

ORIGINAL RESEARCH ARTICLE

How did adult women's fear of COVID-19 affect their attitudes toward cervical cancer screening? An example of Turkey

DOI: 10.29063/ajrh2023/v27i6.9

Öziim Erkin

İzmir Demokrasi University, Faculty of Health Sciences, Department of Public Health Nursing, İzmir, Turkey

*For Correspondence: Email: ozum.erkin@gmail.com; Phone: 0090.506 810 9724

Abstract

This descriptive cross-sectional study was carried out between May and December 2021 in Turkey to examine the effect of adult women's fear of COVID-19 on their attitudes toward Cervical Cancer (CC) screening. The study population consisted of 334 women between the ages of 30 and 65 years according to the criteria of the national standards for the CC screening program in Turkey. A socio-demographic data form (21 questions) and the fear of COVID-19 Scale (7 questions) were used for data collection. The mean score of women for the level of knowledge about cervical cancer screening was 6.16 ± 3.05 out of a total score of 10. The mean score of the Fear of COVID-19 scale was 19.20 ± 6.12 out of a total score of 35. Cause of the risk of COVID-19 contamination 25.4 % of women postponed their CC screening. Women's knowledge about cervical cancer screening was found to be moderate, and their fear of coronavirus was found to be close to moderate. It was determined that women with a high fear of coronavirus postponed their CC screening tests. (*Afr J Reprod Health 2023; 27 [6]: 77-87*).

Keywords: Fear, COVID-19, attitude, cervical cancer, screening, Turkey

Cette étude transversale descriptive a été menée entre mai et décembre 2021 en Turquie afin d'examiner l'effet de la peur du COVID-19 chez les femmes adultes sur leur attitude vis-à-vis du dépistage du cancer du col de l'utérus (CC). La population étudiée était composée de 334 femmes âgées de 30 à 65 ans, conformément aux critères des normes nationales pour le programme de dépistage du CC en Turquie. Un formulaire de données sociodémographiques (21 questions) et l'échelle de peur COVID-19 (7 questions) ont été utilisés pour la collecte des données. Le score moyen des femmes pour le niveau de connaissance du dépistage du cancer du col de l'utérus était de $6,16 \pm 3,05$ sur un score total de 10. Le score moyen de l'échelle de peur du COVID-19 était de $19,20 \pm 6,12$ sur un score total de 35. En raison du risque de contamination par le COVID-19, 25,4 % des femmes ont reporté leur dépistage du CC. Les connaissances des femmes sur le dépistage du cancer du col de l'utérus ont été jugées moyennes et leur peur du coronavirus proche de la moyenne. Il a été établi que les femmes ayant une peur élevée du coronavirus reportaient leurs tests de dépistage du CC. (*Afr J Reprod Health 2023; 27 [6]: 77-87*).

Mots-clés: Peur, COVID-19, attitude, cancer du col de l'utérus, dépistage, Turquie

Introduction

Cervical cancer [CC], is globally the fourth most common type of cancer in women¹. According to GLOBOCAN (2020) data, approximately 605 thousand newly diagnosed women with CC are reported in the world, and they constitute 3.1% of all new cancer diagnoses. While 3.3% of cancer-related deaths in the world (2020) are due to CC, approximately 342 thousand women died from this cancer in 2020². According to 2016 data in Turkey, CC ranks ninth among cancers seen in women. It ranks fourth among the most common cancers in women aged 25-49³. When the incidence of cancer types by gender is examined, the incidence of CC has been reported as 4.3 per 100 thousand³.

Previous studies show that who are aged 40-49 years, live in developing countries (where screening and treatment are inadequate), and have Human immunodeficiency virus [HIV], infection are most affected by CC^{4,5}. The most important risk factor causing CC is Human papillomavirus [HPV]. There are more than 100 types of low-and high-risk HPV. Low-risk type HPV causes warts in the genital and anus areas in men and women and rarely turns into cancer while high-risk type HPV causes the development of abnormal cells that cause CC. Although the most effective carcinogens are HPV-16 and HPV-18, HPV-16 alone constitutes 60% of CCs⁶. The prevalence of HPV shows geographical differences in Turkey as well as all over the world. In a study conducted in

Turkey, the percentage of positivity for HPV-16 and 18 was found to be 25.4% in the screenings in Çorum province and 28.1% in Amasya province⁷. One study from Turkey, it was reported that 5 out of 10 women aged 30-65 had a pap-smear test at some time and that the rate of women aged 30-65 years who had at least one pap-smear test was 54.2%⁸. Women in low-and middle-income countries are highly vulnerable to CC. Approximately 90% of CC cases in these countries result in death⁹. In November 2020, the World Health Organization (WHO) launched its ambitious RC elimination initiative, which aims to reduce the incidence of RC to less than 4/100,000 women in all countries of the world by the end of the century, with 90% of girls vaccinated against HPV by age 15¹⁰. Vaccination and testing against the etiologic agent (HPV), as well as providing the best possible curative and palliative care to women diagnosed with invasive cancer, is a complementary priority of the WHO elimination initiative¹⁰. The World Health Organization (WHO) recommends population-based screening for breast, cervical, and colorectal cancers, which can be diagnosed earlier¹¹. Cervical cancer screening has been carried out in Turkey since 2014 within the scope of the "National Cancer Screening Standards Programme". For this screening, HPV or smear test standards have been established as free of charge services and every five years for women who are aged 30-65 years¹². Community-based screening programs are carried out free of charge in all primary health care institutions and organizations^{12,13}.

A short interruption in CC screening should not lead to a significant increase in CC incidence, since the screening program aims to detect precancerous lesions¹⁴. However, the COVID-19 pandemic has had significant impacts on cancer screening services worldwide¹⁴⁻¹⁸. Stay-at-home orders or recommendations were consistently implemented throughout the spring, summer, fall, and winter of 2020 in response to waves of COVID-19 infections and hospitalizations^{19,20}. As part of the COVID-19 pandemic prevention and control measures, physical distancing, reallocation of health resources, and implementation of new procedures to reduce the spread of the pandemic have resulted in urgent and significant changes in

screening programs¹⁷. It has been reported that the utilization of virtual care by many people, the decrease in the use of health services, and limited access to primary healthcare providers may have had an impact on the decrease in participation in cancer screenings^{14,18}.

Studies in the literature show similar results^{16,18,22}. Accordingly, it has been revealed that there is a decrease in the number of cancer screening services during the COVID-19 pandemic. In one of two different studies evaluating the impact of the pandemic on cancer screening programs in Ontario, a 41.3% decrease was reported in 2020 compared to 2019¹⁶, and in the other study, a 63.8% decrease in CC screening cytology tests in the first six months of the pandemic compared to 2019¹⁸. During the pandemic, the rate of in-person clinical visits has decreased by 44% on average, and 60-80% of tests or procedures have been delayed²². Ninety percent of healthcare institutions have stopped offering cervix cancer screenings²³. Different societies have made definite recommendations for the specific need for early diagnosis, diagnosis, and treatment (brachytherapy, etc.) of gynecological cancers during the COVID-19 crisis²⁴⁻²⁶. With the COVID-19 crisis, disruption of healthcare services related to systematic CC screening and delays in diagnosis of early-stage lesions may result in a higher incidence of locally advanced CC and increased healthcare inequalities worldwide^{24,27,28}. Studies have also reported that at the beginning of the COVID-19 pandemic, individuals often hesitated to seek medical care for fear of infection^{29,30}. In their study that focused on patients' attitudes towards hospital use since the onset of the COVID-19 pandemic, Wong *et al.* reported that the most comprehensive theme was "fear". In the study, it was reported that patients saw hospitals as infectious reservoirs, they said they had not been informed about risk reduction measures in hospitals, and that individuals' attitudes towards hospital use were affected by national news showing a large number of people applying to hospitals³⁰. If these disruptions to screening services have led to changes in public attitudes towards screening and decreased intention to participate, the risk of long-term adverse effects on cancer outcomes can be anticipated³¹. It is important to determine the attitudes of women

towards screening in the prevention of CC, which is an important women's and public health problem. Therefore, this study was conducted to examine the effect of adult women's fear of COVID-19 on their attitudes towards CC screening.

Methods

Design and sample

This descriptive cross-sectional study was carried out between May and December 2021 in Turkey. The population of the study consisted of women between the ages of 30 and 65 according to the criteria of the national standards for the CC screening program in Turkey³². According to the 2021 "Provincial/district and town/village population by age group and gender" report of the Turkish Statistical Institute [TUIK], the female population between the ages of 30 and 69 was over twenty million (20,567,504) which constitutes 23% proportion of the Turkish population³³. The sample size for the study was calculated using the formula: $n = z^2pq/d^2$ ³⁴. Where: n = desired sample size when population > 10,000, z = level of significance at 95% CI (=1.96), p = proportion of the study population who are aware of CC screening from similar previous study¹³ = 0.15 [11], $q = 1 - p = 0.85$ and d = degree of accuracy desired, usually set at 0.05. Sample size (n) = $z^2pq/d^2 = (1.96)^2 \times (0.15) \times (0.85) / (0.05)^2 = 196$. In the end, 334 women who agreed to participate in the study and completed all the necessary documents participated in the study. Women between the ages of 30-65 years, who could speak Turkish, use social media (Facebook, Instagram and WhatsApp) and fill out the questionnaire were included in the study. Data for the survey were collected through an online questionnaire created on Microsoft Forms licensed to the university where the research was conducted using a purposive and snowball sampling technique to reduce physical interactions of women within the scope of infection control measures during the pandemic process. The questionnaires, which took approximately seven minutes to answer, were sent to participants electronically (Facebook, Instagram and WhatsApp) via an online link. The researchers sent the

questionnaire to 10 women who met the inclusion criteria. The women were asked to complete the forms voluntarily and then, if they wished, to share the survey link electronically with other eligible women in their circle. Thus, more than the minimum number of women were reached through snowballing surveys. Participants first read the Informed Voluntary Consent Form before completing the questionnaires, and those who submitted consent were allowed to see the items on the questionnaire. Women could submit the questionnaire when they filled out all the questions.

The mean total Fear of COVID-19 Scale score is the dependent variable. Independent variables are postponing CC screening during the pandemic process, the reason for postponing CC screening during the pandemic process like; fear of going to the hospital, risk of contamination, having Coronavirus, unable to make an appointment, distance of healthy facility, avoiding public transportation, avoiding increasing the workload of healthcare workers, negative attitudes of healthcare professionals, restrictions due to the pandemic.

Data collection tools

A sociodemographic data form which developed by the researchers and the Fear of COVID-19 Scale which developed by Ahorsu *et al.* were used as data collection tools in the study.

The Sociodemographic data form

This form was developed by the researchers in line with the literature^{13,35}. It consists of 21 questions about demographic characteristics of women, such as age, marital status, education and income status, current employment status, family type, the status of having children, and the longest place of residence (8 questions), and characteristics about screening such as the history of CC in first degree relatives, having had CC screening before, postponing CC screenings due to the pandemic (3 questions) and reasons for it (9 questions). In addition, women were asked to evaluate the level of their knowledge about CC screening between 0 and 10 (1 question). Within the scope of the validity studies of the form, expert opinions were obtained from ten academicians who are experts in the fields of

health sciences. The experts rated the language and content appropriateness of the items in the form on a scale of 1-4 (4- Very appropriate, 3- Appropriate, 2- Needs little change, 1- Needs a lot of change). required) were asked to evaluate the items by giving a score³⁶. For each of the items in the form, the number of experts who marked options 3 and 4 was divided by the total number of experts and the Content Validity Index (CVI) was calculated^{36,37}. The content validity index was found to be 0.98. A pilot study was conducted with ten participants to evaluate the clarity, comprehensibility and operability of the questions. At the end of the pilot study, feedback was received from the participants that the form was understandable.

The Fear of COVID-19 Scale (FCV-19)

In this study, the scale developed by Ahorsu et al. (2020) and adapted to the Turkish language by Bakioğlu *et al.* was used^{38,39}. The FCV-19 is a 7-item, five-point Likert-type assessment tool with options "(1) Strongly Disagree," "(2) Disagree," "(3) Undecided," "(4) Agree," and "(5) Strongly Agree", which are scored from 1 to 5, respectively. It has only one dimension. There are no reverse scored items on the scale. The scores that can be obtained from the scale vary between 7 and 35. A high score on the scale means experiencing a high level of fear of coronavirus. Ahorsu *et al.* calculated the internal consistency coefficient of the FVC-19 as 0.82³⁸. The internal consistency coefficient of the scale adapted to the Turkish language was calculated as 0.88 by Bakioğlu *et al.*³⁹. Cronbach's alpha value of the scale in this study was found as 0.88.

Data analysis

The IBM SPSS Statistics 25.0 software package was used for data analysis. Socio-demographic and CC screening characteristics were analyzed by using descriptive statistics (numbers, percentages, mean and standard deviation (SD) values). The normality of variables was tested by using the Kolmogorov-Smirnov analysis. Parameters that were determined not to show normal distribution were compared by using the Mann-Whitney U test. The significance level was accepted as 0.05⁴⁰.

Ethical considerations

At the outset, the permission of the owner of the Fear of COVID-19 scale used in the research was obtained via e-mail. To conduct the study, ethics committee approval was obtained from the Non-Interventional Clinical Research Ethics Committee

of a İzmir Demokrasi University (decision date: 28/04/2021; No: 2021/05-07). Institutional permission was obtained from the Republic of Turkey Ministry of Health. The study was conducted in accordance with the principles of the Helsinki Declaration (revised in Brazil in 2013). Informed written consent of women was obtained before conducting the survey.

Results

The mean age of women was 41.68 ± 7.63 , and 76.9% of them were married. It was found that 88.1% had graduated tertiary school and that the income status of 55.1% was above the 12 dollar per day. Also, 65.3% were employed, 94% had a nuclear family, and 83.2% had children (Table 1). Table 1 presents information about participants' socio-demographic characteristics.

Table 1: Sociodemographic characteristics of women (n: 334)

Variables	n	%
Age (X±SD 41.68, ±7.63)		
30-39	144	43.1
40-49	135	40.4
≥50	55	16.5
Marital status		
Single	77	23.1
Married	257	76.9
Education		
Primary school	25	7.5
Secondary school	21	6.3
Tertiary school	294	88.1
Income		
Below the 12 dollars	18	5.4
Above the 12 dollars per day	184	55.1
12 dollars per day	37	11.1
Other	95	28.4
Employment status		
Employed	218	65.3
Unemployed	116	34.7
Family type		
Nuclear	314	94.0
Extended	20	6.0
Children		
Yes	278	83.2
No	56	16.8
The longest place of residence		
Province	292	87.4
District/village/other	42	12.6
Total	334	100.0

Abbreviations: *SD*, standard deviation

When the characteristics of women participating in the study regarding CC screening were examined, it was found that 6.3% of them had first-degree relatives with a history of CC, 18.9% had had their first screening because the recommendations of

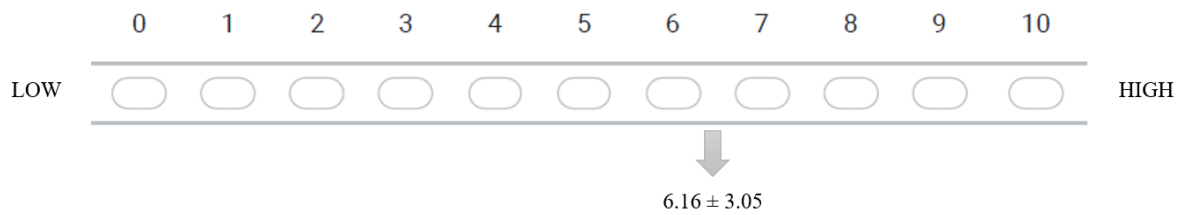


Figure 1: The level of women's knowledge about cervical cancer screening (n: 334)

Table 2: Characteristics of women regarding cervical cancer screening (n: 334)

Variables	n	%
History of cervical cancer (CC) in first-degree relatives		
Yes	21	6.3
No	313	93.7
Having had CC screening before		
Yes	215	64.4
No	119	35.6
First reason for screening		
Family history of cancer		
Yes	14	4.2
No	320	95.8
Being within the screening age limits		
Yes	133	39.8
No	201	60.2
Complaints experienced		
Yes	29	8.7
No	305	91.3
Recommendations of health personnel		
Yes	63	18.9
No	271	81.1
Recommendations/ hearing from the environment (media, family, friends, etc.)		
Yes	26	7.8
No	308	92.2
CC screening test before		
None	119	35.6
HPV DNA test	11	3.3
Pap-smear test	147	44.0
HPV DNA test + Pap-smear test	57	17.1
Total	334	100.0

health personnel, 64.4% had had a CC screening test before (Table 2). When the reasons for the first application for CC screening were analyzed, it was observed that 18.9% of women responded to the recommendation of health personnel and 39.8% responded to being within the age limit for screening. It was determined that the mean score of women for the level of knowledge about cervical cancer screening was 6.16 ± 3.05 (min:4,

max:9) (Figure 1). When the reasons for postponing CC screening were analyzed, 16.8% of women answered, "fear of going to hospital", 25.4% answered "risk of contamination, 18.3% answered pandemic-related restrictions (Table 3). When the characteristics of women regarding the CC screening and their scores on the Fear of COVID-19 Scale were examined, it was determined that the median score of the Fear of COVID-19 scale was 19.00 (Q25: 15.00, Q75: 23.00). 44% of women postponed their CC screening during the pandemic period. There was a statistically significant difference between women's scores on the Fear of COVID-19 Scale according to their postponement of CC screening during the pandemic ($U = -2.371, p = 0.018$). The median of women who postponed their CC screening was higher than that of women who did not (Table 3). There was a statistically significant difference between the fear of going to the hospital ($U = -3.123, p = 0.002$) and the risk of transmission ($U = -4.091, p = 0.000$), which women reported as reasons for postponing CC screening during the pandemic process, and their scores on the Fear of COVID-19 Scale. It was found that the median of women who were afraid of going to the hospital was higher than that of women who were not. Also, the median of women who thought there was a risk of transmission was higher than that of women who did not (Table 3).

Discussion

The danger of not diagnosing cancer early and not starting treatment is far greater than the danger posed by COVID-19¹. In this study examining how the fear of COVID-19 affects screening among adult women in Turkey, about half of the women stated that they postponed their screening during the pandemic period due to the

Table 3: The relationship between women's cervical cancer screening and their scores on the Fear of COVID-19 Scale

Variables	n	%	Median	U/p
Postponing CC screening during the pandemic process				
Yes	147	44.0	20.00	U:-2.371
No	187	56.0	18.00	p:0.018*
The reason for postponing CC screening during the pandemic process				
<i>Fear of going to the hospital</i>				
Yes	56	16.8	21.00	U:-3.123
No	278	83.2	18.50	p 0.002*
<i>Risk of contamination</i>				
Yes	85	25.4	21.00	U:-4.091
No	249	74.6	18.00	p:0.000*
<i>Having Coronavirus</i>				
Yes	7	2.1	16.00	U:-1.171
No	327	97.9	19.00	p: 0.242
<i>Unable to make an appointment</i>				
Yes	19	5.7	20.00	U:-0.344
No	315	94.3	19.00	p: 0.731
<i>Distance of health facility</i>				
Yes	3	0.9	24.00	U:-0.286
No	331	99.1	19.00	p: 0.775
<i>Avoiding public transportation</i>				
Yes	11	3.3	21.00	U:-1.725
No	323	96.7	19.00	p: 0.085
<i>Avoiding increasing the workload of healthcare workers</i>				
Yes	19	5.7	20.00	U:-1.176
No	315	94.3	19.00	p: 0.240
<i>Negative attitudes of healthcare professionals</i>				
Yes	4	1.2	23.50	U:-1.466
No	330	98.8	19.00	p: 0.143
<i>Restrictions due to the pandemic</i>				
Yes	61	18.3	19.00	U:-0.196
No	273	81.7	19.00	p:0.845
Median score of the Fear of COVID-19 Scale			19.00	

Abbreviations: CC, Cervical cancer; SD, standard deviation; U: Mann-Whitney U; **p* value of less than .05 was considered to show a statistically significant result.

fear of COVID-19. However, more than half of women reported that they had been screened for CC before the pandemic. Similarly, to these findings, one Turkish study reported that, 56.4% of participants stated that they have never taken pap smear test, 37.1% of them stated that the pandemic affects the frequency of taking pap smear test⁴¹. Surprisingly, more than half of women reported having had a pap smear test, while only 3 out of 100 women were tested for HPV DNA test in this study. Within the framework of the 'Global Cervical Cancer Elimination Action'¹⁰, the World Health Organization recommends that by 2030, each country should screen 70% of women aged 35-45 in its population with high-performance HPV tests. When we compare these findings with the

2030 targets¹⁰, it is very low and not at the desired level.

In this study, the level of women's knowledge about CC screening was moderate. One Turkish study reported that 89.3% of women did not know how often CC screening was needed, and that 15.3% had the test¹³. In this study, four out of ten women reported that they underwent CC test screening because they were within the screening age limit, while only one-fifth of the women reported that they underwent screening on the recommendation of health personnel. These findings clearly show that women need to be informed about CC screening and receive proper care from health personnel regarding referral. However, it has been reported in the literature that the knowledge of healthcare

professionals about national cancer screening programs is not sufficient⁴², while nurses' knowledge about HPV and cervical screening is insufficient⁴³. While COVID-19 is a threat to public health systems, it is an opportunity to reform health sectors for the improvement of people⁹. It is predicted that informing women through campaigns in cooperation to ensure their access to screening services in health institutions will be effective in increasing the demand for services. It is necessary to immediately begin or continue community-based HPV vaccination and CC screening test programs among women in low-and middle-income countries so that CC prevalence and mortality can be reduced⁹. In this study, nearly half of women stated that they postponed CC screening during the pandemic period. While our findings are similar to the literature⁴², studies report that many cancer screenings have been postponed or canceled during the COVID-19 pandemic^{24,27,28,44}. In a study conducted in England, a 25.7% decrease was reported in the absolute count of CC diagnoses according to 2020 data, and as a result, an increase in CC cases was predicted within 3 years⁴⁵. While an 83% decrease was reported in the count of Pap tests in Canada in April 2020¹⁷, similarly, a 44% decrease was reported in Brazil between January 2019 and January 2020⁴⁶. A study conducted in Slovenia indicated that there were decreases in CC screenings (92%), follow-up (70%), and HPV triage tests (68%) as a result of two-month restrictions between March 12 and May 8, 2020⁴⁷. During lockdowns in California, a decrease of approximately 80% from baseline was observed in CC screening rates in the Kaiser Permanente Southern California network of 1.5 million women⁴⁸. More advanced cancer diagnoses and deaths are expected in the coming years as a result of the interruption or suspension of healthcare services due to the COVID-19 crisis^{24,27,28}.

According to a study conducted by the WHO, discontinuation of population-level screening programs across noncommunicable diseases was among the top five most frequent disruptions⁴⁹. The study indicated that there was a significant reduction in overall cancer diagnoses compared to the pre-pandemic period in the Netherlands, Austria, Poland, the United Kingdom, and the United States^{27,50}. In this study,

women stated the risk of transmission of COVID-19, general restrictions due to the pandemic, and fear of going to the hospital as reasons for postponing CC screening, respectively. Our study findings are similar to the literature⁵⁰⁻⁵². Restrictions (e.g., social distancing, quarantine, and suspension of non-essential clinical services) to reduce the spread of SARS-CoV-2 have led to a decrease in the total count of cancers diagnosed, along with increasing cancer diagnosis rates⁵⁰. The main reasons for reported disruptions included health workforce disruptions (e.g. inadequate number of staff due to COVID-19), fear of contamination, and public distrust⁵¹. In one study, 25% of patients reported that they stayed at home "so as not to disturb" their physicians because they thought primary care centers were overflowing with COVID patients⁵². Although cancer services have largely resumed with the change in the COVID-19 wave, increasing clinical hygiene protocols and physical distancing requirements limit the number of face-to-face visits that can be offered each day⁵³.

Studies report that individuals were often hesitant to seek medical care in the early days of the pandemic for fear of COVID-19 infection^{17,30}. While the impact of patient fears on CC screening has not been documented well, data on other elective services have shown that approximately half of the patients may choose to delay care^{17,54}. Parallel to the literature^{17,30} nearly a quarter of women in this study hesitated to go to the hospital due to fear of COVID-19. In one Turkish study reported that 74.1% of them stated that the pandemic affects the frequency of it because of being afraid of going to the health center for worry of getting an infection⁵⁵. Similar to the literature^{17,54}, in our study, nearly half of the women postponed CC screening, while women with high fear of coronavirus stated that they postponed their CC screening tests. It was also observed that the fear of COVID-19 was higher in participants who were afraid of going to the hospital and postponed the screening test due to the risk of transmission. Similar to our findings, national data in Italy showed that, in addition to quarantine, the significant decrease in the number of screening tests, suspension of screenings, and reduced adherence to screenings were also associated with fear of COVID-19⁵⁶. In a survey

conducted in Spain, 10% of respondents reported that they postponed their examinations or tests for fear of contamination, while 44% of them stated that their health had deteriorated⁵⁷. Whether women miss a screening during the quarantine procedure and/or for fear of contracting COVID-19 should be investigated⁵⁸.

Limitations

This study has some limitations. Since the study data were collected by using an online questionnaire, response errors associated with internet technology. In this study the health records could not be reached, analysis was done according to participants statements on survey form. The data obtained from the research are limited to the statements on the scales used in the research and self-reports of women. Since the results of the study are limited to the sample group, they cannot be generalized to the whole population.

Conclusion

In this study, more than half of the women had previously undergone CC screening, but nearly half of the women postponed their CC tests due to fear of COVID-19 during the pandemic period. The level of women's knowledge of CC screenings was moderate, and their fear of COVID-19 was similarly close to moderate. It was determined that women with a high fear of COVID-19 postponed their CC screening tests. "Fear of going to the hospital" and "risk of transmission" were among reasons for delaying CC screening tests in women with a higher fear of COVID-19.

This study suggests that dissemination of HPV-self sampling may be an effective saving strategy to increase the count of women screened by compensating for missed CC screenings during the pandemic²⁸. Self-sampling may increase participation in screening in women who have missed their appointments for fear of going to healthcare institutions or exposure to COVID-19²⁷. Nurses can contact women who are eligible for screening, invite them for CC screening and remind them about the screening, and can inform them about the measures to be taken to reduce the risk of transmission and the prevention and protection measures applied in institutions when

they call them back for screening. This can help reduce their fears of COVID-19 and increase participation in screening programs. In addition, screening services can be provided in places close to women who do not want to come to screening centers due to the risk of contamination and residing in remote areas where access is difficult.

In order for women to benefit from CC screening services offered free of charge to the society, it is thought that public health nurses' organizing health trainings and social awareness activities about early diagnosis and screening, as well as taking an active role in the referral chain will be important practices to increase CC screening.

Acknowledgment

I would like to thank all the women who participated in this study for their voluntary participation, without which this study would not have been possible.

Funding

The study has no funding to report.

Conflict of interest

The author declared no conflicts of interest.

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