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# The effect of the music-supported education program on the awareness and health beliefs of Roma women about cervical cancer and screening

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## Abstract

**Background** Roma women, who have low education, are one of the risk groups for cervical cancer as it has proven that they marry and give birth at an early age and have limited access to preventive health services.

**Aim** This study aims to reveal the effect of a music-supported education program based on the Health Belief Model on the awareness and health beliefs of Roma women about cervical cancer and screening.

**Methods** This study was conducted between June 2021- January 2022 with 40 Roma women in the experimental group and 40 in the control group. Data were collected using the Personal Information Form and the Health Belief Model Scale for Cervical Cancer and Pap Smear Test. The experimental group received a four-week training and a two-week music-supported training.

**Results** It was revealed that 27.5% of the Roma women in the experimental group had the pap smear test after the intervention, and there was a significant difference in the mean scores of the awareness of cervical cancer and screening and the factors of the Health Belief Model Scale for Cervical Cancer and Pap Smear Test compared to the pre-intervention. It was found that the intervention had a significant effect at the level of 77.9% in reducing the perceived barriers to the pap smear test ($p < 0.001$).

**Conclusion** It was found that the music-supported education program based on the Health Belief Model positively affected the awareness and health beliefs of Roma women about cervical cancer and screening.

**Trial registration** The study was registered with the U.S.National of Medicine Clinical Trials Registry (NCT04756440 -15.08.2020).

**Keywords** Cervical cancer, Music-supported education, Nursing, Pap smear, Planned education program, Gypsy woman health belief model

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## Background

Cervical cancer is a global health problem [1]. While it ranks fourth among causes of death in women in the world [2], it ranks ninth in Turkiye [3]. It is known that this type of cancer is mostly (99.7%) caused by Papilloma Virus (HPV) [4]. The World Health Organization (WHO) states that all adult women should be screened for cervical cancer all over the world. In many developed countries, the annual incidence and prevalence of cervical cancer has decreased by 50–70% after the initiation of population-based screening [5] and cervical cancer screening rates are over 60% [6]. However, in underdeveloped and developing countries, screening rates are below 20% [7]. It is reported that only 20% of the target female population in Turkiye can be screened within the scope of the screening program [8]. It is known that factors such as regional inequalities, education level, and income level affect participation in cancer screening activities, and it is necessary to identify the social, cultural, societal, and structural barriers to cancer screening [9]. The determination of these barriers may be a guide for encouraging people to have screenings and for identifying the disadvantaged groups in the society [10].

Roma people, who are known to live scattered in almost every part of the world and Turkiye, are the most marginalised and discriminated ethnic group [11]. Their vulnerability to poorer health outcomes compared to other disadvantaged groups is associated with poor living conditions, high rates of homelessness, low educational achievement, social exclusion and widespread prejudice and discrimination. Complex factors such as stigmatisation and lack of understanding by staff are known to trigger this situation [12]. Epidemiological studies on health status show that Roma have poorer health and a higher risk of premature death than comparison groups matched by socioeconomic status [13, 14].

Roma women, who are known to have low education levels, marry (i.e. girls mostly after the age of 13 and boys after the age 15) [15, 16]. and give birth at an early age, and have limited access to health services and preventive health services are one of the risky groups for cervical cancer with these characteristics [17]. One study conducted with Roma and non-Roma women revealed that non-Roma women had a higher level of knowledge about uterine cancer than Roma women, and the difference between these two groups was statistically significant [18]. It is stated that screening programs are not sufficient in reducing the burden of cervical cancer by themselves [19] and it is necessary to examine the emotional, cognitive, and environmental factors affecting the decision to have screening. Moreover, it is stated that the Health Belief Model can be used for this purpose [20].

The Health Belief Model suggests that relevant health behavior will emerge if individuals perceive the illness as a vulnerability, believe in the severity of the illness, are aware of the benefits and barriers of screening, and have positive motivators for screening. On the other hand, it is stated that health education is an important tool in equipping individuals with knowledge and skills to solve health problems and ensuring effective use of health services; [21] however, education alone is not sufficient to develop health behaviors, including screening behaviors, and more than one action strategy should be used together [22]. It is argued that public health messages can be communicated effectively through art [23].

Music can provide a non-verbal way for self-expression and communication, or it can bridge the nonverbal and verbal channels of communication. When both nonverbal and verbal channels are used, music serves to strengthen or facilitate verbal communication [24]. With the use of musical instruments, non-musical purposes (supporting emotional, spiritual, physical health, etc.) can be served [24] and it is stated that songs as musical instruments may have advantages in conveying public health messages [25, 26] Songs can attract the attention of individuals, who are illiterate or have a low level of education, and may give the opportunity to remember the messages due to repetition [27] It is stated that people can be easily persuaded to adopt the desired health behavior when listening to culturally relevant songs, which are thought to be a relatively inexpensive way to spread public health messages to many people in a short time [25] Music plays an important role in the lives of gypsies. It is known that gypsies tend to participate in musical activities more regularly [28]. This suggests that music can be used as a tool to enable Roma women to participate in early diagnosis of cancer and screening activities.

This study aimed to present an innovative approach in ensuring the participation of Roma women in cervical cancer screening. For this purpose, a music-supported education program was developed and implemented in order to influence the health beliefs of Roma women.

## Methods

### Design

This study was conducted between June 2021- January 2022 in accordance with the single-blind randomized controlled pretest-posttest experimental research model. The study was reported using the Consolidated Standards of Reporting Trials (CONSORT) stages and the TIDieR report.

### Participants

The target population of the study consisted of Roma women between the ages of 30–65 who are registered to Yavuz Selim Family Health Center in Canik district of Samsun, where the majority of Roma citizens reside. With national population-based cervical cancer

screenings in Turkiye, women in the 30–65 age group who do not show any signs of disease are screened with pap-smear and HPV-DNA testing every five years, free of charge [29]. The inclusion criteria were being married or having had or having a partner, being literate, having received no training on cervical cancer, not having been screened for cervical cancer before, not being pregnant or in the postpartum trimester, and having no communication barriers. Having had a problem with the cervix before and having had a hysterectomy operation before were the exclusion criteria. Not participating in the sessions of the music-supported education program once or more than once was also determined as the criteria for exclusion from the study.

### Sample size

An analysis was performed in G*Power 3.1 program to determine the sample size of the study. Those with a perceived barriers to pap smear mean score of 27.59 ± 10.83 in the Health Belief Model Scale for Cervical Cancer and Pap Smear Test were assigned to the experimental group, while those with a mean score 20.74 ± 7.04 were assigned to the control group [30]. According to these values, the sample size was determined as 58 at 95% confidence interval, 5% error margin, and with an effect size of 0.97 and 95% power to represent the target population. Considering a possible data loss, the sample size was determined as 80. A pool of participants was created with the Roma women who applied to Yavuz Selim Family Health Center and who met the sample selection criteria. Randomization was performed using the website https://www.randomizer.org.

Blinding was achieved by randomly assigning Roma women to groups and by ensuring that they did not know which group they belonged to. In addition, the coded data were shared with the statistician as Data Set 1 and Data Set 2, and the statistician who performed the analysis was not told which data belonged to which group. In this way, statistician blinding was also ensured.

### Data collection

Data were collected using the Personal Information Form and the Health Belief Model Scale for Cervical Cancer and Pap Smear Test.

**Health belief model scale for cervical cancer and pap smear test** The scale was developed by Champion to assess Health Belief Model structures related to breast cancer and screening behavior. It was adapted for cervical cancer and screening by Güvenç et al. in 2010 and its validity and reliability studies were conducted. The Health Belief Model Scale for Cervical Cancer and Pap Smear Test consists of 35 items under 5 factors: susceptibility, seriousness, perceived benefits and motivation, health motivation, and Pap smear barriers [31].

### Data collection process

**Pre-tests/post-test** The data collection forms were administered to the participants who agreed to participate in the study, in a training room in Yavuz Selim Family Health Center before the education program was implemented. Data collection took approximately 15–20 min. After the completion of the training program, the post-test was administered to the experimental and control groups 3 months later.

The Music-Supported Education Program was given in a training center. The education program which was developed based on the Health Belief Model and factors to increase the awareness and health beliefs of Roma women about cervical cancer and screening was presented to three Public Health Nursing academicians, one Obstetrics and Gynecology Nursing academician, and one Obstetrician. The experts were asked to evaluate the training program according to the Lawshe Content Validity Form, and upon the approval of the experts, the program was administered to the participants. The content validity index of the education program was determined as 0.99, and the content validity ratio was determined as 1. A female pelvis model was used in the training sessions. The education program continued for 4 weeks in sessions of 45–60 min with power point presentations. The trainings were given face to face individually by the same researcher on the day and time when the participant was convenient.

After the completion of the education program, the participants learned a song created by the researchers to reinforce the messages of the training. The researcher has a music therapy certificate and worked with Roma musicians to create the music. The lyrics took into account the Health Belief Model including cervical cancer and risk factors and were presented for the expert's opinion. Upon the expert's approval, the music was added to the lyrics, having been composed by a Roma musician and his team using a 9 – 8 rhythm,. This is a characteristic rhythm of Roma music also called Roma rhythm [32]. The created composition was performed. The lyrics were used both to create an enjoyable learning environment and to convey the desired messages through music.

The music-supported training was implemented in two sessions. In the sessions the participants listened to the 5.13 min-song. The participants in the experimental group listened to the song in each session and they were asked to give feedback after the sessions. Each session lasted for approximately 20 min. Considering the social distance rules, the classroom layout was designed in such a way that interaction was minimal. In addition, since the study was conducted during the global pandemic,

personal protectors were mandatory for the participants during the entire study. The music composed was sent to the participants in both the experimental and control groups via WhatsApp at the end of the study. The participants who listened to the song expressed their feelings about the song by saying, "This song is all about our lives". No intervention was made in the control group during the research process. After the study was completed, the interventions performed in the experimental group were also performed in the control group.

### Data analysis

IBM SPSS V23 package program was used to analyze the data. Descriptive statistics, paired t test, Wilcoxon test, Chi-square test, Mann-Whitney U test, independent t test, two-factor ANOVA and Pillai's Trace Test were performed to analyze the data.

### Ethical considerations

Ethics Committee approval was obtained from Ondokuz Mayıs University, Faculty of Medicine Ethics Committee prior to the study (B.30.2.ODM.0.20.08/725). In addition, necessary legal permissions were obtained from Samsun Public Health Directorate. The participants were ensured that their personal information would be kept confidential, and their verbal and written consent for voluntary participation was obtained. The study was registered in the Clinical Trials Registry (no: NCT04756440), and it was conducted in accordance with the Declaration of Helsinki.

## Results

### Descriptive results

The participants in the experimental and control groups were found to have similar characteristics ($p > 0.05$) (Table 1).

The mean age of first sexual intercourse of the participants in the experimental group was 15.5 ± 2.2 (min:1-max:22); 35.0% had four or more births; 87.5% did not have cervical cancer in their family; 62.5% had gynecological problems, and 52.0% of those who experienced gynecological problems also had infection problems. The mean age of the first sexual intercourse of the participants in the control group was 16.0 ± 1.9 years; 32.5% gave birth to four or more children; 80.0% did not have cervical cancer in their families; 55.0% had gynecological problems; 50.0% of those who experienced gynecological problems also had infection problems; and 50.0% had abortions or operations. When the obstetrical characteristics of the participants in the experimental and control groups and their family history of cervical cancer were examined, no statistically significant difference was found between the groups ($p > 0.05$).

When the awareness levels of the participants in the experimental and control groups about cervical cancer and screening before the intervention was examined, no statistically significant difference was found between the groups ($p > 0.05$) (Table 2).

After the intervention, a statistically significant difference was found between the groups in terms of having heard of cervical cancer before, knowing about the Pap smear test, believing the necessity of pap smear test in

**Table 1** Comparison of the socio-demographic characteristics of the participants in the experimental and control groups ($n = 80$)

| | Intervention Group | Control Groups | Statistics | *P* |
|---|---|---|---|---|
| | $M$±sd (min-max) | $M$±sd (min-max) | | |
| | *n* (%) | *n*(%) | | |
| **Age** | 40.6 ± 8.6 (30–59) | 41.2 ± 8.2 (30–61) | 753.0* | 0.651 |
| **Marital status** | | | | |
| Married | 40 (100) | 38 (95.0) | | |
| Single | - | 2 (5.0) | | |
| **Education** | | | | |
| Literate | 17 (42.5) | 14 (35.0) | 2.690** | 0.442 |
| Elementary | 17 (42.5) | 23 (57.5) | | |
| Secondary school | 6 (15) | 3 (7.5) | | |
| **Health Insurance** | | | | |
| There is | 37 (92.5) | 36 (90.0) | 1.000** | 0.692 |
| There is not | 3 (7.5) | 4 (10.0) | | |
| **Working Status** | | | | |
| Working | 14 (3.0) | 21 (52.5) | 0.176** | 0.115 |
| Not Working | 26 (65.0) | 19 (47.5) | | |
| **Income status** | | | | |
| Income is lower than expense | 30 (75.0) | 26 (65.0) | 0.536** | 0.464 |
| Income is equal to expense | 10 (25.0) | 14 (35.0) | | |

*Mann Whitney U test istatistiği, **Ki-kare test istatistiği, Fisher Exact

**Table 2** Comparison of the awareness levels of the participants in both groups about cervical cancer and screening before and after the intervention

| Features | Pre-intervention | | | Post-intervention | | |
|---|---|---|---|---|---|---|
| | Intervention Group | Control Groups | Statistics *p* | Intervention Group | Control Groups | Statistics *p* |
| **Having Heard of Cervical Cancer** | | | | | | |
| Heard | 13 (32.5) | 10 (25.0) | 0.244* | 40 (100) | 13 (32.5) | 37.792* |
| Not Heard | 27 (67.5) | 30 (75.0) | 0.621 | 0 (0) | 27 (67.5) | **0.000** |
| **Knowing About the Pap Smear Test** | | | | | | |
| Yes | 7 (17.5) | 4 (10.0) | 0.422* | 40 (100) | 4 (10) | 61.869* |
| No | 33 (82.5) | 36 (90.0) | 0.516 | 0 (0) | 36 (90) | **0.000** |
| **Beliefs Regarding the Necessity Of Pap Smear Test In Early Diagnosis Of Cervical Cancer** | | | | | | |
| Believing | 8 (20.0) | 6 (15.0) | 0.087* | 37 (92.5) | 4 (10) | 51.232* |
| Unbelieving | 32 (80.0) | 34 (85.0) | 0.769 | 3 (7.5) | 36 (90) | **0.000** |
| **Knowing Where the Pap Smear Test Is Performed** | | | | | | |
| Yes | 8 (20.0) | 10 (25.0) | 0.072* | 40 (100) | 10 (25) | 44.853* |
| No | 32 (80.0) | 30 (75.0) | 0.789 | 0 (0) | 30 (75) | **0.000** |
| **Status of having had pap smear test** | | | | | | |
| Yes | 0(0) | 0(0) | | 11 (27.5) | 0(0) | 10.540* |
| No | 40(100) | 40(100) | | 29 (72.5) | 40(100) | **0.000** |
| **Willingness To Have Cervical Cancer Screening** | | | | | | |
| Yes | 6 (15.0) | 5 (12.5) | 0.000 | 30 (75) | 7 (17,5) | 24.337* |
| No | 34 (85.0) | 35 (87.5) | 1.000 | 10 (25) | 33 (82,5) | **0.000** |

*Ki-kare test istatistiği, Continuity Correction

**Table 3** The Health Belief Model Scale for Cervical Cancer and Pap Smear Test factor mean scores of the participants in the experimental and control groups before and after intervention ($n=80$)

| Features | Pre-intervention | | | Post-intervention | | |
|---|---|---|---|---|---|---|
| | Intervention | Control | Statistics | Intervention | Control | Statistics |
| | $M$±sd | $M$±sd | *p* | $M$±sd | $M$±sd | *p* |
| **Cervical Cancer Susceptibility Perception** | 8.75 ± 2.40 | 8.27 ± 3.24 | 724.0* 0.436 | 10.32 ± 1.52 | 8.62 ± 3.13 | 444.5* **0.000** |
| **Cervical Cancer Seriousness** | 28.30 ± 5.37 | 28.65 ± 5.66 | 731.5* 0.508 | 32.45 ± 3.13 | 28.92 ± 5.70 | 432.5* **0.000** |
| **Pap Smear Benefit And Motivation Perception** | 25.92 ± 3.70 | 29.27 ± 4.14 | 460.5* **0.001** | 31.75 ± 2.54 | 29.35 ± 3.92 | 529.5* **0.009** |
| **Perceived barriers to Pap smear** | 43.67 ± 6.56 | 42.72 ± 6.69 | 0.641** 0.524 | 29.75 ± 4.69 | 43.15 ± 6.48 | **-10.584**** **0.000** |

*Mann Whitney U test istatistiği, **Independent t testi

early diagnosis of cervical cancer, knowing where the pap smear test is performed, having had pap smear test before, and willingness to have cervical cancer screening ($p<0.001$) (Table 2).

The perceived Pap smear benefit and motivation mean scores and the health motivation mean scores of the participants in the experimental and control groups were statistically significant compared to their pre-intervention scores ($p<0.05$) (Table 3).

The post-intervention tests revealed that the participants in the experimental and control groups had statistically higher perceived cervical cancer susceptibility, cervical cancer seriousness, and pap smear benefit and motivation mean scores ($p<0.001$) (Table 3).

It was found that post-intervention pap smear barriers mean score of the participants decreased compared to pre-intervention. For a further evaluation, the change in the pap smear barriers mean scores of the participants in the experimental and control groups was compared.

The change was tested with a two-factor ANOVA analysis and the results are given in Table 4.

A significant difference was found between the experimental group and the control group in terms of the change between pre- and post-intervention barriers to pap smear test mean scores, and the difference was due to the experimental group [$F(1,78)=274.904$; $p<0.001$]. This difference was caused by the joint effect of the participation in the music supported education program and the measurement factors. It was found that the music-supported education program had a significant effect (77.9%) in terms of reducing barriers to pap smear test scores of the participants ($\eta^2=0.779$; $p<0.001$) [33, 34].

**Table 4** Relationship between the Experimental Group and the Control Group Regarding the Pap Smear barriers Mean scores

| | Measurements | M ± Sd | Significant difference | Test statistics (Group*Measurement) | | | |
|---|---|---|---|---|---|---|---|
| | | | | F | η2 | p | |
| Intervention Group | Pre-intervention- Perceived barriers to Pap smear | 43.67 ± 6.56 | Post-intervention < Pre-intervention | 274.904* | 0.779 | < 0.001 | |
| | Post-intervention-Perceived barriers to Pap smear | 29.75 ± 4.69 | | | | | |
| Control Group | Pre-intervention- Perceived barriers to Pap smear | 42.72 ± 6.69 | ---- | | | | |
| | Post-intervention-Perceived barriers to Pap smear | 43.15 ± 6.48 | | | | | |

**Pillai's Trace Test; η2* = Eta square (Effect Size); *M* = mean; *Sd* = standard deviation

## Discussion

After the intervention, 92.5% of the participants in the experimental group and 10% of the participants in the control group started to believe in the necessity of pap smear test in the early diagnosis of cervical cancer ($p < 0.001$). In Aldohaian et al.'s study, 82% of the participants reported that having a pap smear test may help reveal changes in the cervix before cancer develops [20]. The belief in the benefit of preventive health behavior is an important factor to improve health. It is thought that, thanks to the education program, the participants gained information about cervical cancer and pap smear test, thus increasing their belief in the necessity of pap smear test in early diagnosis of cervical cancer.

Post study, 75% of the participants in the experimental group and 17.5% of the participants in the control group wanted to have cervical cancer screening, and there was a statistically significant difference between the groups in terms of willingness to be screened for cervical cancer ($p < 0.001$).This is linked with a study in Nigeria Where, Gana et al. (2016) found that, as a result of the training program, women learned about cervical cancer and screening, and more than three-quarters of the participants were willing to have a screening test [35].

It was found that 27.5% of the participants in the experimental group had cervical cancer screening after the intervention, and there were no women in the control group who had cervical cancer screening. Many studies revealed that the rate of having pap smear test increased after the training given to women [36, 37, 38]. Agide et al. (2018) reported in their systematic review that health education interventions contributed greatly to participation in cervical cancer screenings. However, this differed according to the place where the screening was carried out and the population in which the study was conducted. The findings of this study showed that the rate of having screening increased in the experimental group after the intervention [39]. However, this increase in screening rate was limited. At the time of the study, Turkiye was struggling with the highly contagious global COVID-19 pandemic. The limited increase in the rate of having the pap smear test among the participants in the experimental group may be attributed to the risk of contracting the virus.

It was further revealed that the mean perceived cervical cancer susceptibility score of the participants in the experimental group increased after the intervention compared to the pre-intervention ($p < 0.001$). In many studies, it was stated that the perceived susceptibility of women increased as a result of the education given based on the Health Belief Model [21, 37, 40, 41]. Riza et al. (2020) conducted a study with vulnerable groups, including Roma women, and found that the participants are lack of knowledge about cervical cancer and there

was a need for health education and intervention activities according to the characteristics and needs of each group [42]. There are descriptive studies investigating the attitudes and behaviors of Roma women about cervical cancer and screening [18, 43, 44]. However, there are no studies on how the education given or any intervention implemented affected their awareness and health beliefs about cervical cancer and screening. Findings from this study are consistent with those of the studies conducted with the general population. It is thought that the education program developed in this study with a sensitivity to the culture of Roma women may have increased their perception of susceptibility by making Roma women aware of the risks of developing cervical cancer.

It was found that after the intervention, the mean perceived barriers to pap smear test score of the participants in the experimental group decreased compared to the pre-intervention score ($p<0.001$). It was also revealed that the music-supported education program had a significant effect (77.9%) in terms of reducing the perceived barriers mean score of the participants. Many intervention studies based on the Health Belief Model revealed that after the intervention, the barriers perceived by the participants in the experimental group decrease significantly [21, 36, 40, 37, 41]. The decrease in the perceived barriers mean score indicates an increase in motivation to have a screening test [41]. However, another study in Gambia where the Community Health Intervention with Musical Participation was implemented to reduce the symptoms of common mental disorders in pregnant women, revealed that the intervention was acceptable and applicable [45]. The approach to measuring the health impact of interventions or interventions emerging from existing traditional cultural practices is also in line with recommendations to move towards strengths-based assessment of a community's resources [46].

This study was conducted during the COVID-19 pandemic. It is reported that 45% of the individuals with cancer symptoms in the United Kingdom did not apply to a hospital due to the fear of contracting the virus during the pandemic, and 350,000 fewer cancer cases were detected in 2020 compared to the previous year [47]. Another study conducted in the North East United States found that there was a 60-82% decrease in cancer screening tests in 2020 compared to 2019 during the pandemic [48].

### Study limitations

During the pandemic, COVID-19 cases were widespread in the province of Samsun. Since the screening teams at the Cancer Early Diagnosis Screening and Training Center were included in the filiation teams, the screenings had to be stopped. For this reason, screenings could only be performed for a limited period of time. However, despite the significant decrease in perceived barriers, in our study, only 27.5% of the participants in the experimental group had a pap smear test, which is thought to be caused by the risk of contracting the virus. Another limitation is that the study was conducted in a single center where Gypsies were densely registered in the province where the research was conducted.

## Conclusion

The music-based education program had a positive effect on the perceived susceptibility to cervical cancer, cervical cancer seriousness, pap smear benefits and motivation factor scores of the participants in the experimental group compared to the participants in the control group. The Program led to an increase in the awareness of the participants about cervical cancer and screening, and to a decrease in their perceived barriers to the pap smear test. This program can be said that culture-sensitive early diagnosis studies are more acceptable and applicable. Music is an important communication tool in various societies such as the Roma population. For this reason, it can be recommended to plan music-supported interventions in the early diagnosis of cancer.

Based on the results of the research, it can be stated that the music-supported education program, which is sensitive to the culture of the Roma population, is effective in raising awareness of women against cervical cancer and screening and increasing their health beliefs. This program can be administered to all Roma women in different populations.

In addition, it can be said that culture-sensitive early diagnosis studies are more acceptable and applicable. Music is an important communication tool in various societies such as the Roma population. For this reason, it can be recommended to plan music-supported interventions in the early diagnosis of cancer.

In this study, a song was composed for Roma women based on the Health Belief Model and containing the barriers to early diagnosis of cervical cancer. This song can be used free of charge as an educational tool by all researchers and health educators working with this group of people. In addition, this song can be used by adding different language options in the training sessions for Roma groups living in different parts of the world for the early diagnosis of cervical cancer.

Even if the screenings are free, it is important to conduct awareness studies on the subject. For this reason, training programs or health awareness initiatives that put the culture of all groups into consideration, especially disadvantaged groups, can be conducted by public health nurses, oncology nurses and all health professionals involved in the early diagnosis of cancer.

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**Author contributions**
Study conception and design: "İAA., MA" Data collection:"MA" Data analysis and interpretation: "MA., İAA" Drafting of the article: "MA.,İAA".

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**Data availability**
"The dataset used and/or analyzed during the current study are available from the corresponding author on reasonable request."

## Declarations

**Ethics approval and consent to participate**
Ethics Committee approval was obtained from Ondokuz. Mayıs University, Faculty of Medicine Ethics Committee prior to the study (B.30.2.ODM.0.20.08/725). Informed consent was obtained from all the participants.

**Consent for publication**
Not applicable.

**Competing interests**
The authors declare no competing interests.

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