

## ORIGINAL ARTICLE

# Knowledge, attitudes and behaviors of breast and cervical cancers and screenings of women working in primary health care services

Serdar Deniz<sup>1</sup>, Ferhat Coskun<sup>2</sup>, Dilek Oztas<sup>3</sup>, Ahmet Oner Kurt<sup>4</sup>

<sup>1</sup>Malatya Provincial Health Directorate, Malatya, Turkey; <sup>2</sup>Mersin Provincial Health Directorate, Mersin, Turkey; <sup>3</sup>Yildirim Beyazit University Faculty of Medicine Public Health Department, Ankara, Turkey; <sup>4</sup>Mersin University Faculty of Medicine Public Health Department, Mersin, Turkey

## Summary

**Purpose:** Determination of information attitudes, behaviors and related factors on breast and cervical cancer screenings of primary health care workers.

**Methods:** The population of the study consisted of 1,130 female health workers working in health facilities (Community Health Centers, Family Health Centers) that provided primary health care services in the province of Mersin. The fieldwork was carried out in October 2017-February 2018 period. There were 62 questions in the survey form. There were questions about socio-demographic and living conditions in the first 19 questions and breast and cervical cancer in the next 43 questions.

**Results:** In the study, 87.8% of the target group could be reached, 84.8% of the physicians and 88.2% of the non-physician health professionals. The mean age was  $38.93 \pm 7.89$ . Of the group 14% were physicians and the rest were health workers such as midwives, nurses, health officers and medical secretaries, while 47.7% of the group had at least 1 relative who was diagnosed with cancer. More than 90% of the group said that breast and cervical cancer could be diagnosed early and treated if diagnosed early. Of the group 95.3% knew

how to do breast self-examination (BSE) and 90.1% of those who knew were doing BSE. The most common response to the question of what should be done for early recognition of breast cancer was BSE and Pap smear test in cervical cancer. The physician group was more advantageous than the other staff in knowing and practicing BSE and in what period it should be done. The most common symptom of breast cancer was the presence of a mass or swelling in the breast. Of the subjects in the target age group, 21.9% of those who think they are at risk had never had a Pap smear test and 14.3% have not had a gynecological examination.

**Conclusions:** Although these findings indicate that health care professionals are more knowledgeable in terms of breast and cervical cancer screening than non-health care workers, it is necessary to motivate healthcare professionals to increase their level of knowledge and practice on cancer screening. The most important means of achieving this is to ensure that in-service trainings, cancer screenings and the risks to be taken in case of non-screening are mentioned seriously.

**Key words:** breast cancer, cervix cancer, health professionals, knowledge, screening

## Introduction

Cancer is one of the most investigated diseases in medical history, representing a life-threatening malignancy worldwide [1].

In the early nineteenth century, cancer findings and etiology began to be questioned [2]. The

fight against cancer in Turkey started with the establishment of Turkish Cancer Research and Warfare Institution in 1947 and the war against cancer began in 1983 under guidance of an independent department within the Ministry of Health [3].

With infectious diseases being effectively controlled, life expectancy has increased. This has led to an increase in noncommunicable diseases, including cancer. In diseases such as cancer, where health-related behaviors are very important, the development of positive behaviors related to health and the acquisition of the necessary knowledge and practices have great importance [4,5].

Cancer, one of the leading causes of morbidity and mortality, is the second most important cause of death in the world. Globally, 1 out of 6 deaths is attributed to cancer. Most deaths from cancer are seen in low- and middle-income countries. Approximately only 20% of these low and middle-income countries have data that can be used to develop cancer policies. However, the issue of diagnosis and access to treatment is also a problem in low- and middle-income countries [6].

Anywhere in the body, swelling, wounds, color changes, bleeding, swallowing problems, coughing, voice misalignment and excretion system problems are some of the symptoms that help diagnose cancer early. With early diagnosis, it is possible to decrease the mortality of cancer. PAP smear, HPV-DNA tests and other tests and examinations can provide early diagnosis of cervical cancer. Any obstacle to early disease identification, or not being sufficiently encouraged, cancer is diagnosed later in life, which in turn limits treatment options [6-8].

Late pregnancy, age, dietary and endocrine factors, as well as breast cancer risk factors in the family are more warning conditions if the person is required to act. There are studies that support this situation as well as researches that do not reveal any differences between those who have family members with cancer and those who do not. Research has shown that housewives acquire information about breast cancer from television. However, there is evidence that health workers who are expected to have done enough practice and have enough theoretical knowledge of breast cancer during their training and working lives are not at a sufficient level of knowledge and attitudes about breast cancer prevention [8-13].

There is a great deal of early recognition to reduce the mortality of breast and cervical cancer, and to increase the chance of treatment. Diagnosis by Papanicolaou smear (pap smear) test, even during periods when there is no symptom in cervical cancer, provides support for the prevention of nearly half of cervical cancer deaths. The cost of this test is low and the application is easy to use. Breast self examination (BSE) is the first application for early detection of breast cancer. For this, all women over the age of 20 5-7 days post menstruation. and menopausal women are advised to do pe-

riodic BSE every month on a given day. It is also important for early diagnosis to notify the health service providers of the difference in appearance when bathing or wearing clothes. It is expected that those who are educated about health sciences will be able to use and apply early recognition applications more effectively. It was observed that health workers were more effectively perceived by health workers themselves and by the individuals they served when informed consent was given in case the expectations were not met [13-19].

## Methods

Community-based cancer screening standards have been determined for 3 cancers in Turkey.

For early diagnosis of breast cancer:

- Breast self-examination of women; Over 20-year old, once per month.
- Doctor's clinical breast examination; Over 20-year old, once per 2 years and over 40 years once per year.
- Mammography should be done once per 2 years for women aged 40-69 years.

For early diagnosis of cervical cancer:

- The HPV-DNA/Pap smear test should be repeated once every 5 years for women aged 30-65 years.
- For early diagnosis of colon cancer in both genders screening programs:
- The fecal occult blood test should be done once per 2 years for both genders aged 50-70 years.

The screening and follow-up of these screening programs is carried out by primary health care institutions (Community Health Centers, Family Health Centers). If any of these screening tests detects an abnormal condition, the patient is referred for further examination and, if necessary, for treatment in a higher health care facility [20,21].

Since knowledge, attitudes and behaviors related to breast cancer and cervical cancer were examined in our study, only female staff were identified as the study group. 1130 female health personnel (164 physicians, 966 non-physician health professionals) working in health institutions (Community Health Centers, Family Health Centers) that provide primary health care service in Mersin province constitute the universe of our research. It is planned to reach the entire target group without using any sampling method. With reasons such as annual leave and health excuse, at the time of the study, absence of duty, change of duty, and refusal to participate in the survey, 87.8% (n=991) of the whole target group could be reached 84.8% of the physicians (n=139), 88.2% (n=832) of non-physician health professionals. The fieldwork of the research started on October 2017 and was completed on February 2018.

There were 62 questions in the survey form. There were questions about socio-demographic and living conditions in the first 19 questions and breast and cervical cancer in the next 43 questions.

### Statistics

Statistical analyses were performed using SPSS v.25 statistical software. The statistical significance level was set at  $p < 0.05$ . Data were summarized using descriptive statistics (frequencies,  $n$ , percentages). Pearson chi-square test was used for comparisons between study groups and Pearson correlation test was used to determine the relationship of the arguments to each other.

### Results

All individuals of our study group ( $n=991$ ) consisted of women. The mean age was  $38.93 \pm 7.89$  (min 21, max 63). 14.0% ( $n=139$ ) of the group were physicians and the rest were health workers such as midwives, nurses, health officers and medical secretaries. All of the group participants were in the age group that needed to do a BSE. Distribution of participants in the target age group in breast and cervical cancer screening and distribution of some categorized data of our study group is presented in Table 1.

Of the group, 18.2% ( $n=180$ ) had at least 1 chronic disease and 0.6% ( $n=6$ ) had a cancer diagnosis.

**Table 1.** Distribution of categorized data of the study group

Data	$n$ (%)
Education status	
Secondary or high school	159 (16.0)
University	832 (84.0)
Job	
Doctor	139 (14.0)
Other health professional*	852 (86.0)
Marital status	
Married	796 (80.3)
Single	119 (12.0)
Divorced, widowed	76 (7.7)
Children's status	
No children	178 (18.0)
At least one child	813 (82.0)
Place of residence	
Province	514 (51.9)
District	477 (48.1)
Economic condition	
Bad	36 (3.6)
Middle	666 (67.2)
Good	289 (29.2)
Number of screening target, age group	
Mammography (40-69 years)	505 (51.0)
Number of persons	
HPV-DNA/Pap smear (30-65)	838 (84.6)

\*midwife, nurse, health officer, medical secretary

**Table 2.** Information on the chronic illness status of the study group and relatives who have cancer diagnosed

$n=991$	$n$ (%)
Do you have any chronic illnesses? If yes, what is it?*	
Cancer	6 (0.6)
CVD, DM, COPD	91 (9.2)
Other	83 (8.4)
No	811 (81.8)
Do you have any relatives who have any cancer diagnosis?	
Yes	473 (47.7)
No	518 (52.3)
Do you have any relatives who have breast cancer diagnosis?	
Mother	20 (2.0)
Sister	12 (1.2)
Aunt	57 (5.8)
Other	85 (8.6)
No	817 (82.4)
Do you have any relatives who have cervix cancer diagnosis?	
Mother	8 (0.8)
Sister	4 (0.4)
Aunt	24 (2.4)
Other	28 (2.8)
No	927 (93.5)
Do you have any relatives who have cancer diagnosis except for breast and cervix cancer?	
Mother	50 (5.0)
Father	13 (1.3)
Sister/brother	21 (2.1)
Other	268 (27.0)
No	639 (64.5)
Do you have a relative who died of cancer? If so, which cancer?	
Breast	29 (2.9)
Cervix	15 (1.5)
Other	242 (24.4)
No	705 (71.1)
Who are your relatives who died of cancer? ( $n=286$ )**	
Mother	36 (12.6)
Father	11 (3.8)
Sister/brother	10 (3.5)
Aunt	20 (7.0)
Other	209 (73.1)

\*CVD: cardiovascular diseases, DM: diabetes mellitus, COPD: chronic obstructive pulmonary disease. \*\*Those who did not have relatives who died of cancer were not included in the calculation.

**Table 3.** Distribution of answers about early recognition of breast and cervical cancer\*

	<i>n</i> (%)
Breast cancer	
Breast self examination	810 (31.6)
Mammography	702 (27.4)
Clinical breast examination	529 (20.6)
Breast ultrasonography	524 (20.4)
Cervix cancer	
Pap smear /HPV DNA	879 (85.2)
Doctor's examination	77 (7.5)
No idea	49 (4.7)
Ultrasonography	27 (2.6)

\*There are more than one respondent to the question

Of the participants, 98.6% (n=977) knew that the screening of breast and cervical cancer was free. Also, 47.7% (n=473) of the group had at least 1 relative who had a cancer diagnosis. Information on the chronic illness status of the study group and relatives who had cancer diagnosed are shown in Table 2.

Of the participants 98.0% (n=971) stated that breast cancer could be recognized early. This rate was 95.4% (n=945) for cervical cancer. The distribution of responses given early on how to detect both cancer types is presented in Table 3. All of the physicians (n=139) stated that both cancers could be treated if they were diagnosed early.

The entire group was in the age group in which BSE should be done. However, 95.3% (n=944) knew

**Table 4.** Distribution of knowledge, attitudes and behaviors related to BSE

		Yes <i>n</i> (%**)	No <i>n</i> (%**)	$\chi^2$	<i>p</i> value
Do you know how to do BSE?					
Job	1*	139 (100.0)	0 (0.0)	8.050	0.005
	2	805 (94.5)	47 (5.5)		
Education status	A	150 (94.3)	9 (5.7)	0.352	0.552
	B	794 (95.4)	38 (4.6)		
Cancer-diagnosed relatives	Yes	455 (96.2)	18 (3.8)	1.759	0.185
	No	489 (94.4)	29 (5.6)		
Do you do BSE?					
Job	1*	127 (91.4)	12 (8.6)	4.023	0.045
	2	724 (85.0)	128 (15.0)		
Education status	A	139 (87.4)	20 (12.6)	0.374	0.541
	B	712 (85.6)	120 (14.4)		
Cancer-diagnosed relatives	Yes	405 (85.6)	68 (14.4)	0.046	0.830
	No	446 (86.1)	72 (13.9)		
		Wrong answer <i>n</i> (%)	Correct answer <i>n</i> (%)	$\chi^2$	<i>p</i> value
How often should the BSE be done? (Correct answer: once a month)					
Job	1*	0 (0.0)	139 (100.0)	48.864	0.000
	2	230 (27.0)	622 (73.0)		
Education status	A	45 (28.3)	114 (71.7)	2.756	0.097
	B	185 (22.2)	647 (77.8)		
Cancer-diagnosed relatives	Yes	112 (23.7)	361 (76.3)	0.112	0.738
	No	118 (22.8)	400 (77.2)		
What period should the BSE be done? (Correct answer: after menstruation)					
Job	1*	0 (0.0)	139 (100.0)	40.623	0.000
	2	199 (23.4)	653 (76.6)		
Education status	A	39 (24.5)	120 (75.5)	2.334	0.127
	B	160 (19.2)	672 (80.8)		
Cancer-diagnosed relatives	Yes	84 (17.8)	389 (82.2)	3.039	0.081
	No	115 (22.2)	403 (77.8)		

1: Doctor, 2: Other health professionals. A: Secondary or high school, B: University. \* The group differs positively in terms of knowledge, attitude and behavior. \*\* Raw percentages have been taken.

to do BSE, and 90.1% (n=851) of those were doing BSE. BSE was learnt from family physicians (25.4%), other physicians (3.4%), a knowing acquaintance (6.0%) and book, internet or television (32.1%).

Of the group 19.5% had detected mass while performing BSE. Within this group malignant masses were found in 1.0% (n=2) and benign masses were found in 65.8% (n=127). The rest of the masses were not detected.

**Table 5.** Reasons for those who did not have a clinical breast examination or gynecological examination

Reason	Reasons for not having a clinical breast examination (n=516) n (%)	Reasons for not having a gynecological examination (n=235) n (%)
I did not consider it necessary	400 (77.5)	105 (44.7)
I did not have time	26 (5.0)	10 (4.3)
Physician did not suggest	26 (5.0)	16 (6.8)
Embarrassed	14 (2.7)	3 (1.3)
Other	50 (9.7)	101 (43.0)

**Table 6.** Distribution of information, attitudes and behaviors regarding breast examination and mammography according to age group, job, education status and cancer-related relatives

		Wrong answer n (%**)	Correct answer n (%**)	$\chi^2$	p value
How often should the doctor perform breast examination? (Correct answer: once every 2 years for 20-39 age group, once a year for $\geq 40$ age group)					
Age group	20-39	284 (58.4)	202 (41.6)	5.395	0.020
	$\geq 40$ *	258 (51.1)	247 (48.9)		
Job	A	87 (54.7)	72 (45.3)	0.000	0.995
	B	455 (54.7)	377 (45.3)		
Education status	1	68 (48.9)	71 (51.1)	2.173	0.140
	2	474 (55.6)	378 (44.4)		
Cancer-diagnosed relatives	Yes	265 (56.0)	208 (44.0)	0.649	0.420
	No	277 (53.5)	241 (46.5)		
How often should mammography be taken? (Correct answer: once every 2 years for $\geq 40$ age group)					
Age group	20-39	260 (53.5)	226 (46.5)	6.267	0.012
	$\geq 40$ *	230 (45.5)	275 (54.5)		
Job	A	95 (59.70)	64 (40.3)	8.043	0.005
	B*	395 (47.5)	437 (52.5)		
Education status	1*	42 (30.2)	97 (69.8)	23.916	0.000
	2	448 (52.6)	404 (47.4)		
Cancer-diagnosed relatives	Yes	232 (49.0)	241 (51.0)	0.057	0.812
	No	258 (49.8)	260 (50.2)		
Have you ever taken a mammography?					
Age group	20-39	30 (6.2)	456 (93.8)	340.812	0.000
	$\geq 40$ *	313 (62.0)	192 (38.0)		
Job	A	53 (33.3)	106 (66.7)	0.137	0.712
	B	290 (34.90)	542 (65.1)		
Education status	1	54 (38.80)	85 (61.2)	1.283	0.257
	2	289 (33.9)	563 (66.1)		
Cancer-diagnosed relatives	Yes*	181 (38.30)	292 (61.70)	5.341	0.021
	No	162 (31.3)	356 (68.7)		

1: Doctor, 2: Other health professionals. A: Secondary or high school, B: University. \* The group differs positively in terms of knowledge, attitude and behavior. \*\* Raw percentages have been taken.



According to occupation, knowledge, attitudes and behaviors related to BSE differed, but no significant difference according to educational status was detected (Table 4).

According to cancer screening standards, the entire group had to have a breast exam performed by a physician at least once. However, 52.1% (n=516) had never had a breast examination before. The doctors who made the breast examination were as follows: 70.1% (n=333) were general surgery specialists, 14.9% (n=71) were obstetricians, 8.4% (n=40) were family doctors, and 6.5% (n=31) were other physicians. 23.7% (n=235) of the group and 16.5% (n=131) of the married ones did not have gynecological examination before. The rest went for gynecological examination when there was any complaint (75.3%) and when the patient was un-

able to tolerate the trouble of gynecological disease (6.2%). The most common reason for not having a breast or gynecological examination was expressed as "I did not see it necessary" (Table 5).

The responses varied according to the age group but not varied with educational status and the occupational groups about the question on how often the doctor performed the breast examination. In the age group in which mammography should be applied ( $\geq 40$  years), college graduates and the physician group responded more frequently to the question on how often the mammogram should be withdrawn. There was no difference according to education level and occupation in relation to mammography. However, the incidence of mammography was higher in those who had a cancer-related relative (Table 6).

**Table 7.** Distribution of information, attitudes and behaviors regarding Pap smear according to age group, job, education status and cancer-related relatives

		Wrong answer n (%)**	Correct answer n (%)**	$\chi^2$	p value
Which disease is diagnosed with pap smear? (Correct answer: Cervix Ca)					
Age group	<30, >65	9 (5.9)	144 (94.1)	0.006	0.940
	30-65	48 (5.7)	790 (94.3)		
Education status	1	12 (7.5)	147 (92.5)	1.126	0.289
	2	45 (5.4)	787 (94.6)		
Job	A*	0 (0.0)	139 (100.0)	9.867	0.002
	B	57 (6.7)	795 (93.3)		
Cancer-diagnosed relatives	Yes*	18 (3.8)	455 (96.2)	6.323	0.012
	No	39 (7.5)	479 (92.5)		
How often Pap smear should be done? (Correct answer: 30-65 years 1 in 5 years)					
Age group	<30, >65	93 (60.8)	60 (39.2)	0.285	0.593
	30-65	490 (58.5)	348 (41.5)		
Education status	1	96 (60.4)	63 (39.6)	0.187	0.665
	2	487 (58.5)	345 (41.5)		
Job	A*	34 (24.5)	105 (75.5)	78.850	0.000
	B	549 (64.4)	303 (35.6)		
Cancer-diagnosed relatives	Yes	274 (57.9)	199 (42.1)	0.304	0.582
	No	309 (59.7)	209 (40.3)		
		Yes n (%)	No n (%)	$\chi^2$	p value
Have you ever done a Pap smear test before?					
Age group	<30, >65 *	34 (22.2)	119 (77.8)	114.709	0.000
	30-65	571 (68.1)	267 (31.9)		
Education status	1	99 (62.3)	60 (37.7)	0.118	0.732
	2	506 (60.8)	326 (39.2)		
Job	A	94 (67.6)	45 (32.4)	2.941	0.086
	B	511 (60.0)	341 (40.0)		
Cancer-diagnosed relatives	Yes*	306 (64.7)	167 (35.3)	5.053	0.025
	No	299 (57.7)	219 (42.3)		

1: Doctor, 2: Other health professionals. A: Secondary or high school, B: University. \* The group differs positively in terms of knowledge, attitude and behavior. \*\* Raw percentages have been taken.

**Table 8.** Distribution of responses asking what the symptoms of breast cancer are

	Symptoms							$\chi^2$	p value
	1 n (%)	2 n (%)	3 n (%)	4 n (%)	5 n (%)	6 n (%)	7 n (%)		
Job								140.263	0.000
Doctor (n=139)	139 (100.0)	139 (100.0)	138 (99.3)	84 (60.4)	137 (98.6)	123 (88.5)	86 (61.9)		
Other Health professional (n=852)	798 (93.7)	699 (82.0)	675 (79.2)	365 (42.8)	682 (80.0)	598 (70.2)	439 (51.5)		
Education status								57.744	0.000
Secondary or high school (n=159)	144 (90.6)	122 (76.7)	117 (73.6)	65 (40.9)	113 (71.1)	96 (60.4)	84 (52.8)		
University (n=832)	793 (95.3)	716 (86.1)	696 (83.7)	384 (46.2)	706 (84.9)	625 (75.1)	441 (53.0)		
Cancer-diagnosed relatives								20.785	0.004
Yes (n=473)	455 (96.2)	406 (85.8)	398 (84.1)	231 (48.8)	402 (85.0)	355 (75.1)	261 (55.2)		
No (n=518)	482 (93.1)	432 (83.4)	415 (80.1)	218 (42.1)	417 (80.5)	366 (70.7)	264 (51.0)		

1: Swelling or mass; 2: Bleeding from the nipple; 3: Retraction of the nipple; 4: Nipple wound; 5: Swelling or mass in the armpit; 6: Color change; 7: Pain.

Of the participants 5.4% did not know what the Pap smear test was. However, 61.0% of the group had Pap smear test. Their Pap smear results were 94.0% normal / healthy, 2.6% HPV and 2.1% cervicitis. And in this group Pap smear test averages were  $2.08 \pm 1.27$  (min 1, max 7). The distribution of knowledge, attitudes and behaviors related to Pap smear test is presented in Table 7.

The answers to the question of what breast cancer symptoms are, differed according to the occupation, educational status, and the presence of relatives who were diagnosed with cancer (Table 8).

## Discussion

The mean age of the study participants was  $38.93 \pm 7.89$  (min 21, max 63). Because the youngest age was 21, all the group was in the age group that BSE should be done. The participants were all health professionals. The lowest education level was secondary school. Of the participants, 80.3% were married and 84.0% were university graduates. Physicians consisted 14.0% of the group and 86.0% consisted of other health workers such as midwives, nurses, health officers. Our study was similar with other studies in terms of variables such as age average, educational status, and the ones that were directed especially to health personnel. [8,10,11,19,22-28].

In our study more than 90% of participants stated that breast and cervix cancer could be diagnosed early and could be treated if they were

diagnosed early. According to our study group, BSE was the most frequent diagnostic method for breast cancer and Pap smear test for cervical cancer. Although all of our participants were in the age group in which BSE should be done, 95.3% were aware of BSE and 90.1% of them were doing BSE. About more than half who knew how to do BSE have learnt from a doctor, and a third have learnt from books, the internet and television. Physicians were more informed than other health professionals about how to perform BSE. The presence of a cancer-related relative and the educational status were not found to be effective in this regard. The higher frequency of knowing how to do BSE is due to the fact that this work was performed in health personnel and it is expected that this frequency should be lower in studies performed in non-health personnel. It is thought that physicians should have had more detailed training on the subject during their university education period. According to researches, the knowledge and practice of health care professionals about BSE were found higher compared to other people. The increase of knowledge about BSE and the frequency of implementation on participating in health seminars and BSE training, health professional school students and higher educational levels support our research findings [10,11,13,16,19,23-28].

In this study, 52.1% of the group did not have clinical breast examination (CBE) before, and the most common reason for not having it was not considered necessary. This was followed by the lack

of time and the absence of a physician's recommendation. The period of clinical breast examination was more known (48.9%) in women aged 40 years and older. The educational status, occupation and relatives who had a cancer diagnosis did not affect the accuracy of the answer given in relation to the frequency of having CBE. Age group 40 and over, higher educated and physician group were more knowledgeable over what period mammography should be done. As expected, in the over 40 years age group who needed to have a mammography, the incidence of mammography was higher. This was also observed in those who had a cancer-affected relative. Education status and occupation were not found effective on having mammography. As a sign of breast cancer, the most common symptoms were breast mass or swelling and bloody discharge from the nipple. The fact that the working group consisted of health professionals, the frequency of CBE and mammography is expected to be high. This suggests that vocational training should be supported in schools and in the workplace with in-service trainings. This research showed that those in the target age group are more sensitive to perform CBE and mammography. Having a physician's recommendation, giving importance to self-health and having a cancer diagnosis in the family is considered as a motivating factor in the positive direction. We understand from other studies that the high frequency of performing mammography

and CBE is due to the fact that the research group consists of health professionals [8,10,11,22-24].

In this study, 23.2% of the group did not have gynecological examination. This frequency was 16.5% in married women. The most common reason for this was that they did not consider the gynecological examination necessary. Physicians and those with relatives who had cancer diagnosed had a higher proportion of knowledge of Pap smear test that should be performed for early diagnosis of the disease. Likewise, physicians responded more correctly of the period required for Pap smear test compared to other health professionals. Being in the target age group (30-65 years) and having a relative with cancer diagnosis had a positive effect on performing Pap test. Approximately 20.0% of respondents did not know cervical cancer vaccination and thought that more than one sexual partner will not cause cervical cancer. Physicians' vocational training seems to be more useful in terms of gynecological information. However, this advantage does not come as a challenge in practice. It is understood from other authors that the health personnel is advantageous in this respect as compared to the non-health personnel, as it is in other matters as well [22,23].

### Conflict of interests

The authors declare no conflict of interests.

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