

**RESEARCH  
ARTICLE**

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Received: 10.04.2019  
 Acceptance: 07.10.2019  
 DOI: 10.18521/kt.551857

**Konuralp Medical Journal**  
 e-ISSN1309-3878  
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## HPV Frequency and Protection Behavior of Women with HPV Screening Between 30-65 Years in a Primary Health Care Center

### ABSTRACT

**Objective:** Although cervical cancer is common, because of the presence of pre-invasive lesions and due to the fact that the cervix is an easily accessible organ, it is an appropriate disease for early diagnosis, prevention, treatment and even eradication. We aimed to evaluate the results of HPV-DNA screening program in women between the ages of 30-65 in a primary care setting and to make recommendations for preventable risk factors.

**Methods:** In this retrospective cross-sectional descriptive study we evaluated the records of 716 women 30-65 years old who scanned for HPV between 2014-2016 in a primary health care center. In the evaluation of data obtained, descriptive statistical methods were used.

**Results:** The average age of women included in the study was  $44.11 \pm 9.25$ , 97.1% were married; the age of first sexual intercourse was minimum 13 maximum 34 (mean  $19.76 \pm 3.67$ ). Of women 20,7% (n=148), smoked in various amounts and 26,7% of them (n=191) used hormonal contraceptives for varying periods of time. HPV was found in 19 (2.7%) of the women. Of these, 7 (1%) were HPV genotype-16. In terms of protection behavior the rate of those who had at least 1 gynecological examination per year was 34.2% (n = 252), the rate of condom use was 21,24% (n=110). None of the women participated in the study had HPV vaccination.

**Conclusions:** In our study the positive rate of HPV is lower than previous published the studies done in Turkey and abroad, the high-risk HPV genotype-16 ratio was higher. We concluded that HPV vaccination, condom use and regular gynecological examination rates are inadequate in women which we included in our study and this may be due to economic reasons as well as socio-cultural factors.

**Keywords:** Obesity, Qualitative Research, Weight Loss

## Bir Birinci Basamak Sağlık Kuruluşunda 30-65 Yaş Arası Human Papilloma Virus (HPV) Taraması Yapılan Kadınlarda HPV Sıklığı ve Korunma Davranışları

### ÖZET

**Amaç:** Her ne kadar rahim ağzı kanseri yaygın olsa da pre-invaziv lezyonların varlığı ve rahim ağzının kolay erişilebilir bir organ olması nedeniyle erken tanı, önleme, tedavi ve hatta eradikasyon için uygun bir hastalıktır. Bu çalışmada, bir birinci basamak kuruluşunda yapılan human papilloma virus (HPV) tarama programının sonuçlarını değerlendirmeyi ve önlenebilir risk faktörleri için önerilerde bulunmayı amaçladık.

**Gereç ve Yöntem:** Bu retrospektif kesitsel tanımlayıcı çalışmada, bir birinci basamak sağlık merkezinde 2014-2016 yılları arasında HPV taraması yapılan 30-65 yaş arası 716 kadının kayıtlarını değerlendirdik. Elde edilen verilerin değerlendirilmesinde tanımlayıcı istatistiksel yöntemler kullanıldı.

**Bulgular:** Çalışmaya katılan kadınların yaş ortalaması  $44,11 \pm 9,25$ , %97,1'i evli; ilk cinsel ilişki yaşı en az 13 en fazla 34 idi (ortalama  $19,76 \pm 3,67$ ). Kadınların %20,7'si (n=148) sigara içmekte ve %26,7'si (n=191) farklı sürelerle hormonal bir kontraseptif yöntem kullanmaktaydı. Kadınların 19'unda (%2,7) HPV (+) olarak bulundu. Bunlardan 7'si (%1) HPV genotip -16 idi. Korunma davranışı açısından yılda en az 1 jinekolojik muayene yapılanların oranı% 34,2 (n = 252), kondom kullanma oranı% 21,24 (n = 110) idi. Çalışmaya katılan kadınların hiçbiri HPV aşısı olmamıştı.

**Sonuç:** Çalışmamızda, HPV-DNA pozitiflik oranı Türkiye'de ve yurtdışında yapılan çalışmalardan daha düşük olsa da yüksek riskli HPV genotip-16 oranı yüksekti. Çalışmamıza dahil ettiğimiz kadınlarda HPV aşılması, kondom kullanımı ve düzenli jinekolojik muayene oranlarının yetersiz olduğu ve bunun sosyo-kültürel faktörlerin yanı sıra ekonomik nedenlerden kaynaklanabileceği sonucuna vardık.

**Anahtar Kelimeler:** HPV, Korunma, Tarama, Birinci Basamak

## INTRODUCTION

Cancer is an increasing health problem in the world and leads to a significant socioeconomic burden in societies, as well as economic and moral losses and difficulties in individuals. According to the 2018 world cancer statistics, cancer is among the leading causes of death. In 2018, a total of 18.1 million new cancer cases will develop in the world and 9.5 million deaths have been predicted. It is expected that a significant proportion of the cancer cases that will develop in the coming years will emerge in developing countries (1). Cervical cancer is the fourth most common cancer in women and second in gynecologic cancers. According to data from the World Health Organization, around 528.000 new cases of cervical cancer are reported each year around the world, and about 266.000 of them are fatal (2). More than 70% of these deaths occur in developing countries due to the lack of adequate screening programs (3). The most common risk factors of cervical cancer include smoking, long-term use (more than 5 years) of hormonal contraceptives, multiparity (more than 2 births), multiple sexual partners, early sexual intercourse and HPV detection (4-6). Today, 99.9% of cervical cancer is known to cause HPV (Human PapillomaVirus) infection (7).

Although cervical cancer is common, because of the presence of pre-invasive lesions and due to the fact that the cervix is an easily accessible organ, it is an appropriate disease for early diagnosis, prevention, treatment and even eradication (8). For this reason, HPV screening programs have been widely applied in developed countries and it has become one of the indispensable preventive medicine applications by decreasing the incidence of cervical cancer. A similar screening program was launched in 2014 in Turkey. Then, this program was strengthened by integrating HPV tests and family physicians.

In this study, we aimed to evaluate the results of HPV-DNA screening program in women between the ages of 30-65 in a primary care setting and to evaluate the risky behaviors and to make recommendations for preventable risk factors.

## MATERIAL AND METHODS

Among the 819 women aged between 30-65 who were registered to a primary care center and HPV screening was performed between 2014-2016, 716 of them who agreed to participate were included to the study.

Ethical approval for the research was obtained from Dışkapı Yıldırım Beyazıt EAH Ethics Committee with a number of 39/9 on 12.06.2017.

Demographic data questionnaire created by the researchers was applied to the women included in the study by telephone or by face to face interview method. HPV screening results of women were obtained from family medicine information system records.

Women who have first sexual intercourse age before 18, more than 2 births, smoke regardless of amount, use hormonal contraceptives over 60 months and HPV positive ones accepted as risky group for cervical cancer (9).

The data were analyzed by SPSS (Statistical Package for Social Sciences) ver.21. Descriptive statistical methods (frequency, percentage, mean, standard deviation) were used to evaluate demographic data.

## RESULTS

The mean age of women participated in the study was  $44.1 \pm 9.24$  years and 97.1% (n = 695) were married. In terms of protection behavior the rate of those who had at least 1 gynecological examination per year was 34.2% (n = 252), the rate of condom use was 21,24% (n=110). None of the women participated in the study had HPV vaccination.

Due to the reasons such as menopause, infertility and hysterectomy 27.65% (n = 198) of the women did not need any family planning (FP) method. Table 1 shows the distribution of women who are required to use FP according to the methods they are currently using.

**Table 1.** Distribution of women who need contraception according to the methods they are currently using \*

Method	n	%
External ejaculation	148	28,6
Pill (OCS)	19	3,67
Tube ligation	53	10,23
Vasectomy	2	0,39
Intrauterin device	132	25,48
Monthly injection	2	0,39
Condom	110	21,24
No methods	52	10,04
Total	518	100

\*n = 518

In 70.1% (n = 502) of the women included in the study, there was at least one risk of cervical cancer. Of these, 55.2% (n = 277) had single, 34.1% (n = 171) had two, 8.8% (n = 44) had three and 2.0% (n = 10) there were 4 risk factors. The distribution of risk factors determined in the women included in the study is given in Table 2.

**Table 2.** Distribution of risk factors for cervical cancer among women \*

Risk Factor	n	%
Smoking	148	20.7
Hormonal contraceptive usage over 60 months	40	8.0
Births more than 2	371	73.9
First sexual intercourse before 18 of age	211	42.0
HPV (+)	19	3.7

\*Only who have at least one risk factor were included (n = 502)

HPV was found in 2.7% (n=19) of the women included in the study. Of these, 1% (n=7) were HPV genotype-16.

## DISCUSSION

In our study although HPV positivity rates are lower than the rates in Turkey and abroad, we have a higher rate of high-risk HPV genotype-16 (10,11). The reason for this finding can be the socioeconomic constraints in the region where we did our research or the changes in the epidemiology of the virus. It is an issue that needs to be put forward by further research.

In our study, we examined the prevention behaviors of women in cervical cancer in 2 stages. In primary protection HPV vaccination and condom use which are the most important measures against HPV transmission.

None of the women included in our study had the HPV vaccine, the most important step in the prevention of cervical cancer. This situation, may be due to concerns about vaccination among the people, such as side effects and reliability, efficacy, cost, and the false sense of security leading to "increased sexual activity with many partners" (12). As a limitation of our study, we did not record why they are not vaccinated, but we observed that women were not vaccinated mostly for economic reasons.

The majority of women in our study (78.6%) used scientific and traditional family planning methods which were not effective in HPV protection. Those using condoms were a group of 21.24%. This rate was 19.2% in another study conducted in different regions of the same city (13).

These rates suggest that the primary purpose of condom use is to provide contraception rather than protection from infection. However, more detailed research is required to clarify this issue.

Gynecological examination is the most cost effective way of finding a condition like cervical cancer in the early stages and improving the quality of life of the patient. However, only 35.2% of the women in our study had a gynecological examination on a regular basis. In a study conducted in our country, it was determined that 18.3% of women had never been examined before and 66.3% of them had been examined 1 to 5 times throughout their lifetime (14). In another study, the rate of routine gynecological examination without any complaints was 15% (15). We thought that the high rates in our study was due to the fact that the women included in the study considered the examinations performed during pregnancy and delivery as a gynecological control examination.

As a conclusion, it was shown that HPV vaccination, condom use which are the primary prevention of cervical cancer, as well as regular gynecological examination, which is secondary protection, are insufficient in our study group. We conclude that this shortage may be influenced by economic reasons as well as sociocultural factors. This deduction once again revealed the importance of state-supported programs in order to increase personal protective behaviors.

We thought that performing of HPV screening programs would be more appropriate for primary care physicians because the women would feel less anxious when they were examined by them as they were familiar and easily accessible.

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