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Evaluation of Factors Affecting Prevention Behaviors According to Breast Cancer Risk Levels

Meme Kanseri Risk Düzeylerine Göre Önleme Davranışlarını Etkileyen Faktörlerin Değerlendirilmesi

Zeliha TURAN [1] **Kübra AKCAN** [2] **Feray BUCAK** [1]

[1] *Lect., Harran University, Faculty of Health Sciences, Department of Nursing – Şanlıurfa/Türkiye*

[2] *Lecturer Dr., Şırnak University, Health Services Vocational School, Department of Medical Services and Techniques – Şırnak/Türkiye.*

Sorumlu yazar / Corresponding author

Zeliha TURAN

zeliha028444@gmail.com

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ABSTRACT

Aim: *This study aimed to evaluate the factors affecting women's prevention behaviors according to their breast cancer risk levels and to examine whether prevention behaviors differ by risk level.*

Material and Method: *This cross-sectional study was conducted at a state hospital between November 2024 and April 2025. A total of 344 women aged 25-69 years were included in the study. Data were collected using a Personal Information Form, the Scale to Determine Factors Affecting Women's Breast Cancer Prevention Behaviors, and the Breast Cancer Risk Assessment Form. Data were analyzed using the Mann-Whitney U test, Kruskal Wallis test, and Dunn–Bonferroni post-hoc tests.*

Results: *The total mean score of the scale factors affecting participants' breast cancer prevention behaviors was 99.67 ± 17.99, and the mean breast cancer risk level was 128.11 ± 79.10. Most participants (93%) were in the low-risk group for breast cancer. Level of education, place of residence, receiving breast self-examination training, knowing the frequency of mammography/breast ultrasound, and having mammography/breast ultrasound had a significant effect on the total score of the scale for determining the factors affecting breast cancer prevention behaviors ($p<0.001$; $p<0.05$). However, no significant difference was found in prevention behaviors according to breast cancer risk level ($p>0.05$).*

Conclusion: *No significant relationship was found between women's breast cancer risk levels and factors affecting prevention behaviors. Socio-demographic characteristics appear to play a more important role in shaping prevention behaviors. These results emphasize the importance of education and awareness-based prevention strategies led by healthcare professionals.*

Keywords: *Breast cance, Prevention behaviors, Risk level*

ÖZET

Amaç: *Bu çalışmada, kadınların meme kanseri risk düzeylerine göre önleme davranışlarını etkileyen faktörlerin değerlendirilmesi ve önleme davranışlarının risk düzeyine göre farklılık gösterip göstermediğini incelemek amaçlanmıştır.*

Gereç ve Yöntem: *Bu kesitsel çalışma, Kasım 2024 ile Nisan 2025 tarihleri arasında bir devlet hastanesi'nde gerçekleştirilmiştir. Çalışmaya 25-69 yaş arası toplam 344 kadın dahil edilmiştir. Veriler, Kişisel Bilgi Formu, Kadınların Meme Kanseri Önleme Davranışlarını Etkileyen Faktörleri Belirleme Ölçeği ve Meme Kanseri Risk Değerlendirme Formu kullanılarak toplanmıştır. Veriler, Mann Whitney U testi, Kruskal Wallis testi ve Dunn–Bonferroni post-hoc testleri kullanılarak analiz edilmiştir.*

Bulgular: *Katılımcıların meme kanseri önleme davranışlarını etkileyen faktörleri belirleme ölçeği toplam puan ortalaması 99.67 ± 17.99, meme kanseri risk düzeyi ortalaması ise 128.11 ± 79.10 olarak bulunmuştur. Katılımcıların büyük çoğunluğu (%93) meme kanseri açısından düşük risk grubunda yer almıştır. Eğitim düzeyi, yaşanılan yer, kendi kendine meme muayenesi eğitimi alma, mamografi/meme USG sıklığını bilme ve mamografi/meme USG yaptırmanın meme kanseri önleme davranışlarını etkileyen faktörleri belirleme ölçeği toplam puanı üzerinde anlamlı etkisinin olduğu belirlenmiştir ($p<0.001$; $p<0.05$). Ancak, meme kanseri risk düzeyine göre önleme davranışlarında anlamlı bir farklılık olmadığı bulunmuştur ($p>0.05$).*

Sonuç: *Kadınların meme kanseri risk düzeyleri ile önleme davranışlarını etkileyen faktörler arasında anlamlı bir ilişki bulunmamıştır. Sosyo-demografik özelliklerin önleme davranışlarını şekillendirmede daha önemli bir rol oynadığı görülmektedir. Bu bulgular, yalnızca risk düzeyine değil, eğitim ve farkındalığa odaklanan önleme stratejilerine duyulan ihtiyacı vurgulamaktadır.*

Anahtar Kelimeler: *Meme kanseri, Önleme davranışları, Risk düzeyi*

INTRODUCTION

Cancer stands out as a critical public health problem due to its high mortality rates both globally and in Türkiye (Bakır & Demir, 2020; Sha, Kong, Li, & Wang, 2024). Currently the second leading cause of death worldwide, cancer is expected to increase in all regions and remain one of the leading causes of death by 2030 (Sha et al., 2024). Breast cancer is the most common cancer type among women worldwide and accounts for a significant share of cancer-related deaths (Sung et al., 2021; Li et al., 2021).

Many risk factors are known to play a role in the development of breast cancer. These include female gender, race, older age, early menarche, late menopause, infertility, low parity, late gestational age, not breastfeeding, high density of breast tissue, obesity, hormone use, smoking and alcohol consumption, sedentary lifestyle, exposure to chemicals and radiation, medications, and genetic predisposition (Bakır & Demir, 2020; Esen, Taş, Öztürk, & Toprak, 2020; Taylan et al., 2020; Turan & Yiğit, 2021; Sha et al., 2024).

Thanks to advances in breast cancer diagnostic methods, significant decreases in mortality and morbidity rates have been observed; therefore, early diagnosis is of great importance (Tarı Selçuk, Avcı, Yılmaz Dündar, & Mercan, 2020; Turan & Yiğit, 2021; Sha et al., 2024; World Health Organization, 2024). Systematic screening programs such as Breast Self-Examination (BSE), Clinical Breast Examination (CBE), and mammography, implemented to increase access to early diagnosis and treatment, play a key role in reducing losses due to breast cancer (Taylan et al., 2020; Tarı Selçuk et al., 2020; Luleci & Kilic, 2022). However, the literature frequently emphasizes that women do not adequately implement breast cancer screening behaviors (Bakır & Demir, 2020; Tarı Selçuk et al., 2020; Luleci & Kilic, 2022; Altaş & Sezerol, 2025). Research on health behaviors indicates that women receive limited support, information, and motivation and therefore are unable to adequately implement prevention health measures (Turan & Yiğit, 2021; Gül & Büyükbayram, 2024).

Awareness of individual risk levels may play an important role in motivating prevention health behaviors and participation in screening programs. However, it remains unclear whether women's prevention behaviors differ according to their breast cancer risk level. Determining this relationship is important for developing risk-based prevention interventions and guiding healthcare professionals, particularly nurses, in planning appropriate education and counseling strategies. In line with this information, in this study aimed to determine the factors affecting prevention behaviors according to breast cancer risk levels.

Research Question

1. Do breast cancer prevention behaviors differ according to women's breast cancer risk levels?

MATERIAL AND METHODS

Research Type

The study used a cross-sectional survey model within the quantitative research method.

Study Population and Sample

The study was conducted at a state hospital between November 2024 and April 2025. Women who applied to the hospital for any reason constituted the study population. To calculate the required sample size, a pilot application was conducted with 30 participants using the G*Power 3.1.9.7 program. Based on an effect size of 0.165 (d=0.16), a 5% margin of error (α=0.05), and 80% power (1-β=0.80), the minimum sample size was calculated as 286. Considering possibile data loss, the sample size was increased by 20%, and a total of 344 participants were included in the study (Faul, Erdfelder, Lang, & Buchner, 2007).

Inclusion criteria; included being between 25 and 69 years of age, being able to communicate in Turkish, and volunteering to participate in the study. Exclusion criteria; included having a diagnosed psychiatric illness.

Data Collection Tools

Data were collected via face-to-face interviews, and participants were included to the study after providing verbal and written informed consent. Each interview took approximately 10-15 minutes. Data collection tools included a Personal Information Form containing questions on socio-demographic characteristics, the Scale to Determine Factors Affecting Women's Breast Cancer Prevention Behaviors, and the Breast Cancer Risk Assessment Form.

The Personal İnformation Form: consisted of 12 questions prepared by the researchers based on the literature and covering participants' socio-demographic characteristics (Noman et al., 2021; Öcalan & Demir, 2024; Ardahan & Topçu, 2024).

The Scale to Determine Factors Affecting Women's Breast Cancer Prevention Behaviors: It was developed in Iran by Khazaee-Pool et al. (2016) to assess the factors affecting women's prevention health behaviors in this area. The scale was adapted into Turkish and its validity and reliability studies were conducted by Turan and Yiğit (2021). The abbreviated name of the scale is MEKÖD. The scale consists of 33 items and has a 5-point Likert-type structure (1 = Never, 5 = Always). The seven subdimensions in the scale are: attitude, motivation, self-efficacy, support systems, information seeking, self-care, and stress management. Participants are scored according to how well their responses to each item reflect their own situation. The total score that can be obtained from the scale ranges from 33 to 165. The score ranges for the subdimensions are as follows: Support Systems (4–20), Self-Efficacy (4–20), Self-Care (6–30), Stress Management (3–15), Motivation (4–20), Information Seeking (4–20), and Attitude (8–40). The first eight items in the Attitude subdimension of the scale are reverse-scored. The higher the participant's score on the relevant subdimension, the stronger their positive behaviors related to that dimension.

Breast Cancer Risk Assessment Form: Developed by the American Cancer Society, it has been approved and recommended for use by the Republic of Turkey Ministry of Health (2005). This six-section form aims to determine an individual's risk for breast cancer based on variables such as age, individual and family history of breast cancer, age at birth, menstrual history, and body structure. Following the assessment, scores of 200 and below are classified as "low risk," 201–300 as "moderate risk," 301–400 as "high risk," and 400 and above as "highest risk." Possible scores on the form range from 40 to 775.

Ethical Consideration

Written approval was obtained from the ethics committee of a university to conduct the study (Date: 03.10.2024 and Approval Number: 2024/112059). The study was conducted in accordance with the Declaration of Helsinki, and written and verbal informed consent was obtained from all participants.

Data Analysis

Study data were analyzed using IBM SPSS Statistics 25.0. Normality was assessed using the Kolmogorov-Smirnov and Shapiro-Wilk tests. Since MEKÖD scores, subscales scores, and breast cancer risk scores were not normally distributed, non-parametric test were applied. The Mann-Whitney U test was used for comparisons between two groups, and the Kruskal-Wallis test was used for comparisons among more than two groups. When a significant difference was detected, Dunn–Bonferroni post-hoc tests were performed for pairwise comparisons. Statistical significance was set at $p<0.05$.

RESULTS

The mean age of the women participating in the study was 34.83 ± 9.41, ranging from 25 to 68. 39.0% of the participants were university graduates, 73.0% were married, and 52.3% lived in the city center. 87.5% of the participants had no first-degree relative diagnosed with breast cancer, and 68.3% reported regular menstrual periods. 67.2% of the participants had not received BSE training, 66.3% did not know how often they had mammography and/or breast ultrasound, and 57.6% had never had mammography and/or breast ultrasound. The mean Body Mass Index (BMI) of the participants was 25.44 ± 4.29, and the mean number of children was 2.43 ± 2.63 (Table 1).

The participants' mean MEKÖD score was 99.67 ± 17.99. The participants' mean MEKÖD sub-dimension scores were attitude (17.12 ± 5.69), motivation (15.61 ± 3.47), self-efficacy (13.62 ± 3.46), support systems (13.27 ± 4.45), information seeking (13.31 ± 4.07), self-care (17.06 ± 5.39), and stress management (9.64 ± 2.89). The participants' mean breast cancer risk score was determined as 128.11 ± 79.10 (Table 2).

While 93% of participants were in the low-risk category for breast cancer, 2.3% were in the highest-risk group. No statistically significant difference was found in the comparison of the MEKÖD subscales and total scores according to breast cancer risk categories ($p>0.05$) (Table 3).

Table 1. Distribution of Socio-Demographic Characteristics of Participants (n= 344)

Features	n (%)
Education Level	
Literate	83 (24.1)
Primary School	46 (13.4)
High School	81 (23.5)
University	134 (39.0)
Marital status	
Married	251 (73.0)
Single	93 (27.0)
Place of residence	
Provincial center	180 (52.3)
District	106 (30.8)
Village	58 (16.9)
Breast cancer diagnosis in a first-degree relative	
Yes	43 (12.5)
No	301 (87.5)
Menstrual cycle	
Regular	235 (68.3)
Irregular	66 (19.2)
Menopause	43 (12.5)
Status of receiving BSE training	
Yes	113 (32.8)
No	231 (67.2)
Knowledge of the frequency of mammography/breast USG	
Yes	116 (33.7)
No	228 (66.3)
Mammography/breast USG status	
I've never had it done	198 (57.6)
<1 year	119 (34.6)
1-5 years ago	19 (5.5)
≥6 years	8 (2.3)
	Mean ± SD (Min-max)
Age	34.83 ± 9.41 (25-68)
Height	162.38 ± 5.73 (145-180)
Weight	67.00 ± 11.19 (40-103)
BMI	25.44 ± 4.29 (15.62-42.87)
Number of children	2.43 ± 2.63 (0-10)

Table 2. Mean MEKÖD and Breast Cancer Risk Scores

Scales	Mean ± SD	Min-Max
Attitude	17.12 ± 5.69	8-35
Motivation	15.61 ± 3.47	5-20
Self-efficacy	13.62 ± 3.46	4-20
Support systems	13.27 ± 4.45	4-20
Information seeking	13.31 ± 4.07	4-20
Self-care	17.06 ± 5.39	6-30
Stress management	9.64 ± 2.89	3-15
MEKÖD total	99.67 ± 17.99	45-144
Breast cancer risk assessment	128.11 ± 79.10	40-665

Table 3. Comparison of MEKÖD Scores According to Breast Cancer Risk Levels

Risk Category	n (%)	Attitude	Motivation	Self-efficacy	Support systems	Information seeking	Self-care	Stress management	MEKÖD total
Low risk	320 (93.0)	17.00	16.00	14.00	13.00	13.00	17.00	9.00	99.00
Moderate risk	14 (4.1)	16.00	16.50	15.50	13.50	15.50	19.50	11.00	108.00
High risk	2 (80.6)	20.50	19.00	15.50	13.50	11.00	16.00	10.50	106.00
Highest risk	8 (2.3)	19.50	16.00	14.00	14.50	16.00	18.50	9.00	106.50
KW		3.590	2.944	2.451	1.560	4.599	3.186	5.224	3.746
p-value		0.309	0.400	0.484	0.668	0.204	0.364	0.156	0.290

Values are presented as medians. **KW:** Kruskal Wallis.

Table 4. Comparison of MEKÖD and Breast Cancer Risk Scores According to Socio-Demographic Characteristics

Features	Attitude	Motivation	Self-efficacy	Support systems	Information seeking	Self-care	Stress management	MEKÖD total	Risk score
Education Level									
Literate	16.00	16.00	13.00	13.00	12.00	15.00	9.00	96.00	140.00
Primary School	17.50	16.00	12.50	14.00	13.00	16.00	10.00	98.00	105.00
High School	17.00	16.00	13.00	13.00	13.00	17.00	9.00	99.00	105.00
University	16.00	16.00	15.00	13.00	15.00	18.00	10.00	102.50	110.00
p-value	0.585	0.424	**0.000**	0.769	**0.000**	**0.003**	0.195	**0.003**	**0.000**
Marital status									
Married	17.00	16.00	14.00	13.00	13.00	17.00	9.00	98.00	105.00
Single	16.00	16.00	14.00	13.00	15.00	17.00	9.00	102.00	110.00
p-value	0.972	0.740	0.205	0.729	**0.006**	0.220	0.434	0.129	**0.007**
Place of residence									
Provincial center	16.00	16.00	14.00	14.00	14.00	18.00	10.00	102.00	110.00
District	16.00	16.00	13.00	13.00	13.00	17.00	10.00	100.00	105.00
Village	18.50	14.50	12.50	11.00	11.00	15.00	9.00	92.00	110.00
p-value	0.248	**0.017**	**0.003**	**0.010**	**0.000**	**0.001**	**0.003**	**0.000**	0.891
Breast cancer diagnosis in a first-degree relative									
Yes	15.00	17.00	15.00	14.00	14.00	18.00	10.00	102.00	200.00
No	17.00	16.00	14.00	13.00	13.00	17.00	9.00	99.00	105.00
p-value	0.113	0.173	0.072	0.289	0.350	**0.047**	0.156	0.192	**0.000**

Table 4. (Continued) Comparison of MEKÖD and Breast Cancer Risk Scores According to Socio-Demographic Characteristics

Features	Attitude	Motivation	Self-efficacy	Support systems	Information seeking	Self-care	Stress management	MEKÖD total	Risk score
Menstrual cycle									
Regular	16.00	16.00	14.00	13.00	14.00	17.00	9.00	101.00	105.00
Irregular	17.00	16.00	13.00	12.50	13.00	16.00	9.00	97.50	110.00
Menopause	19.00	16.00	12.00	13.00	12.00	17.00	9.00	97.00	175.00
p-value	0.154	.0704	**0.005**	0.538	**0.016**	0.223	0.244	0.234	**0.000**
Status of receiving BSE training									
Yes	15.00	17.00	16.00	14.00	15.00	19.00	10.00	105.00	110.00
No	18.00	16.00	13.00	13.00	12.00	16.00	9.00	96.00	105.00
p-value	**0.009**	**0.000**	**0.000**	**0.008**	**0.000**	**0.000**	**0.000**	**0.000**	0.579
Knowledge of the frequency of mammography/breast USG									
Yes	15.00	17.00	16.00	15.00	15.00	20.00	10.00	108.00	110.00
No	17.00	15.50	13.00	12.00	12.00	16.00	9.00	96.00	105.00
***p*-value**	**0.017**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	0.221
Mammography status									
I've never had one	16.00	16.00	14.00	13.00	13.00	16.00	9.00	98.00	105.00
<1 year	18.00	16.00	15.00	14.00	14.00	18.00	10.00	104.00	110.00
1-5 years ago	17.00	15.00	12.00	13.00	11.00	17.00	9.00	95.00	150.00
≥6 years	17.00	17.50	14.00	10.50	13.00	16.50	8.00	94.00	105.00
p-value	0.309	0.103	**0.022**	0.243	**0.003**	0.061	0.170	**0.004**	**0.000**

Values are presented as medians. Significant pairwise differences identified by post-hoc analyses are described in the text.

Participants' MEKÖD scores differed according to several socio-demographic characteristics (Table 4). A significant difference was observed across education levels, with university graduates demonstrating higher self-efficacy, information seeking, and self-care scores compared to other groups. In contrast, individuals who were only literate had higher breast cancer risk scores ($p<0.05$) (Table 4).

Regarding marital status, a statistically significant difference was found only in the information-seeking subscales, where single participants had higher scores than married participants ($p<0.05$) (Table 4).

Place of residence was associated with multiple MEKÖD subscales. Participants living in the provincial center generally demonstrated higher scores compared to those living in villages, particularly in motivation, self-efficacy, support systems, information seeking, self-care, stress management, and total MEKÖD scores. Individuals living in districts were also found to have higher scores than those living in villages in terms of stress management ($p<0.05$) (Table 4).

Participants with a first-degree relative diagnosed with breast cancer had significantly higher self-care scores compared to those without such a history ($p<0.05$) (Table 4).

Menstrual cycle characteristics were also associated with certain subscales. Women with regular menstrual cycles had higher self-efficacy scores than those with irregular cycles, while menopausal participants demonstrated higher information-seeking scores ($p<0.05$) (Table 4).

Participants who received BSE training and knew the frequency of mammography/breast USG had significantly higher MEKÖD scores compared to other participants ($p<0.001$; $p<0.05$) (Table 4).

Those who had a mammogram/breast ultrasound less than a year ago had significantly higher self-efficacy, information seeking, and total MEKÖD scores than those who had never had one. Furthermore, those who had a mammogram/breast ultrasound less than a year ago had significantly higher information seeking and total MEKÖD scores than those who had one to five years ago ($p<0.001$; $p<0.05$) (Table 4).

DISCUSSION

This study found that factors influencing breast cancer prevention behaviors did not differ based on women's breast cancer risk levels. Most participants were in the low-risk group, and their prevention behaviors did not vary significantly with risk level. This could be due to inadequate personal risk perception or low awareness of risk levels. Women's prevention behaviors appear to be shaped primarily by socio-demographic and educational factors rather than clinical risk categorization.

The results obtained from the study are similar to some research findings in the literature. Research conducted among healthcare workers and community samples demonstrated no significant relationship between breast cancer risk levels and screening or early diagnosis behaviors (Açıkgöz, Yoruk, Turkmen, & Ergor, 2020; Eren & Mermer, 2023; Özberk & Özberk, 2023). These results indicate that being categorized as at risk alone may not be sufficient to motivate behavioral change. Instead, behavioral engagement may depend on awareness, access to information, and health education.

Education level emerged as an important determinant of prevention behaviors in this study. Women with higher education levels demonstrated significantly higher self-efficacy, self-care, and information seeking scores. Consistent with previous research, higher educational attainment has been associated with increased participation in breast cancer prevention and screening programs (Wu et al., 2019; Fatouh, Hamido, Moustafa, & Yousif, 2020; Assefa, Abera, & Geta, 2021; Gül & Büyükbayram, 2024). Education may enhance health literacy, enabling individuals to access information, interpret risk, and adopt prevention behaviors more effectively. However, some studies have reported inconsistent findings regarding the association between education level and MEKÖD scores, suggesting that cultural and contextual factors may influence this relationship (Karabulutlu, Bakır, & Demir, 2023; Okan, Kavici Porsuk, Taşdemir, Temiz, & Arslan, 2023; Gençtürk, Ay, & Marangoz Arslan, 2025).

Place of residence was another factor influencing prevention behaviors. Women living in urban areas demonstrated higher scores across several MEKÖD dimensions compared with those living in rural areas. This difference may be explained by improved access to healthcare services, screening programs, and health information in urban settings. Nevertheless, previous studies reporting no association between residence and prevention

behaviors highlight the potential influence of regional healthcare inequalities and sociocultural differences (Karabulutlu et al., 2023; Okan et al., 2023).

An important finding was that women who received BSE training and were aware of the frequency of mammography/breast ultrasound had significantly higher scores on all MEKÖD subscales and total scores. Similarly, women who had undergone mammography or breast ultrasound within the past year had significantly higher self-efficacy, information seeking, and total MEKÖD scores. These findings support existing evidence demonstrating that educational interventions and screening awareness improve participation in prevention practices (Noman et al., 2021; Okan et al., 2023; Öcalan & Demir, 2024). Increasing knowledge and awareness may therefore represent one of the most effective strategies for improving prevention health behaviors.

Regarding marital status, single participants demonstrated higher information seeking scores than married participants. Contrary to our findings, some studies have reported no significant relationship between marital status and MEKÖD scores (Karabulutlu et al., 2023; Okan et al., 2023). Furthermore, in a study by Gençtürk et al. (2025), contrary to our findings, married women reported higher MEKÖD scores than single women. These differences may be explained by variations in social roles, caregiving responsibilities, and available personal time, which can influence individuals' motivation and opportunity to seek health-related information. Single individuals may have greater autonomy and time resources to engage in information-seeking behaviors, whereas married participants may prioritize family-related responsibilities, potentially limiting such activities. Additionally, cultural and contextual differences across study populations may account for the inconsistent findings reported in the literature.

In this study, participants with a first-degree relative with breast cancer had significantly higher self-care scores. This result, suggesting that perceived susceptibility may encourage engagement in protective behaviors. Participants with regular menstrual periods had significantly higher self-efficacy scores than participants with irregular menstrual periods, and those with menopausal periods had significantly higher information-seeking scores than those who were menopausal. However, history of breast cancer in a first-degree relative and regular menstruation did not have an effect on the total MEKÖD score. Previous studies have reported differing findings regarding these variables (Okan et al., 2023; Gül & Büyükbayram, 2024; Gençtürk et al., 2025; Karabulutlu et al., 2023; Şişman, Özgen, Alptekin, & Arslan, 2023; Öcalan & Demir, 2024). Such inconsistencies may be related to variations in sample characteristics and cultural contexts.

Overall, the findings indicate that awareness, education, and accessibility factors play a more influential role than calculated breast cancer risk levels in shaping prevention behaviors. These results emphasize the importance of community-based education programs, awareness campaigns, and accessible screening services to promote breast cancer prevention behaviors among women.

Limitation

Because participants were limited to women attending a single public hospital, the generalizability of the findings is limited. Strength of the study is that it contributes to limited number of studies examining women's breast cancer prevention behaviors according to their risk levels in Turkey.

CONCLUSION

These research findings indicate that factors influencing women's breast cancer prevention behaviors are not directly related to their calculated breast cancer risk levels. Instead, factors such as education level, residence, BSE training, and knowledge of screening frequency have a greater impact on prevention behaviors. Therefore, health professionals, especially nurses, should prioritize educational and motivational interventions for women in prevention health services. Future research could be conducted with longitudinal designs that track how women's risk perceptions change over time and how this impacts their protective behaviors.

Ethics Committe Approval

Ethics committee approval was received for this study from the Şırnak University Ethics Committee (Date: 03.10.2024, and Approval Number: 2024/112059)

Author Contributions

Idea/Concept: Z.T., K.A., F.B.; Design: Z.T., K.A., F.B.; Supervision/Consultancy: Z.T.; Analysis and/or Interpretation: Z.T., K.A.; Literature Review: Z.T.,

K.A., F.B.; Writing of the Article: Z.T., K.A., F.B.; Critical Review: Z.T., K.A., F.B.

Peer-review

Externally peer-reviewed.

Conflict of Interest

The authors have no conflict of interest to declare.

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