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Original Article

# Investigation of the relationship between fear and fate of breast cancer in women over 40

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A B S T R A C T

Objective: This research was carried out to examine the relationship between breast cancer fatalism and fear in women over 40.
Material and methods: This research, which is planned as descriptive-correlational type, was conducted between March and May 2020 with women living in Iğdır.
Results: According to the findings obtained from the study, it was found that the total mean score of breast cancer fate of individuals was 4.42 ± 2.58, and the total mean score of fear of breast cancer was 23.67 ± 7.03. It was found that there was a statistically significant positive correlation between breast cancer fatalism total score mean, fear of breast cancer total score mean and age (p <0.05).
Conclusion: It was determined that the factors affecting breast cancer fatalism of women were educational level, income rate, job, and having a relative diagnosed with breast cancer. It has been determined that the factors affecting the fear of breast cancer are education level, income rate and job. It is recommended that the study be carried out in larger groups.
Keywords: fatalism; fear; breast cancer

## Introduction

Breast cancer is the most common cancer type among women in the world. The rate of breast cancer seen in women in our country is 24.7% and this rate is the first among the cancers seen in women [1]. Early diagnosis facilitates treatment in breast cancer and prolongs the life of the individual. The American Cancer Society (ACS) recommends that women aged 45-54 undergo mammography screening annually, and women aged 55 and over every two years. In our country, women between the ages of 40-69 are recommended to have a screening every two years. Despite the recommended early diagnosis methods, the rate of women showing early diagnosis behavior in breast cancer is low. The main reasons for this are fear and fatalism [2,3].
Fear, one of the reasons for not showing early diagnosis behavior, negatively affects early diagnosis of cancer. Fear arises due to factors such as pain, loss of breast, cancer diagnosis, and death during screening. Studies have found that fear negatively affects breast cancer early diagnosis behavior in women [4,5]. Nevertheless, although fear is not always seen as an obstacle in women, it has been reported in studies that women positively affect the rate of early diagnosis behavior due to fear of breast cancer [6,7].

Another factor that prevents women's attitudes towards health and their participation in cancer screening in early diagnosis of breast cancer is fatalism. Fatalism is among the psychosocial barriers that negatively affect the individual's early diagnosis behavior [8].
Some women facing breast cancer may feel powerless. Fatalism belief also prevents many women from participating in breast cancer screenings. It is stated that women who think in a fatalistic way do not have screening tests because they believe that they cannot change their fate, even though they make efforts [9].

## Material and methods

### Study Design

This study, which was planned as a descriptive-correlational type, was conducted between March and May 2020 with women over the age of 40 living in Iğdır. The target population of the study consisted of women registered with the first step health institutions depends on the Provincial Directorate of Health in Iğdır located in the east of Turkey. The sample of the study consisted of women, who agreed to participate in the study, registered with the first step health institutions depends on the Provincial Directorate of Health in Iğdır located in the east of Turkey.

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*Collection of Data*

In the collection of research data, Introductory Information Form, Breast Cancer Fatalism Scale and Breast Cancer Fear Scale were used. After explaining the purpose of the research and obtaining verbal permission from those who voluntarily accepted to participate in the research, the data were collected online with the Google form prepared by the researchers.

*Data Collection Tools*

1.  Introductory Information Form

It consists of questions created by researchers and containing the introductory features of women.

2.  Breast Cancer Fatalism Scale

Powe Breast Cancer Fatalism Scale was developed in America and the original version of the scale consists of 15 questions. However, it was revised in 2001 as a result of qualitative interview methods, multiple interviews and factor analyzes by Mayo, Ureda and Parker (2001) [10]. The scale consists of eleven questions and is a dichotom type scale answered as yes / no. "Yes" answer is calculated as 1 point, "No" answer is calculated as 0 points. The increase in the score obtained from the scale indicates that fatalism has increased. Since there are 11 items on the scale, the scores that can be obtained from the scale vary between 0-11. The scale is single-sized and can be filled in 3 to 5 minutes. The internal validity coefficient of the original form of the scale is reported as 0.89. The Turkish validity and reliability study of the scale was conducted by Ersin et al. in 2014 [11]. The content validity index was determined as 0.80 in the study. The explained variance of the scale is 34.4%. Kuder Richarson - 20 coefficient was calculated as 0.797 for the Turkish Power fatal scale [11]. Item total correlations of the participants ranged from 0.264 to 0.530. Powe Breast Cancer Fatalism Scale is determined to be a valid and reliable measurement tool in Turkish language after psychometric evaluation. In our study, Kuder Richarson - 20 coefficient was calculated as 0.72.

3.  Breast Cancer Fear Scale

Breast Cancer Fear Scale, It was developed in 2004 by Champion et al. [12]. The cronbach alpha coefficient of the scale was specified as .91. The eight-item scale determines the relationship between breast cancer, mammography behavior, and women's emotional responses, and is a likert-type scale scored from 1 to 5. The highest score to be obtained from the scale is 40, and the lowest score is 8. Breast Cancer Fear Scale was adapted to Turkish by Seçginli. Cronbach alpha coefficient is 0.90 [13]. The Turkish Champion Breast Cancer Fear Scale is a scale consisting of eight items and the items in the scale are evaluated as (1) I strongly disagree, (2) I disagree, (3) I am indecisive, (4) I partially agree, (5) I totally agree. In the evaluation of the scores obtained from the breast cancer fear scale; It indicates low level fear of 8-15 points, medium level fear of 16-23 points and high level fear of 24-40 points. In our study, Cronbach alpha coefficient is 0.87.

*Statistical analysis*

The analysis of the data was done on the computer using the SPSS statistical software. Descriptive statistics, Kolmogorov-Smirnov, Mann-Whitney U, Kruskal-Wallis and Spearman correlation tests were used to evaluate the data. Explore and normality plots with tests were used as descriptive statistical methods. Kolmogorov – Smirnov test was used to test normality distribution with analytical tests. Since the Kolmogorov - Smirnov test value was p <0.05, it was determined that the data were not distributed normally.

*Ethical Principles*

Consent was obtained from Ağrı İbrahim Çeçen University Scientific Research Ethics Committee and written permission was obtained from the institutions where the study would be conducted. Verbal permission was obtained from those who wanted to participate in the research by making necessary explanations to the individuals included in the research.

## Results

According to the findings of our study, 87.9% of the participating individuals were married, 59.1% were primary school graduates, 43.2% were less than their income, 78.4% of them have health insurance, 48.5% were not working, 87.9% of them have no relatives diagnosed with breast cancer and the average age of the group was found to be 44.94 ± 5.64 (Table 1).

Table 1. Descriptive characteristics of individuals (N = 264)

| Variables | | n | % |
|---|---|---|---|
| Marital status | Single | 32 | 12.1 |
| | Married | 232 | 87.9 |
| Education Level | Primary education | 156 | 59.1 |
| | Secondary education | 55 | 20.8 |
| | High education | 53 | 20.1 |
| Income rate | Less than income | 114 | 43.2 |
| | Income equal to expense | 112 | 42.4 |
| | More than income | 38 | 14.4 |
| Health Assurance presence | Yes | 207 | 78.4 |
| | No | 57 | 21.6 |
| Job | Officer | 32 | 12.1 |
| | Worker | 11 | 4.2 |
| | Not working | 128 | 48.5 |
| | Housewife | 93 | 35.2 |
| Having a relative diagnosed with breast cancer | Yes | 32 | 12.1 |
| | No | 232 | 87.9 |
| | $\overline{X}$ ±SD | | |
| Age (Years) | 44.94 ± 5.64 (min. 40, max. 68) | | |

According to the findings obtained from the study, it was found that the total mean score of breast cancer fatality of individuals was 4.42 ± 2.58, and the lowest score was 0 and the highest score was 11. Breast cancer fear total score mean was 23.67 ± 7.03, and the lowest score was 0 and the highest score was 40 (Table 2).

Table 2. Breast Cancer Fatalism and Breast Cancer Fear Total Score Means

| | $\overline{X}$ ±SD | Min- Max |
|---|---|---|
| Breast Cancer Fatalism | 4.42±2.58 | 0.00-11.00 |
| Breast Cancer Fear | 23.67±7.03 | 0.00-40.00 |

The mean score of Breast Cancer Fatalism was statistically significantly higher in primary school graduates, those with lower income, workers with profession, and those who had no relatives diagnosed with breast cancer (p <0.05) (Table 3).

The Breast Cancer Fear score mean was found to be statistically significantly higher in primary school graduates, those with low income and those who did not work (p <0.05) (Table 4).

It was found that there was a statistically significant positive correlation between breast cancer fatalism total score mean, fear of breast cancer total score mean and age (p <0.05) (Table 5).

Table 3. Comparison of the demographic characteristics of the individuals and Breast Cancer Fatalism Scale

| Variables | | n | $\overline{X}$ ±SD | Statistic |
|---|---|---|---|---|
| Marital status | Single<br>Married | 32<br>232 | 4.18±2.71<br>4.45±2.57 | U=3547.50<br>p= 0.683 |
| Education Level | Primary<br>Secondary<br>Higher | 156<br>55<br>53 | 4.79±2.41<br>4.18±2.50<br>3.56±2.93 | x2 KW=8.41<br>p=0.015 |
| Income rate according expanse | Less<br>Equal<br>More | 114<br>112<br>38 | 5.40±2.51<br>3.78±2.34<br>3.34±2.50 | $x^2$<br>KW=30.022<br>p= 0.001 |
| Health Assurance presence | Yes<br>No | 207<br>57 | 4.46±2.54<br>4.24±2.73 | U=5615.00<br>p=0.575 |
| Job | Officer<br>Worker<br>Nonworker<br>Housewife | 32<br>11<br>128<br>93 | 3.65±2.40<br>5.72±1.67<br>4.80±2.61<br>4.00±2.57 | x2<br>KW=12.229<br>p=0.007 |
| Having a relative diagnosed with breast cancer | Yes<br>No | 32<br>232 | 3.56±2.47<br>4.53±2.58 | U=2912.00<br>p=0.047 |

*U=Mann-Whitney U Test; x2 KW=Kruskal-Wallis Test*

## Discussion

Breast cancer is a type of cancer that threatens women's health, creates more than one variability in the body, causes the most death and has an increasing frequency of occurrence [14,15]. Breast cancer is the most important obstacle to increase life expectancy in developed and developing countries. It is the leading cause of morbidity and mortality in women [16]. In order to fight breast cancer, factors that prevent early screening behaviors should be known. One of these factors is the fact that individuals attribute the incidence of breast cancer to fate, and the other is the fear of breast cancer [17,18]. Many studies show that fatalism and fear negatively affect early diagnosis behaviors [19-21]. In this study, it was aimed to investigate the relationship between breast cancer fatalism and fear.

According to the findings obtained from the study, it was found that the total score mean of the Breast Cancer Fatalism Scale was 4.42 ± 2.58. The result obtained in the study of Selvi supports our finding [21].

The mean score of the Breast Cancer Fear Scale was found to be 23.67 ± 7.03. A similar result was found in the study conducted by Champion et al. [22].

The Women's breast cancer fatalism scale score mean was statistically significantly higher in primary school graduates (p <0.05). This result shows that as the level of education increases, the tendency to fatalism decreases, so the importance given to learning needs increases and behaves that meet the needs. The finding is similar to the literature. [21,23-25]. The Women's Breast Cancer Fatalism Scale score mean were found to be statistically significantly higher in those whose income was lower than their expenses (p <0.05). It was found that the participation in the cervical, colorectal and breast scans was lower in the socioeconomically deprived group in the study of Lo et al. [26]

Table 4. Comparison of the demographic characteristics of the individuals and Fear of Breast Cancer Scale Scores

| Variables | | n | $\overline{X}$ ±SD | Statistic |
|---|---|---|---|---|
| Marital status | Single<br>Married | 32<br>232 | 22.21±5.79<br>23.87±7.18 | U=3159.00<br>p= 0.171 |
| Education Level | Primary<br>Secondary<br>Higher | 156<br>55<br>53 | 25.04±6.47<br>22.90±6.72<br>20.41±7.85 | x2<br>KW=18.442<br>p=0.001 |
| Income rate according expanse | Less<br>Equal<br>More | 114<br>112<br>38 | 24.52±6.63<br>23.86±7.36<br>20.52±6.49 | $x^2$<br>KW=9.865<br>p= 0.007 |
| Health Assurance presence | Yes<br>No | 207<br>57 | 23.35±7.21<br>24.82±6.27 | U=5337.50<br>p=0.269 |
| Job | Officer<br>Worker<br>Nonworker<br>Housewife | 32<br>11<br>128<br>93 | 20.12±6.45<br>21.72±6.48<br>24.54±7.45<br>23.91±6.34 | x2<br>KW=9.903<br>p=0.019 |
| Having a relative diagnosed with breast cancer | Yes<br>No | 32<br>232 | 24.34±5.32<br>23.57±7.24 | U=3445.50<br>p=0.509 |

*U=Mann-Whitney U Test; x2 KW=Kruskal-Wallis Test*

It is thought that individuals with low income will have an increased tendency to fade, since low income will result in poor health screenings and the costs of institutions that receive support.

The mean score of the Women's Breast Cancer Fatalism Scale was found to be statistically significantly higher in those whose profession is worker (p <0.05). In the study of Orhan, it has been determined that individuals with a professional job have a lower tendency towards fatalism [24].

Table 5. The Relationship Between Breast Cancer Fatalism Total Score Mean, Breast Cancer Fear Total Score mean and age

| | | (1) | (2) |
|---|---|---|---|
| (1) Breast Cancer Fatalism Total Score Mean | r<br>p | -<br>- | |
| (2) Breast Cancer Fear Total Score Mean | r<br>p | .149*<br>.015 | |
| (3) Age | r<br>p | .163*<br>.008 | .124*<br>.043 |

*r and p, Spearman correlation test*

The score mean of the women's breast cancer fatalism scale was statistically significantly higher in non-relatives who were diagnosed with breast cancer (p <0.05). The presence of a relatives diagnosed with cancer can be interpreted as increasing the individual risk perception of patients' relatives and increasing their belief that cancer can be prevented as their learning needs are met.

The Women's Breast Cancer Fear Scale mean score was found to be statistically significantly higher in primary school graduates (p <0.05). Our finding is in line with the literature [27,28].

The Women's Breast Cancer Fear Scale score mean was found to be statistically significantly higher in those whose income is less than their expenses (p <0.05). The result of the study is similar to the literature [11,29].

The mean score of the Women's Breast Cancer Fear Scale was found to be statistically significantly higher in those who did not work in any job (p <0.05).

This result can be interpreted as the fact that women have poor access to health services due to poor income, not being able to reach adequate and accurate information about breast cancer, or the fatalistic approaches to breast cancer, increase their fear levels.

According to the findings obtained from our study, it was found that there was a statistically significant positive correlation between breast cancer fatalism total score mean, fear of breast cancer total score mean and age (p <0.05). This result is in line with the literature [21,23,28,30].

Conclusion

It was determined that the factors affecting breast cancer fatalism of women were educational level, income rate, job, and having a relative diagnosed with breast cancer. It has been determined that the factors affecting the fear of breast cancer are education level, income rate and job. It is recommended that the study be carried out in larger groups.

## Acknowledgments

## Disclosure

Authors have no potential conflicts of interest to disclose.

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