

## A survey of the knowledge about PAP smears among women aged 15 and above

Fatma Deniz Sayiner<sup>1</sup>, Mustafa Tozun<sup>2</sup>, Unal Ayranci<sup>3</sup>,  
Nebahat Ozerdogan<sup>4</sup>, Alaettin Unsal<sup>5</sup>

### ABSTRACT

**Objective:** To estimate the lifetime prevalence of pap smear among a group of women and assess the relationship between some possible risk factors and pap smear knowledge status.

**Methodology:** This was a descriptive cross-sectional study. We interviewed 1972 women in their houses in a quarter of a city in western Turkey, who agreed to participate in the study. Factors related to history of having a Pap smear and knowledge level and willingness to participate in a screening program were evaluated using a questionnaire. The questionnaire forms were filled by a face to face method. The student's t test and the chi square ( $\chi^2$ ) test were used for statistical analysis.

**Results:** Twenty one point four percent of women had a pap smear at least once in their lives (422/1972). The rate of those having knowledge about pap smear was 42.4% (n=836/1972). In this study, the prevalence of the women having pap smear test was lower in the women who didn't know pap smear test than the women who knew pap smear test ( $p<0.05$ ).

**Conclusion:** Study results showed that prevalence of the women having pap smear test, and the prevalence of the women who did not know pap smear test are low, but is compatible with the literature.

**KEY WORDS:** Pap smear, Knowledge, Turkey, Gynecologic cancer.

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### INTRODUCTION

Cervical cancer is the third most common cancer among women in the world, and the second most common cancer in developing countries as Latin America,

and South East Asia and Caribbean countries.<sup>1,2</sup> The Papanicolaou (Pap) smear test was introduced in 1941 into the world of medicine, and it became the standard screening test for cervical cancer and premalignant lesions.<sup>3</sup> Cervical cancer can be treated with a 95% cure rate at early stages but also has almost half of mortality in late stages.<sup>4</sup>

In Turkey, cervical cancer is the most common female genital cancer; however, the prevalence and incidence of this disease showed decrease since the screening programs started in also Turkey as in countries in similar situations with Turkey.<sup>5,6</sup>

Many studies from various countries have investigated the knowledge level, attitudes and behaviors about pap smear, and found that having low socioeconomic status, and racial and ethnic minorities, having fatalistic and wrong thinking about cervical cancer were the reasons for lower prevalence in women having pap smear test, and lower knowledge level about pap smear.<sup>7-9</sup>

1. Fatma Deniz Sayiner, PhD,  
Assistant Professor, Health College.
2. Mustafa Tozun, MD,  
Public Health Specialist Doctor, Directorship of Odunpazari  
Community Health Centre, Merkez Eskisehir, Turkey.
3. Unal Ayranci, MD,  
Associated Professor, Medicosocial Centre.
4. Nebahat Ozerdogan, PhD,  
Assistant Professor, Health College.
5. Alaettin Unsal, MD,  
Professor, Medical Faculty, Dept. of Public Health
- 1,3-5: Eskisehir Osmangazi University,  
Merkez Eskisehir, Turkey.

Correspondence:

Unal Ayranci,  
E-mail: ayranciunal@yahoo.com

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The aim was to estimate the lifetime prevalence of pap smear among a group of women and assess the relationship between some possible risk factors and pap smear knowledge status.

## METHODOLOGY

Eskisehir is a semi-rural city situated in the Middle Anatolian Region of Turkey, with a total population of 724,849, and the city center population is 595,157 (82.1% of total population). It is a pilot province for "Family Physician System" in Turkey. During the study, 8 family physicians were working in the Buyukdere quarter. The present cross-sectional study was conducted on women the aged 15 & over between 1<sup>st</sup> January & 31<sup>st</sup> May 2009 in the Buyukdere quarter of Eskisehir city center. The Buyukdere is a medium scale quarter located in the Eskisehir city center.

The total population of women aged 15 and over in the Buyukdere quarter was 12,886 in the study time. The sample size was calculated as 2,014. For the calculate of sample size, confidence interval (CI), and prevalence of event (p) and standard deviation were accepted 95%, and 50%, and 2%, respectively. The women were selected as randomly and were stratified according to age groups.

Of total 2,104 individuals, 42 were excluded from the survey due to: unwillingness to participate in the research (n=21), not being at home at the time of the study (n=17), and having history of hysterectomy (n=4). The remaining 97.9% women (n=1,972/2,014) who agreed to participate in the study, constituted the study group.

Ethical permission for the study was obtained prior to collecting data, by contacting and receiving approval from the appropriate management authority, the health directorships of the city involved. Participants were assured of the confidentiality of their responses and provided informed verbal consent. Assent was obtained from all the participants.

A group of midwifery students (n=5) studying at the Health Services Vocational Midwifery College of Osmangazi University, Eskisehir, Turkey were informed of the particular aims of the study, the method for completing the questionnaires, and also information about pap smear test and knowledge level of pap smear. These students were trained in advance about the method of the study. The students were asked to visit the individuals living in the quarter to complete a questionnaire. The questionnaire form was filled by the students, with a face to face method.

The questionnaire consisted of two parts using the literature.<sup>7-10</sup> One included information about the participants' sociodemographic characteristics. The other

one included the questions related to the women having pap smear test, and knowledge level of pap smear. The definitions were as follows: if a woman had at least once pap smear test in her life, she was accepted as "the woman having pap smear test", and if a woman heard the name of pap smear test, she was accepted as "the woman knowing pap smear test".

Statistical analysis was made with SPSS for Windows software (version 13.0). Comparison between means was performed with the student's t test for independent data. The possible association between qualitative variables was measured with the Chi square ( $\chi^2$ ) test. A value of  $P < 0.05$  was considered statistically significant.

## RESULTS

In this study, the data obtained from the 1,972 subjects were analyzed. Their mean age was  $36.41 \pm 11.26$  (range 15-81) years. Most women were in the age group of 25-34 (37.2%), followed by the age group of 35-49 (35.3%). The educational levels of the study group were determined as follows: 38 (1.9%) illiterate, 77 (3.9%) literate, 660 (33.5%) primary school, 436 (22.1%) secondary school, 538 (27.3%) high school, and 223 (11.3%) university graduated. 1,464 (74.2%) women were not working in any job or were housewives, and 123 (6.2%) women did not have any social health insurance (SHI). A total of 20.5% of the study group (n=404) were smokers and 2.9% (n=57) alcohol consumers. The prevalence of the women having pap smear test was 21.4%, and that of the women knowing pap smear test was found to be 42.4%. The frequency of those having pap smear test showed increase up to 50 years and as educational level increased ( $p < 0.05$ , for each one). However, the prevalence of having pap smear test was higher in those with a job and with SHI ( $p < 0.05$ , for each one). The distribution of more detailed some characteristics by the women having and not having a pap smear are presented in Table-I.

The prevalence of having pap smear in the women knowing about pap smear was found be higher ( $p < 0.05$ ). It was reported that 552 women (28.0%) knew that "married women should have pap smear test"; however, that 508 (25.8%) women did not know anything about it. Furthermore, nearly 1/3 women (n=621, 31.5%) said that they did have any knowledge about having pap smear test.

About 25% women (n=528, 26.8%) reported that "pap-smear test is used in the diagnosis of genital cancer"; however, many women (n=1247, 63.2%) reported that they knew nothing about it. The distribution of knowledge level about pap smear by the

Table-I: The distribution of some characteristics by the women who have Pap smear.

Some characteristics	Women who have Pap smear test			Statistical analysis X <sup>2</sup> ; p
	Yes n (%)	No n (%)	Total n (%)	
Age group (year)				
15-24	16 (6.1)	246 (93.9)	262 (13.3)	97.081; 0.000
25-34	134 (18.3)	599 (81.7)	733 (37.2)	
35-49	227 (32.6)	470 (67.4)	697 (35.3)	
50-81	45 (16.1)	235 (83.9)	280 (14.2)	
Education level				
First school and under	100 (12.9)	675 (87.1)	775 (39.3)	63.196; 0.000
Middle school and college	246 (25.3)	728 (74.7)	974 (49.4)	
High school	76 (34.1)	147 (65.9)	223 (11.3)	
Employment status				
Employment	161 (31.7)	347 (68.3)	508 (25.8)	43.103; 0.000
Unemployment (including housewives)	261 (17.8)	1203 (82.2)	1464 (74.2)	
Social insurance				
Yes	414 (22.4)	1435 (77.6)	1849 (93.8)	17.304; 0.000
No	8 (6.5)	115 (93.5)	123 (6.2)	
Total	422 (21.4)	1550 (78.6)	1972 (100.0)	

women having/not having pap smear test is presented in Table-II.

## DISCUSSION

In this study, about half of the women reported that they knew pap smear test, and the women having pap smear test were only approximately one in five. In a study conducted in a rural area of Western Turkey,<sup>10</sup> the prevalence of the women having knowledge about pap smear test was reported to be 8.5%, and the prevalence of the women having pap smear test were reported to be only 3.9%. That our results are higher than the results of this study could be

explained with the fact that our study subjects were from urban area.

Some studies indicated that the prevalence of the women having pap smear test ranged from 12.0% to 83.3%.<sup>11-13</sup> In addition, Swaddiwudhipong et al. reported that the prevalence of the women having knowledge about pap smear test was 57.3%. The results of those studies can be said to be compatible with our study results. Pap smear screening behavior may vary according to women's age, educational level, socioeconomic status and cultural characteristics.<sup>14</sup> Some studies<sup>15,16</sup> showed that the prevalence of women having pap smear test increased with the

Table-II: The distribution of knowledge level about Pap smear by the women having/not having pap smear test.

Knowledge level	Women who have Pap smear test			Statistical analysis X <sup>2</sup> ; p
	Yes (%)	No (%)	Total (%)	
	422 (21.4)	1550 (78.6)	1972 (100.0)	
The women who know pap Smear				
Yes	408 (48.8)	428 (51.2)	836 (42.4)	647.948; 0.000
No	14 (1.2)	1122 (98.8)	1136 (57.6)	
To identify the group needs for having pap smear test				
Married women	142 (25.7)	410 (74.3)	552 (28.0)	230.860; 0.000
The women who are family history positive for cervical cancer	61 (17.9)	279 (82.1)	340 (17.2)	
All women, but 3 years after starting the sexual life (Correct)	166 (37.1)	281 (62.9)	447 (22.7)	
All women	50 (40.0)	75 (60.0)	125 (6.3)	
Do not know	3 (0.5)	505 (99.5)	508 (25.8)	
To know how often pap smear test should be done				
Every year after the starting sexual life (Correct)	198 (35.9)	353 (64.1)	551 (27.9)	195.859; 0.000
Every year after getting married	186 (24.2)	582 (75.8)	768 (38.9)	
Other	14 (43.8)	18 (56.2)	32 (1.7)	
Do not know	24 (3.9)	597 (96.1)	621 (31.5)	
Pap smear test should be performed for diagnosis of the disease				
Gynecologic cancers (Correct)	258 (48.9)	270 (51.1)	528 (26.8)	514.950; 0.000
Gynecologic infections	51 (61.4)	32 (38.6)	83 (4.2)	
Other diseases	42 (36.8)	72 (63.2)	114 (5.8)	
Do not know	71 (5.7)	1176 (94.3)	1247 (63.2)	

advancing age. In this study, the prevalence of the women having pap smear test showed increase with the advancing age until the age of 50 years, but the prevalence of the women having pap smear test decreased after the age 50 ( $p < 0.05$ ). This result shows that the women aged 50 years and over is a risk group for cervical cancer, even though they did not have enough knowledge about pap smear test. In some studies<sup>16,17</sup> the prevalence of women having pap smear test was reported to increase as educational level increased. We have also found similar results. It is known that having a job and SHI are good indicators of socio-economic level. In a manner consistent, in our study, having both a job and SHI were two important indicators for having a higher prevalence of pap smear test ( $p < 0.05$  for each one).

In consistent with the study by Akyuz et al.<sup>15</sup>, the prevalence of the women having pap smear test was lower in the women not having knowledge about pap smear test than the women having knowledge about pap smear test ( $p < 0.05$ ). This result emphasizes the importance of access to information.

The American Cancer Society Guideline for the early detection of cervical cancer was recently reviewed in 1987, and it was recommended that all women who were sexually active or reached to the age of 18 should have an annual pap test and pelvic examination; and also the guideline advised that after a woman had three or more consecutive, technically satisfactory, normal annual examinations, if the pap smear test is still negative, the test may be performed less frequently at the discretion of her physician.<sup>18</sup> In Turkey, as in the other developed countries, the annual pap smear test is performed as a part of the pelvic examination 3 years after starting sexual activity.<sup>15</sup> However, in this study, approximately one quarter of the women (22.7%) did not know if they needed to have pap smear test, and nearly one in each third women (27.9%) did not know how often they needed to have pap smear test. These findings indicate that pap smear test is not given much importance for the detection of cervical and that practice was not routine.

The prevalences of correct answers to the questions to identify the group needs concerning having pap smear test & the questions about how often pap smear test should be done were higher in the women having pap smear test than the women not having pap smear test ( $p < 0.05$  for each one). These results suggest that there is positive correlation between the "having pap smear test" and "having knowledge about the pap smear test". Akyuz et al.<sup>15</sup> reported a similar result.

In this survey, we determined that the study group consisted of the women whose two thirds (73.2%) did

not know or had incorrect knowledge about pap smear test. In parallel, the prevalence of the correct answers to the question about having pap smear test for what diseases were higher in the women having pap smear test. For these contradictory results, more detailed researches are needed.

The study results showed that prevalence of the women having pap smear test, and the prevalence of the women having knowledge about pap smear test were low. In contrast, the women having pap smear test had more knowledge about pap smear than that of the women not having pap smear. In the light of these results, we conclude that health personnel should be educated about pap smear and the benefits of pap smear test. Promoting health education about the pap smear, the development of effective screening programs should be given more importance.

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