

Determination of State of Women to Have Pap Smear Test and the Associated Factors

Kadınların Pap Smear Yaptırma Durumlarının ve İliřkili Faktörlerin Belirlenmesi

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Geliř Tarihi / Received : 27.09.2018 Kabul Tarihi / Accepted : 03.12.2018

Abstract

Objective	This descriptive study was conducted for the purpose of determining the state of women to have pap smear test and the effective factors (Sakarya Med J 2018, 8(4):830-839)
Materials and Methods	The population of the study consisted of 350 women who applied to the Department of Obstetrics and Gynecology, Aziziye Research Hospital Ataturk University between December 2015 / April 2016.The whole population was included in the study without sample selection. Percentage distribution and chi-square analysis were used to analyze the data.
Results	Percentage distribution and chi-square analysis were used to analyze the data. It was determined that 125 (35.7%) of 350 women had pap smear test before and 225 (64.3%) of them had never have this test. The rate of having pap smear test was found to increase in terms of age, marriage duration, knowledge regarding pap smear test, seeing gynecological examination, and considering themselves as risky for cervix cancer.
Conclusion	All health care workers need to train women to protect themselves from cervical cancers when they can reach them. The midwife / nurse should emphasize the importance of regular health screening and early diagnosis to individuals.
Keywords	pap smear; cervical cancer; associated factors

Öz

Amaç	Arařtırma, kadınların pap smear yaptırma durumlarının ve etkileyen faktörlerin belirlenmesi amacıyla tanımlayıcı tipte yapılmıřtır. (Sakarya Tıp Dergisi 2018, 8(4):830-839).
Gereç ve Yöntem	Arařtırmanın evrenini Aralık 2015/ Nisan 2016 tarihleri arasında Atatürk Üniversitesi Aziziye Arařtırma Hastanesi Kadın Hastalıkları ve Doğum Polikliniğine başvuran 350 kadın oluřturmuřtur. Örneklem seçilmeksizin evrenin tamamı çalışmaya dahil edildi. Verilerin analizinde yüzdellik dağılımlar, ki-kare analizi kullanılmıřtır.
Bulgular	Arařtırmaya katılan 350 kadının 125'i (35.7) daha önce Pap smear yaptırmıř, 225'i (64.3) bu testi hiç yaptırmamıř olarak belirlendi. Pap smear yaptırma oranının kadınların yařıyla, evlilik süresiyle, pap smear hakkındaki bilgilerine göre, jinekolojik muayeneye gitme durumlarına göre ve kendilerini serviks kanseri için riskli görme durumuyla arttıđı bulunmuřtur.
Sonuç	Tüm sađlık çalışanlarının, kadınlara nerede ne zaman ulařabilirse serviks kanserlerinden korunma konusunda eđitim vermeleri gerekmektedir. Ebe/hemřire, bireylere düzenli sađlık taramalarının ve erken tanının önemini vurgulamalıdır.
Anahtar Kelimeler	pap smear; servikal kanser; iliřkili faktörler

Introduction

Cervical cancer is ranked as the fourth in terms of its prevalence among women around the world. It is predicted that in 2012 there were 12.170 invasive cervical cancer cases in the world, 4220 cases died, and 87% of the cervical cancer related deaths were seen in developing areas.^{1,2} Cervical cancer is reported to be the third most common cancer after corpus and ovarian cancers and the tenth in terms of prevalence among women in Turkey.²

Cervical cancers are primary one of the cancers that are likely to be prevented by early diagnosis in women. The reason for this is the presence of the well-described long pre-invasive process of cervical cancer. Thus, a screen test was developed for cervical cancer. Pap smear is a screening method used for this purpose.³ Cervical cancer screening with Pap smear is one of the rarest cost-effective interventions intending to prevent cancer. Diagnosis and treatment of cervical lesions in premalignant phase would decrease incidence and mortality.⁴

Numerous health behaviors are associated to decrease of cervical cancer risk; however, none of the health behavior is as effective as pap smear test in decreasing of cervical cancer morbidity and mortality.⁵ In developed countries, incidence of cervical cancer has decreased for the last 50 year with the use of pap smear test and mortality rate related to the cervical cancer decreased at the rate of 70%.⁶ Even though the screening programs have decreased the incidence in developing and underdeveloped countries, it could not reach the required level due to financial problems and insufficient level of patient awareness.⁷ In which age groups and with what intervals pap smear should be performed is as important as smear receipt technique. No matter how successful the smear receipt is, if it is not received in adequate frequency or if the target group is not determined appropriately, it may not serve for the purpose sufficiently. Risk factors should be taken into consideration while determining the group of women to have cervical screening.⁴

In the literature, the state of women to have pap smear in cervical cancer is reported to be affected by various demographic and socio-cultural factors. According to the results of the studies, behavior of having pap smear test is reported to be affected by factors such as age, income, marital status, being sexually active, working situation, health insurance, difficulties in access to health institutions, the lack of time due to busy work life, having to wait long hours to see healthcare staff.^{4,5,8}

In a study conducted in Turkey, the state of having pap smear test was found to be affected by age, having family members with cancer history, and having knowledge about cervical cancer.⁹ In another study, it was reported that women considered going to regular gynecological examination as unnecessary unless they have complaints and they could not find systematical health institution services to go for gynecological examination.¹⁰

Knowing that the behavior of having pap smear can vary in different cultures and groups and based on socio-demographic characteristics, is an important information for healthcare personnel in terms of reaching the group and providing service to that group.¹¹ Additionally, if the socio-demographic barriers hindering the state of women to have a pap smear are eliminated, early diagnosis of the cancer will be possible. Thus, the study was conducted for the purpose of determining the state of women to have pap smear test and the associated factors.

Materials and Method

This descriptive study was conducted to determine women's behaviors of having pap smear test in Erzurum and socio-cultural factors affecting this.

Study Group

The study was conducted in the gynecology and obstetrics outpatient clinic of a university hospital in a city located in Eastern Anatolia Region of Turkey between December 2015 and April 2016. The population of the study consisted of 350 women who consulted gynecology and obstetrics outpatient clinic of the university hospital. The whole population was included in the study without sample selection. The study group consisted of women older than 18 years, who were sexually active, was not diagnosed with cervical cancer before, did not undergo hysterectomy operation, and were able to read and write in Turkish.

Data Collection Tools and Data Collection

"Information Form", which was prepared by the researchers, was used as data collection tool. Personal Information Form was prepared by the researcher in accordance with the literature.^{2,5,12,13} Personal Information Form consists of two sections. The first section included questions about socio-demographic characteristics, and the second section included questions about the knowledge on pap smear test, the state of having pap smear test, the effective socio-cultural factors, and risk perception related to cervical cancer. The data were collected by the researcher using the face-to-face interview method. The interviews lasted for approximately 10-15 minutes.

Statistical Analysis

Encoding and assessment of the data were performed by using SPSS v20.0 software (Statistical Package for Social Science). Percentage distribution and chi-square 2 analyses were used in assessment of the data.

Ethical Principles

Written permission was received from Ethics Committee of Erzurum Ataturk University Faculty of Health Sciences before starting the study. The study was conducted in accordance with Helsinki principles. Since all answers are required to be based on voluntariness in all researches conducted by taking information from participants, it was paid attention that the women to participate in the study were voluntary and willing and they were informed that they were free to participate in the study. Before starting to collect the data of the study, the participants were informed about the study, their questions regarding the study were answered, and their written and verbal consents were received. The women were informed that they could withdraw from the study at any time.

Results

It was determined that 125 (35.7%) of the women participating in the study had Pap smear test before, and 225 (64.3%) had never have this test. Average age of the women was 37.79 ± 11.24 and mean marriage duration was 2.05 ± 1.008 .

The rate of having pap smear test was found to be higher those who were in the age group of 40-61 years, secondary school graduates, employed, nulliparous, and had a marriage duration of 31-45 years. A significant correlation was determined between having pap smear test and age and marriage duration. ($p < 0.05$) (Table1).

Table 1: The state of having pap smear test based on socio-demographic characteristics of the women				
Pap smear test				
	Having Number(%) n=125	Not having Number(%) n= 225	X²	P value
Age				
19-29 years	21(23.6)	68 (76.4)	X ² =13.383	p=.001
30-39 years	37 (31.9)	79 (68.1)		
40-61 years	67 (46.2)	78 (53.8)		
Education				
Primary school	50 (31.6)	108 (68.4)	X ² =5.220	P=.265
Secondary school	31 (44.7)	46 (55.3)		
High school	24 (32.0)	51 (68.0)		
University	20 (38.8)	20 (61.2)		
Employment Status				
Employed	26 (36.1)	46 (63.9)	X ² =.006	P=.937
Unemployed	99 (35.6)	179 (64.4)		
Marriage Duration				
1-10 years	35 (25.4)	103 (74.6)	X ² =10.777	p=.013
11-20 years	36 (41.4)	51 (58.6)		
21-30 years	40 (42.6)	54 (57.4)		
31-45 years	14 (45.2)	17 (54.8)		
Number of births				
Nulliparous	15 (39.5)	23 (60.5)	X ² =.1.395	p=.707
1-3	74 (34.1)	143 (65.9)		
4 and more	36 (38.7)	59 (61.3)		

It was determined that 58.6% of the women who had heard of pap smear test and 7.6 % of those who heard this test stated that they had this test. There was a statistically significant correlation between two groups in terms of having pap smear test (p=.000). The women could not exactly describe the group requiring to have pap smear and the rate of having the test was high in those stating that married women should have the test and low in those stating that they did not know. The rate of being aware that pap smear test is used for diagnosis of gynecological cancer and how often it should be performed was high and also the rate of having the test was high in the women who were aware that pap smear test is used for diagnosis of gynecological cancer and how often it should be performed and stated that they should have the test ever year. A significant difference was determined between the women based on their knowledge levels in terms behavior of having pap smear test (p=.000). It was determined that 62.9% of those who stated that they had pap smear test had the test only once (Table II).

In the study, the women were asked about their opinions about going to the examination when they had a gynecological problem and the correlation between the obtained data and the state of having pap smear was investigated. 32.3% of the women to go to the gynecological examination in case of any gynecological complaint and 33.7% of the women who went to the gynecological examination only when their complaints became excruciating were determined to have pap smear test. A significant correlation was found between going to the gynecological examination and the

state of having pap smear test ($p < 0.05$) (Table III).

Table 2: The state of having pap smear test based on women's knowledge on pap smear				
Pap Smear Test				
	Having Number(%) n= 125	Not having Number(%) n=225	X2	P Value
Heard of pap smear test				
Heard before	113 (58.6)	80 (41.4)	$X^2=110.089$	$p=.000$
Never heard before	12 (7.6)	145 (92.4)		
The state of describing the group required to have pap smear test				
All women	49 (45.0)	60 (55.0)	$X^2=43.001$	$p=.000$
The women with gynecological problems	6 (22.2)	21 (77.8)		
Married women	41 (51.2)	39 (48.8)		
Women older than 40 years	20 (47.6)	22 (52.4)		
Did not know	9 (9.8)	83 (90.2)		
Being aware of having pap smear for diagnosis of which disease				
Gynecological cancer	105 (52.0)	97 (48.0)	$X^2=.64.806$	$p=.000$
Gynecological infection	7 (43.8)	9 (56.2)		
Did not know	13 (9.8)	119 (90.2)		
The state of being aware of how often pap smear should be performed				
Every year	83 (55.0)	68 (45.0)	$X^2=59.954$	$p=.000$
Once in two years	23 (37.1)	39 (62.9)		
Did not know	19 (13.9)	118 (86.1)		
Number of having pap smear				
1	78 (62.9)			
2	33 (25.8)			
3 and more	14 (11.3)			

Table 3: The state of having pap smear test based on the women's state of going to gynecological examination				
Pap Smear Test				
	Having Number(%) n= 125	Not having Number(%) n=225	test value and p	
Going to gynecological examination				
I go to the examination when my complaints become excruciating	25 (33.7)	49 (66.3)	$X^2=6.037$	$P= .049$
I go to the examination when I have any complaint	76 (33.3)	152 (66.4)		
I go to the examination regularly	24 (50)	24 (50)		

In Table IV, it was found that all of the women who considered themselves at the risk for cervical cancer, 49.3 % of those who did not consider themselves at risk, and 14.3% of those who did not know whether or not they were at the risk had pap smear test. A significant correlation was determined between considering themselves at risk and the state of having pap smear test ($p=.000$). 75% of those who considered themselves at risk stated that they thought they were at risk due to infection, and 35 % due to presence of cancer in their immediate surroundings.

Table 4: The state of having pap smear test based on women's status of considering themselves at risk for cervical cancer and reasons for considering themselves at risk

Pap Smear Test				
	Having Number(%) n= 125	Not having Number(%) n=225	test value and p	OR
Considering themselves at risk for cervical cancer				
Considered herself at risk	32 (100.00)		$\chi^2=20.101$	$p=.000$
Did not consider herself at risk	67 (49.3)	69 (50.7)		
Did not know whether she was at risk or not	26 (14.3)	156 (85.7)		
Reasons of considering themselves at risk				
Infection	24 (75)			
Presence of cancer in immediate surroundings	8 (35)			

Discussion

The rate of having pap smear was higher in married women in the study of Kabacaoğlu et al.¹⁴ in the age group of 25-29 years in the study of Decker et al.¹⁵ in women who were in the age group of 40-50 years employed, had high educational level, and gave birth in the study of Karabulutlu.¹² Similar to results of these study; in the present study the rate of having pap smear test was found to be higher in those who were in the age group of 40-61 years, secondary school graduates, employed, nulliparous, and had a marriage duration of 31-45 years. A statistically significant correlation was determined between having pap smear test and age and marriage duration. ($p<0.05$) (Table1). It is thought that rate of going to the obstetric or gynecological examination and thus having pap smear increases with increasing ages and longer marriage duration. Educational level, employment status, and number of births of women were determined to have no effect on having pap smear (Table 1).

Different from the present study; in the studies the rate of having pap smear was found to increase as the educational level increased.¹⁶⁻¹⁸ In Kalyoncu's study, 68.9% of the officers, which were the group with the highest rate of having smear test; whereas, this rate was found to be 18.9% in doctors.¹⁹ The fact that the rate of having smear test significantly decreased with higher educational level was associated with high awareness related to risk factors in cervical cancer, the use of barrier methods, virginity, and monogamy in active sexual life.²⁰ Similarly, in the study of it was determined that as educational level increased, the rate of having pap smear decreased and the women with higher educational level had higher average marriage age and shorter marriage duration.¹¹ Since active sexual life generally starts with marriage in Turkish society; the fact that the rate of going to obstetric or gynecological examination increased with longer marriage duration was explained by the fact that women with higher educational level have pap smear at lower rate.

The thoughts affecting the state of women to go gynecological examination were also found to be effective on having pap smear, and a significant correlation was determined between women's state of having pap smear test and going to gynecological examination ($p < 0.05$) (Table III). The study conducted by Karabulutlu and Akyüz revealed similar findings to the present study.^{11,12} In their study, Gürel et al., reported the reasons of women not to have pap smear test as "negligence" at the rate of 87%.²¹ In the study of Oche et al., the most important reasons behind why women did not have pap smear is perception of not being at risk of the disease. The other reasons were reported as being afraid of the pain and negative results of the test, and lack of awareness.²² In the study of Demirgöz Bal, it was stated that there was no complaint requiring to have pap smear test. The most important barrier related to performance of the test was determined as embarrassment (48.4%) and the request for female doctors (64.4%).²³ In the study of Altay and Kefeli; it was found that 53.7% of the women did not want to go to gynecological examination due to privacy, and 57.0% were embarrassed during gynecological examination.²⁴ In their study, Demir and Oskay determined that the women experienced intense pain, embarrassment and stress during gynecological examination. 75.4% of the women stated that they were uncomfortable with the fact that there was no special area for preparation before and after the examination and 75.1% complained about the fact that privacy was not paid sufficient attention.²⁵ Having a positive examination experience for a woman plays an important role in having the test and continuity of future examinations. It is important that the doctors and nurses working in the units of gynecological examination to make an explanation to women before examination, allocating time, and develop their communication skills.^{24,25}

In the present study, a significant difference was determined between the women, who heard and did not hear about pap smear test, in terms of having the pap smear test. When the state of having the test was examined in terms of women's knowledge levels regarding pap smear, it was determined that those, who did not know by whom, for diagnosis of which disease and how often it should be performed, had the test at lower rate, and the difference between them was statistically significant ($p < 0.001$) (Table II). In the other studies, the rate of having the test was reported to be higher in those who had knowledge about cervical cancer and pap smear.^{11,12,26} The health education brochures given as a result of the interventional study conducted by Lee et al., to prevent cervical cancer, were reported to change the willingness to have pap smear test for approximately three years.²⁷ In their study, Güvenç et al., evaluated the effect of health education brochure on having pap smear test among Turkish women. 510 women (20.4%) were reported to have pap smear test two weeks after the intervention.²⁸ In the study of Oche et al., it was found that while the women stated that all the women should have pap smear test (89.2%), only 10% had the pap smear test.²² American Cancer Society (ACS) states that all the women should have the test 3 years after their first sexual intercourse but they should have the test once in 2-3 years before the age of 21 years and after the age of 30 years, and the women over the age of 70 years who does not have abnormal pap test results and have 3 or more normal results in the last 10 years should be excluded from cervical cancer program. Similarly, American College of Obstetricians and Gynecologists (ACOG) reports that all women should have pelvic examination and pap smear test in any period throughout their life, women who are still sexually active or 21 years old should have yearly pelvic examination and pap smear test, and the women who are older than the age of 30 years and have had three consecutive yearly normal pelvic examinations and pap smear tests should be checked with longer period of time.^{4,29,30} However, in the present study, it was found that the group requ-

ired to have pap smear did not describe exactly the state of being aware that it is performed for diagnosis of which disease and how frequently it should be applied. Even though 35.7% (n= 125) of the women had pap smear test, only 62.9% (n=78) had it only once, and having it only once is not adequate for early diagnosis of cervical cancer. Similar to the results of the present study, the rate of the women who had pap smear test once was 63.8% in the study of Jallian and 80% in the study of Sabari.^{31,32}

The most efficient way of preventing cervical cancer is to have pap smear test to determine cervical cell changes. It is more common in women who do not have regular pap smear in cervical cancer. Almost half of the women diagnosed with cervical cancer are women aged between 35 and 50 years. Pap smear test is the most efficient method in decreasing cervical cancer-related deaths.³³ The high rate of cervical cancer is associated with lack of having cervical cancer screening or not having pap smear regularly.³⁴ Unfortunately, most of the women did not have pap smear test regularly due to different reasons. As determined in previous studies, lack of knowledge and awareness about pap smears and cervical cancer, not considering themselves at risk, not understating the benefits of test enough to understand, financial difficulties, being afraid of the results of the test, considering the test to be embarrassing and painful, and the request for female doctors are the most important barriers for having regular pap smear tests.^{23,32-35} The fact that healthcare personnel explain the importance and aim of pap smear test and how often it should be performed, related health educations are expanded, and screening programs take place more in media is thought to be useful to have regular pap smear.

In a study, it was determined that women did not have pap smear test because they did not consider themselves at risk for cervical cancer, and they had the test only when they had bleeding and discharge change.³⁶ In another study, 92% of the participants stated that they did not have the risk of cervical cancer, and 77.5% stated that they did not have any complaint that would require pap smear test.²³ Different from the studies; in the present study, all of the women who considered themselves at the risk for cervical cancer determined to have pap smear test and most of those or not who were not aware if they were at risk did not have the test and a significant correlation was determined between considering themselves at risk and having pap smear ($p<0.001$). Similar to the present study, in other studies, the women who considered themselves at risk for cervical cancer were found to have higher rate of having pap smear test.^{11,12}

Conclusion

The rate of having pap smear test was determined to be affected by women's socio-demographic characteristics, knowledge on pap smear test, state of going to gynecological examination, and perception of risk for cervical cancer; however, the effect of pap smear test on controlling of cervical cancer was not exactly known. Cervical cancers are primary one of the cancers that are likely to be prevented by early diagnosis in women. The reason for this is the presence of the well-described long pre-invasive process of cervical cancer. Early diagnosis can be established by pap smear test. Thus, the healthcare personal should emphasize the importance of early diagnosis and regular health screenings to the women who come for gynecological examination. It also should be explained that pap smear test is an easily applicable, cost-efficient, non-destructive, and highly sensitive test which reduces the treatment burden, morbidity, and mortality. These activities are useful to raise awareness of women about cervical cancer and enable them to have regular health

screenings so that early diagnosis of cancer becomes possible.

Limitations

This study cannot be generalized to all women because the study population is limited to the patients attending the outpatient clinic of a respective hospital.

Sakarya Med J
2018;8(4):830-839

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