive period, existence of cervical cytological screening methods and curable preinvasive lesions⁴.

High-risk human papilloma virus (HPV) infection, multiple or high-risk sexual partners, sexual intercourse at an early age, smoking, diet, immunosuppression, oral contraceptive use, race and low socioeconomic status are among the risk factors for cervical cancer⁵.

The most important of all risk factors for cervical cancer is infection with HPV. HPV is a sexually transmitted infection that affects 80% of active young women. There are more than 100 types of HPV. Low-risk HPV types such as type 6-11 are the cause of genital warts whereas, high-risk HPV types such as 16-18 may lead to serious health problems like cervical or other anogenital cancers⁶⁻⁸.

Pap smear testing is an inexpensive, effective and easily applicable method for early diagnosis and treatment of cervical cancer⁹. This test consists of the process of taking smear sample from the cervical surface. Performing this process regularly provides early diagnosis and treatment of cervical cancer as well as prevention. With Pap smear, pre-malignant and cancerous cells are detected in endocervical canal and treatment at this stage enables prevention, before the cancer cells are able to transform invasive cancer¹⁰.

Another method used in prevention of cervical cancer is vaccination. In this context, in 2006, a quadrivalent vaccine effective against types 6, 11, 16 and 18; and in 2009 a bivalent vaccine effective against types 16 and 18 were licensed, rendering primary prevention possible. In the context of prevention of resistant infections and associated cervical intraepithelial neoplasia 2 (CIN 2); both vaccines were found to be effective in those between 15-26 years of age and without HPV

infection and found to be ineffective in patients with HPV infection¹¹. In 2009, World Health Organization (WHO) has recommended HPV vaccination for prevention of cervical cancer¹².

The highest prevalence of HPV has been described in FSWs. Sexual contact with FSWs in some communities is believed to contribute to HPV transmission and the high prevalence of cervical cancer in the population⁶. The increased risk of HPV observed in FSWs has been attributed to younger age, low educational status, high frequency of sexual contacts and unsafe sex behavior⁷. According to the report of Ankara Chamber of Trade, there are 3000 registered sex workers throughout Turkey. The overall number of registered sex workers in Turkey is more than 25.000¹³.

HPV infection is the major reason for cervical cancer and FSWs are the primary risk group for HPV infection. The aim of this study is determine the level of knowledge, attitudes and behaviors of FSWs about cervical cancer.

MATERIAL AND METHODS

This is a descriptive study carried out on FSWs in a brothel located in the province of Adana, Turkey. The number of actively working people in the brothel at the time of the study was 113. We aimed to reach all of FSWs in the brothel. Four transgender sex workers were excluded from the study. In addition, 6 of FSWs could not be reached hence they were on leave or sick during the study period. In conclusion, the study consisted of a total of 103 (94.5%) FSWs. Our research was initiated after the approvals were obtained from The Ethical Committee of Cukurova University and Adana Directorate of Public Health.

The questionnaire was prepared taking into consideration the previously published scientific studies about cervical cancer. A questionnaire consisting of 21 questions regarding the awareness of FSWs about cervical cancer was used as the data collection tool. Prior to the interviews, details about study and its purpose were explained to the FSWs working in the brothel. After indicating that the data acquired by the survey will only be used for scientific purposes and personal information will be protected, the written consent of participants was obtained. The questionnaires were applied to 103 FSWs during their routine examinations in Adana

Skin and Venereal Diseases Dispensary by the researchers with face to face interviews. Data was collected between April-June 2014.

Statistical analysis

Statistical analysis was performed using SPSS 19.0 software package, p values less than 0.05 were considered significant, at 95% confidence interval. In the data analysis, descriptive statistics and chi-square tests were applied. The sample was divided into two groups as reproductive (18-49 years) and post reproductive (over 49 years)

RESULTS

The study was performed on 103 FSWs in a brothel located in the province of Adana. Mean age of the participants was 43.8 ± 8.6 . The majority of FSWs (76.7%) were in the 31-50 age group. 28.2% of FSWs were working more than 20 years in the brothel. Details on the socio-demographic characteristics of FSWs are presented in Table 1. Examining the FSWs' knowledge about smear,

57.3% knew it is the screening method for cervical cancer, 89.3% had previously undergone smear test, 41.8% specified it should be done after the age of 18, 35.9% remarked it should be performed annually. (Table 2).

There was no significant difference between those who know and those who do not know that smoking is a risk in terms of performing Pap smear test ($p=0.395$). 47.6% of the FSWs knew sexual experience at an early age increases the risk of cervical cancer. However, there was no significant association between 18-49 age group and 49 or older age group in terms of knowing the increased risk of cervical cancer in case of sexual experience at an early age ($p=0.50$) (Table 3). 63.1% knew that more than one sexual partner increases the risk of cervical cancer. In FSWs, knowing that more than one sexual partner increases the risk of cervical cancer was higher in the 18-49 age group than the 49 or older group ($p=0.01$) (Table 3). 56.3% knew HPV infection may lead to cervical cancer. 53.4% heard the vaccine against HPV, 65% did not know at what age to apply. 84.5% were eager to be vaccinated.

Table 1. Socio-demographic characteristics of participants

Socio-demographic characteristics		N	%
Age group	18-30	4	3.8
	31-40	32	31.1
	41-50	45	43.6
	51 and over	22	21.5
Education	Illiterate	17	16.5
	Literate	8	7.8
	Elementary school	50	48.5
	Primary school	12	11.7
	High school	16	15.0
Working years	Less than 20 years	74	71.8
	20 years or more	29	28.2

There was no significant relationship between age groups in terms of knowing HPV ($p=0.47$), FSWs at 18-49 age group was more willing to be vaccinated than the 49 or older age group ($p=0.03$) (Table 3). In terms of hearing the screening test, there was no significant difference between 18-49 and 49 or older age groups ($p=0.90$).

However, compared to 49 or older group, 18-49 age group was significantly more aware that smear should be performed annually ($p=0.015$) (Table 3). 65% of FSWs knew smoking increases the risk of cervical cancer. Also, being aware of this risk did not differ between 18-49 and 49 or older age groups

($p=0.07$) (Table 3). The details regarding level of knowledge about smear and cervical cancer and the HPV awareness according to age groups are summarized in Table 2 and Table 3, respectively.

A significant correlation was found between one's knowing the fact that HPV causes cervical cancer and one's knowing the fact that HPV can be prevented by vaccination and the age to be vaccinated ($p<0.001$, $p=0.01$ respectively). Moreover, a significant correlation was found between one's knowing the fact that HPV causes cervical cancer and one's knowing the fact that the beginning of the sexual experience at an early age

and having multiple sex partners increase the risk of HPV. ($p=0.020$, $p=0.01$ respectively)

DISCUSSION

The mean age of the sex workers participating in the study was determined to be 43.8. The youngest one was 24 and the oldest one was 63 years old. Since the age to work in brothels is legally 21 and above in our country, there are not any women below 21 in our study group. The majority of participants were found to be in the 41-50 age group. Similarly, in a study conducted in a brothel in Edirne the mean age of women was found to be 39.5 and in a brothel in Ankara the mean age of women was found to be 38.9^{14,15}.

In women, HPV prevalence varies according to geographical region in the general population. Similarly, HPV prevalence in our country shows diversities according to geographical regions, with the rates ranging 2.1% to 20%^{16,17}. HPV infection prevalence has been reported to be higher in those with multiple risk factors such as sexual intercourse at young age and existence of more than one sexual partner¹⁸. Different studies conducted on FSWs in different geographical locations notified HPV prevalence as 43% in Mexico, 48% in Japan and 63% in Kolkata, India¹⁹⁻²¹. In Turkey not many studies are carried out in this regard. In a study performed in Izmir HPV prevalence in FSWs was found as 20.1%, while in another study carried out in Turkey it was reported as 13%^{22,23}.

Table 2.FSWs' level of knowledge about smear and cervical cancer

Level of knowledge about smear		N	%
Do you know the scanning test of cervical cancer?	Yes	59	57.3
	No	44	42.7
Did you have a smear test?	Yes	92	89.3
	No	11	10.7
How often (n:92)	Once	7	7.6
	Twice	10	10.9
	Three times	8	8.7
	Four times and above	67	72.8
When must a smear test be applied?	Age 18 and above	43	41.8
	Age 30 and above	41	39.8
	Age 40 and above	19	18.4
How often must a smear test be applied?	Once in a 6-month period	29	28.2
	Once in a year	37	35.9
	Once in a 2-year period	21	20.4
	I Don't know	16	15.5
Level of knowledge about cervical cancer		N	%
Do you know that sexual experience under the age of 18 increases the risk of cervical cancer?	Yes	49	47.6
	No	54	52.4
Do you know that more than one partner increases the risk of cervical cancer?	Yes	65	63.1
	No	38	36.9
Do you know that smoking increases the risk of cervical cancer?	Yes	67	65.0
	No	36	35.0
Do you know that HPV may lead to cervical cancer?	Yes	58	56.3
	No	45	43.7
Do you know that you can be protected from cervical cancer by vaccination?	Yes	55	53.4
	No	48	46.6
Do you know at which age you can be vaccinated?	Yes	36	35.0
	No	67	65.0
Would you like to be vaccinated?	Yes	87	84.5
	No	16	15.5
Did you suffer from HPV infection?	Yes	9	8.7
	No	94	91.3
Condom usage	Yes	54	52.4
	No	49	47.6

Table 3. HPV awareness according to age groups

Variables		Age 18-49		Age 49 >		P, χ^2
		Number	%*	Number	%*	
Knowledge of HPV	Yes	46	58.2	12	50.0	p=0,47 $\chi^2=0,50$
	No	33	41.8	12	50.0	
Knowledge of HPV Vaccine	Yes	43	54.4	12	50.0	p=0,70 $\chi^2=0,14$
	No	36	45.6	12	50.0	
Demand of vaccination	Yes	70	88.6	17	70.8	p=0,035 $\chi^2=4,43$
	No	9	11.4	7	29.2	
Knowledge of screening test	Yes	45	57.0	14	58.3	p=0,90 $\chi^2=0,014$
	No	34	43.0	10	41.7	
Knowledge of when Pap smear test must be applied	Yes	23	29.2	14	58.3	p=0,015 $\chi^2=10,44$
	No	56	70.8	10	41.7	
Knowledge of risk of smoking	Yes	55	69.6	12	50.0	p=0,07 $\chi^2=3,11$
	No	24	30.4	12	50.0	
Knowledge of the risk of early sexual experience	Yes	39	49.4	10	41.7	p=0,50 $\chi^2=0,43$
	No	40	50.6	14	58.3	
Knowledge of the risk of having more than one partner	Yes	55	69.6	10	41.7	p=0,013 $\chi^2=6,17$
	No	24	30.4	14	58.3	
	Total	79	100.0	24	100.0	103

*The percentage column

In our study, 56.3% and 53.4% of FSWs reported having heard of HPV and HPV vaccination, respectively. In a study conducted on FSWs in China, the rates of knowing HPV and HPV vaccination was lower than our study (22.1%, 13.3%)²⁴. On the other hand half of FSWs were aware of the consequences of HPV infection in a study performed in Thailand²⁵. A similar study from Peru reported that 69.0% of the FSWs knew the HPV infection and transmission routes²⁶.

The American Cancer Society (ACS) suggested Pap smear screenings to be initiated three years after the first sexual experience or at the age of 21 regardless of being sexually active or not. For women 30 years and older, screenings are recommended to be performed every year, in case of a three-year negative result every three year; and removal of women from cervical cancer screening program who are over 70 years of age and without an abnormal Pap test result for the last 10 years or with three or more normal Pap test results, is proposed. Similarly, American College of Obstetricians and Gynecologists (ACOG) suggested yearly pelvic exam and Pap smear for women who had sexual experience at any time during the life or reached 21 years of age; and reported that women over 30 years or older and have normal pelvic exam and Pap

smear consecutively for 3 years, may be checked at longer intervals^{27,28}.

Questioning the condom use of the sex workers participating in the study, 52.4% of them replied that they used condom while 47.6% of them replied that they did not use it. The rate of condom use with all customers during sexual intercourse was found to be 70% in the brothels in Bali (1998), 61% in the brothels in Beijing (2002) and 60% in the brothels in Ankara^{15,29,30}.

When we compared knowing that more than one sexual partner is a risk factor, significant difference was found between the 18-49 age group and 49 and over age group. A significant difference was observed in sexually active group in terms of performing Pap smear. Likewise sexually active group knew better when to perform smear test. In similar studies, women who perceived themselves at risk for cervical cancer are reported to undergo Pap smear test with higher proportion³¹⁻³³.

Smoking is known to increase the risk of cervical cancer. Ersan et al. reported that smoking is significantly associated with HPV infection in their study which is also conducted in a brothel²². However, in our study there was no significant difference between those who know and those who

do not know that smoking is a risk in terms of performing Pap smear test.

Among the participants in our study, HPV vaccination eagerness was significantly higher in 18-49 year age group than 49 years and over age group. Consistently, in other similar studies, acceptance of HPV was found to be higher in younger age groups^{34,35}. In a study conducted in China it was reported that especially young women in high-risk groups should be vaccinated.

In our study, a significant correlation was found between one's knowing the fact that HPV causes cervical cancer and one's knowing the fact that HPV can be prevented by vaccination and the beginning of the sexual experience at an early age and having multiple sex partners increase the risk of HPV. Likely, it was discovered that HPV and the beginning of the sexual experience at an early age increases the risk of cervical cancer in a study similar to ours conducted in China²⁴.

In the study conducted on the special group, the education levels of women to be low is considered to be a problem while understanding the questions and answering them correspondingly. This problem was eliminated by further explanations when they had difficulties in answering the questions of the questionnaire.

To sum up, due to the presence of multiple risk factors such as the existence of multiple sexual partners and sexual intercourse at an early age FSWs are the main risk group for HPV infection and cervical cancer. Therefore, active screenings and national cervical cancer prevention programs should primarily be administered to these women. Pap smear performing rates are relatively low in older sex workers, thus older age groups should also be included in Pap smear screening in sex workers. Raising the level of knowledge, effective vaccine utilization in the young age group of FSWs can reduce the incidence of HPV infection and cervical cancer.

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