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Regular breast self-examination rates in women aged 40 and above and factors affecting this rate: a hospital-based cross-sectional study

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Abstract

It was aimed to determine the rate of not performing breast self-examination (BSE) every month and the factors affecting this rate. Data were collected using the face-to-face collection technique until the sample size of female patients aged 40 and above who presented to the outpatient clinic was completed. Women who had breast surgery were not included in the study. The dependent variable of the study was having performed BSE every month within the last year. Independent variables were sociodemographic, socioeconomic, and biodemographic characteristics. The incidence of not performing BSE regularly was 2.773 (CI:1.606–4.791) times higher in women living in the town/village than those living in the city/district center, 3.390 (CI:1.462–7.861) times higher in those with no formal education compared to those who received 5 or more years of education, 2.506 (CI:1.133–5.543) times higher in patients who did not have a family history of breast cancer than in those who did, and 3.128 (CI:1.750–5.592) times higher in those who did not receive BSE training from family health midwives than those who did. The factors for not performing periodic BSE were living in rural areas, having a low level of education, no family history of breast cancer, and not having received training from a family health midwife.

Keywords: Breast, breast cancer, breast self-examination, general surgery, Turkey

Introduction

Breast cancer is the most common type of cancer in the world, and 2.3 million women were diagnosed with breast cancer, whereas 685 thousand deaths occurred due to breast cancer in 2020 [1]. On the contrary, breast cancer is a type of cancer that has a very high rate of survival if diagnosed and treated at an early stage [2].

Mammography, clinical breast examination, and breast self-examination (BSE) are the leading methods for early detection of breast cancer [3, 4]. Among these methods, BSE is a simple, non-invasive procedure and does not require any tools. In addition, considering that one of the most important initial symptoms of breast cancers is a palpable mass, it is revealed that performance of BSE is important for women to detect a mass at an early stage [4, 5].

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It is recommended that BSE be performed every month, especially in underdeveloped countries. However, it has been reported in many studies that it is not performed regularly every month. It has also been reported that this causes a delay in the detection of a possible breast mass and therefore causes inadequacy in finding breast masses [4-9].

In this study, it was aimed to determine the rate of not performing BSE every month and the factors affecting this rate.

Materials and Methods

Type of study: Hospital-based cross-sectional study

The study was conducted between April 2021 and August 2021.

Population of the study: Women above 40 years of age who presented to the general surgery outpatient clinic in 2020 were used for determining the population. Accordingly, 7227 women presented to the general surgery outpatient clinic for examination in 2020. The population of the study has been determined as 7227 women assuming that the same number of women will present in 2021.

Sample of the study: The required sample size representing

the population was calculated to be 365 women in the Epi-info software with a prevalence of 50%, confidence interval of 95%, and a deviation of 5%.

Study variables

Dependent variable: Those who answered yes to the question "Have you performed a breast self-examination every month without exception in the last year?" were considered as regularly performing BSE. The individuals who performed it irregularly and did not perform it at all were considered as those who did not perform it.

Independent variables were sociodemographic, socioeconomic, and biodemographic characteristics.

Data collection form: The data form of the study was prepared by the investigators by reviewing the literature.

Ethics committee approval and verbal consent: Approval for the study was obtained from the Ethics Committee of the Kafkas University Faculty of Medicine, with the decision no: 80576354-050-99/70 and date: 15.04.2021.

Preliminary trial of the study: Conducted with 7 women who presented to outpatient clinics. After the preliminary trial, the problems detected related to the data collection form were corrected.

Selection of the subjects included in the study and data collection: Data were collected using the face-to-face collection technique until the sample size of female patients aged 40 and above who presented to the outpatient clinic was completed. Women who had breast surgery were not included in the study.

Statistical Analysis

The data of the study are presented in the form of numbers and percentages. Chi-square test was used in binary analyses. Variables that were statistically significant in the chi-square test ($p<0.05$) were included in the Backward LR logistic regression analysis.

Results

Our study was conducted on 365 patients. In the present study, there was no statistically significant difference between women's marital status, employment status, health insurance, family type, surgical breast examination, and family physician having given BSE training and regular and irregular performance of BSE (p=0.780, p=0.542, p=0.158, p=0.592, p=0.165, and p=0.338, respectively), and a statistically significant difference was found between family health midwife having given BSE training and regular and irregular performance of BSE (p=0.042, p=0.001,p=0.032, p=0.049, and p=0.001, respectively) (Table 1).

Table 1. Factors affecting performance of regular breast self-examination

Independent variables		Dependent variable: BSE		Total	X2	P	OR	95% CI
		Regular	Irregular					
		Number (%)*	Number (%)*	Number (%)**				
Age	40–49	37 (29.1)	90 (70.9)	127 (34.8)	4.118	0.042	0.541	0.316–1.001
	≥50	47 (19.7)	191 (80.3)	238 (65.2)			1 (Reference)	
Place of residence	Village/town	27 (15.3)	149 (84.7)	176 (48.2)	11.294	0.001	2.773	1.606–4.791
	City/district center	57 (30.2)	132 (69.8)	189 (51.8)			1 (Reference)	
Marital status	Still not married	15 (21.7)	54 (78.3)	69 (18.9)	0.078	0.780		
	Married	69 (23.3)	227 (76.7)	296 (81.1)				
Education	No formal education	8 (12.7)	55 (87.3)	63 (17.3)	4.573	0.032	3.390	1.462–7.861
	5 years and above	76 (25.2)	226 (74.8)	302 (82.7)			1 (Reference)	
Employment status	Employed	19 (25.7)	55 (74.3)	74 (20.3)	0.371	0.542		
	Not employed	65 (22.3)	226 (77.7)	291 (79.7)				
Health insurance	Yes	75 (24.4)	233 (75.6)	308 (84.4)	1.990	0.158		
	No	9 (15.8)	48 (84.2)	57 (15.6)				
Family type	Extended	28 (24.8)	85 (75.2)	113 (31.0)	0.288	0.592		
	Nuclear	56 (22.2)	196 (77.8)	252 (69.0)				
Family history of breast cancer	No	71 (21.6)	258 (78.4)	329 (90.1)	3.867	0.049	2.506	1.133–5.543
	Yes	13 (36.1)	23 (63.9)	36 (9.9)			1 (Reference)	
Surgical breast examination	No	64 (21.5)	233 (78.5)	297 (81.4)	1.931	0.165		
	Yes	20 (29.4)	48 (70.6)	68 (18.6)				
Family doctor BSE training	No	80 (23.6)	259 (76.4)	339 (92.9)	0.920	0.338		
	Yes	4 (15.4)	22 (84.6)	26 (7.1)				
Family health midwife BSE training	No	22 (14.2)	133 (85.8)	155 (42.5)	11.892	0.001	3.128	1.750–5.592
		62 (29.5)	148 (70.5)	210 (57.5)			1 (Reference)	
Total		84 (23.0)	281 (77.0)	365 (100.0)				

* row percentage, ** column percentage, BSE: breast self-examination

The variables that were found to be statistically significant in the binary analyses (Table 1) were included in the logistic regression analysis. Accordingly, the rate of not performing BSE regularly was 2.773 (CI: 1,606–4,791) times higher in those living in the town/village than in those living in the city/district center, 3.390 (CI: 1,462–7,861) times higher in those who did not have a formal education compared to those who had an education of 5 years or more, 2.506 (CI: 1.133–5.543) times higher in those who had no family history of breast cancer than in those who had a family history of breast cancer, and 3.128 (CI: 1.750–5.592) times higher in those who did not receive BSE training from family health midwives than those who did (Table 1).

Discussion

Although BSE is not as sensitive as mammography and clinical physical examination, it has been reported in studies that women who perform BSE detect breast cancer at a rate of 95.0% and early stage breast cancer at a rate of 65.0% by themselves, thereby reducing mortality by 18.0%. It is inevitable that in particular regularly performed BSE would have a greater impact on mortality [10, 11].

In the study, 23.0% of women regularly performed BSE every month. In studies conducted in Turkey, the percentage of performing BSE regularly every month has varied between 10.2% and 24.5% [12-14]. In studies conducted in different countries, the percentage of women performing BSE every month has varied between 16.9% and 39.5% [15-17]. Consequently, periodic BSE performed every month was at a very low rate among women.

The rate of not performing BSE was 2.773 (CI: 1.606–4.791) times higher in those living in towns/villages than in those living in the city/district center. In a study, it has been reported that the rate of women performing BSE every month in rural areas was lower than the rate of women doing this in urban areas. In another study, it was reported that BSE training and performance rates were lower in rural areas [5, 15, 18]. Some studies have emphasized that there was no difference between individuals living in rural and urban areas in terms of BSE [18]. The probable reason for the low monthly rate of performing BSE in women living in rural areas was the lack of access to healthcare services.

The rate of not performing BSE every month was 3.390 (CI: 1.462–7.861) times higher in those with no formal education than those with an education of 5 years or more. In the studies conducted, it has been reported that women with a low level of education had a lower rate of performing BSE every month compared to women with a high level of education [7,15,19]. In many studies, women's education level has been associated with all kinds of health behaviors. Women with a high level of education read and increase their knowledge further about health issues [20, 21].

In a study, the rate of not performing BSE periodically every month was 2.506 (CI: 1.133–5.543) times higher in those with no family history of breast cancer than those with a family history of breast cancer. In a study, it was reported that patients with a family history of breast cancer had higher rates of performing BSE every month [19]. The probable reason for this is the perception that cancer is a frightening disease, making the individual more sensitive with regard to BSE.

In a study, the rate of not performing BSE every month was 3.128 (CI: 1,750–5,592) times higher in those who did not receive training on BSE from family health midwives than in those who did. Studies show that even if women had knowledge about BSE, they did not know how to perform it [22,23]. As is known, there is one physician and one family health midwife for a certain number of individuals through the family medicine practice in Turkey. Primary healthcare services are also provided by family health units. One of the most important tasks of family healthcare is to provide preventive healthcare services for individuals [24]. Through this process, a relationship of trust is built between family health midwives and especially female service users. As a result of this trust, the acceptability of this type of preventive healthcare service increases.

Limitations

The limitation of this study was that the study was conducted with women who presented to a tertiary healthcare institution for the use of healthcare service, and thus caution should be exercised while making generalizations. The limitation of the study is that it only includes the tertiary health institution.

The strength of the study was that it was one of the first studies to investigate a causal relationship with "“performing BSE every month.”

Conclusion

In conclusion, factors for not performing BSE regularly every month in women over the age of 40 were low level of education, living in rural areas, having no family history of breast cancer, and not having received training from family health midwives.

Conflict of interests
The authors declare that they have no competing interests.

Financial Disclosure
All authors declare no financial support.

Ethical approval
Approval for the study was obtained from the Ethics Committee of the Kafkas University Faculty of Medicine, with the decision no: 80576354-050-99/70 and date: 15.04.2021.

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