

## Original Article

## Examining the Correlation between Breast Cancer Fatalism and Health Beliefs of Mothers of Hospitalized Children in the Pediatric Surgery Clinic of a University Hospital

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### Abstract

**Background/aim:** This study was conducted descriptively for the purpose of examining the correlation between breast cancer fatalism and health beliefs of mothers of children hospitalized in the pediatric surgery clinic of a university hospital.

**Materials and methods:** The study was carried out between April-August 2019 and the sample consisted of 355 mothers accompanying pediatric patients. The data were collected using the Individual Diagnosis Form, Breast Cancer Fatalism Scale and the Health Belief Model Scale for Breast Cancer and Screenings. The data were evaluated via the SPSS 16.0 package program. In the data analysis; descriptive statistics, independent samples t-test, variance analysis, Mann-Whitney U test and correlation analysis were performed.

**Results:** It was determined that there was a positively weak and significant correlation between BSE benefit ( $r = .283$ ,  $p = 0.000$ ) and BSE barrier perceptions ( $r = .283$ ,  $p = 0.000$ ) and breast cancer fatalism perceptions; a negatively weak and significant correlation between BSE self-efficacy perceptions ( $r = -.241$ ,  $p = 0.000$ ) and breast cancer fatalism perceptions.

**Conclusion:** As a consequence, considering that there is a correlation between health beliefs and breast cancer fatalism perceptions of individuals; it is suggested that training programs are organized for health beliefs and fatalism.

**Key words:** Health beliefs, breast cancer fatalism, nursing

### Introduction

A community health problem; breast cancer is the most common type of cancer among women and is gradually becoming more prevalent worldwide. It is among the first five types of cancer encountered in women in the World and in Turkey (Bray et al. 2018). Although breast cancer is one of the most common types of cancer among women, it usually progresses slowly, can be treated successfully and have a lower mortality rate when diagnosed early. BSE, breast ultrasonography, clinic breast examination and mammography are used in the early diagnosis of breast cancer (Bray et al. 2018; Foster & Costanza 1984; Koç & Saglam 2009).

Individual's perceptions about health behaviors may sometimes have a negative impact on realizing the behaviors. One of these perceptions is barrier perception. There are many factors increasing barrier perception and fatalistic approach is one of them. Fatalism perception may have a negative impact on realizing behaviors. Thus, it is of prime importance to determine fatalism which is effective on earning early diagnosis behaviors in the protection and development of health (Ersin et al. 2018). In the literature, interventions aimed at developing breast cancer early diagnosis behaviors and earning preventive health behaviors in breast health, suggest that health beliefs (Gozum &

Aydin 2004; Mermer 2010; Ersin & Bahar 2012; Acikgoz, Cehreli & Ellidokuz 2015; Kartal et al. 2017; Avci, Atasoy & Sabah 2007; Aydogdu & Bahar 2011; Hajian et al. 2011; Khiyali et al. 2017; Kolutek & Avci 2015; Yilmaz, Sayin & Cengiz 2017; Masoudiyekta et al. 2018) and fatalistic approach (Ersin et al. 2018; Gozum & Aydin 2004; Mermer 2010; Ersin & Bahar 2012; Acikgoz, Cehreli & Ellidokuz 2015; Kartal et al. 2017; Avci, Atasoy & Sabah 2007; Aydogdu & Bahar 2011; Hajian et al. 2011; Khiyali et al. 2017; Kolutek & Avci 2015; Yilmaz, Sayin & Cengiz 2017; Masoudiyekta et al. 2018; Kulakci et al. 2015) are effective. Therefore, determining women's health beliefs and fatalism in earning and sustaining breast cancer early diagnosis behaviors is of great importance for planning interventional studies. In addition, there is a limited number of studies investigating breast cancer fatalistic approach and health beliefs together in the world (Kulakci et al. 2015; Amy 2016; Akhigbe & Akhigbe 2012; Kissal et al. 2018; Talbert 2018). Thus, the present study was conducted for the purpose of examining the correlation between breast cancer fatalism and health beliefs of mothers of children hospitalized in the pediatric surgery clinic of a university hospital.

### Materials and Methods

It is a descriptive study and no sampling method was used. The sample consisted of 355 mothers accompanying pediatric patients who were hospitalized in the pediatric surgery clinic of a university hospital in Sanliurfa between April-August 2019.

**Data collection tools:** Data collection tools were; the Individual Diagnosis Form (Kulakci et al. 2015; Altintas-Kulakci & Aslan-Korkmaz 2019; Altintas et al. 2017), which was created by the researchers reviewing the literature, Breast Cancer Fatalism Scale and the Health Belief Model Scale for Breast Cancer and Screenings (HBMS).

**Breast cancer fatalism scale:** The scale was developed by Powe in 1995 (Powe 1995) and the Turkish validity and reliability of the scale were demonstrated by Ersin *et al.* (2018) in 2014 (Ersin et al. 2018). The scale includes 11 items and while the answer "Yes" is calculated as 1 point, the answer "No" is calculated as 0 point. The highest and lowest possible scores to be obtained from the scale are 11 and 0, respectively. The Cronbach's Alpha value of the scale was found to be 0.797. Increase of scores

obtained from the scale indicates increase of fatalism. The scale can be completed in 3-5 minutes (Ersin et al. 2018).

**The health belief model scale for breast cancer and screenings (HBMS):** The scale was developed by Victoria Champion in 1984 and was rearranged in his subsequent studies (1993, 1997, 1999) (Elik 2006). The Health Belief Model Scale for Breast Cancer and Screenings was adapted into Turkish in three different studies in our country (Gozum & Aydin 2004; Karayurt 2003; Secginli & Nahcivan 2003). This study used the Health Belief Model Scale for Breast Screenings, which was adapted into Turkish by Gozum and Aydin in line with the data acquired from 266 classroom teachers over 20 years in the province of Ordu. The scale includes a total of 58 items; "susceptibility" (3 items), "seriousness" (7 items), "health motivation" (7 items), "BSE benefits" (4 items), "BSE barriers" (11 items), "BSE self-efficacy" (10 items), "mammography benefits" (5 items) and "mammography barriers" (11 items). The scale has no general total score. Total score of each dimension is used.

The Likert-type scale includes values ranging from strongly disagree (1) to strongly agree (5). The scale contains sub dimensions such as; susceptibility perception (3-15 points), seriousness perception (6-30 points), health motivation perception (5-25 points), BSE benefit perception (4-20 points), BSE barrier perception (8-40 points), self-efficacy perception (10-50 points), mammography benefit perception (5-25 points) and mammography barrier perception (11-55 points) (Champion 1999).

The highest and lowest possible scores to be obtained from the scale are 215 and 43, respectively. Increase of scores indicates increase of susceptibility and seriousness and also a higher perception of benefits for benefit perception, barriers for barrier perception, health motivations for health motivation and self-efficacies for self-efficacy (Cenesiz 2007; Karayurt, Coşkun & Cerit 2008; Gumus Sekerci & Sohbet 2019; Gozum, Karayurt & Aydin 2004).

The Cronbach's Alpha value of the original scale was reported to be between 0.65-0.90.

**Ethical dimension of the study:** In order to conduct the study, permissions were obtained from the Ethical Committee of Harran University Medical Faculty (08.04.2019/04), the institution and individuals who would participate in the study.

**Statistical analysis:** The data were evaluated using the SPSS 16.0 package program. In the data analysis; descriptive statistics, independent samples t-test, variance analysis, Mann-Whitney U test and correlation analysis were performed.

## Results

Among the participants; 44.8% were in the age group of 30-39 years, 31.5% were not literate, 96.1% were married, 85.1% had social security, 90.4% were unemployed, 25.6% had 7 and more children and 43.1% lived in the city center (Table 1).

It was determined that 42.8% of mothers were informed about breast cancer and 16.6% had breast cancer history in family. In addition, it was found that 27.6% of the participants were informed about breast cancer early diagnosis and screening methods and among those who were informed about breast cancer early diagnosis and screening methods, 11.8% had obtained that information from medical personnel, 95.9% did BSE, 57.1% had mammography and 6.1% had CBE. It was determined that 8.5% of mothers who were familiar with BSE did it regularly; those who were familiar with CBE had it once in every 2-3 years and 23.2% of those who were familiar with mammography had it once in every 2-3 years.

Self-efficacy sub dimension score average of the Health Belief Model Scale was found to be  $27.70 \pm 8.51$  and BSE barrier perception sub dimension score average was  $21.75 \pm 4.77$ . The Breast Cancer Fatalism Scale score average was found to be  $5.41 \pm 1.47$  (Table 2).

It was determined that there was a significant difference between participants' age and susceptibility, health motivation, BSE benefit, BSE barrier and self-efficacy perceptions; between their educational background and health motivation, BSE benefit, BSE barrier and self-efficacy perceptions; between their social security and seriousness, family type, health motivation, BSE benefit, BSE barrier and self-efficacy perceptions; and between their surrounding area and health motivation, BSE benefit, BSE barrier and self-efficacy perceptions ( $p < 0.05$ ). It was determined that there was a significant difference between age, educational background, employment, family type, surrounding area and breast cancer fatalism perception ( $p < 0.05$ ). It was determined that there was a significant difference between mothers' information about breast cancer, health beliefs and breast cancer history in family, susceptibility, seriousness, BSE benefit-barrier and self-efficacy perceptions ( $p < 0.05$ ). It was determined that there was a statistically significant difference between information about breast cancer, information about breast cancer early diagnosis and screening methods, source of information about breast cancer early diagnosis and screening methods, and breast cancer fatalism perception ( $p < 0.05$ ) (Table 3). It was determined that there was a positively weak and significant correlation between BSE benefit and barrier perceptions and breast cancer fatalism perceptions; a negatively weak and significant correlation between self-efficacy perceptions and breast cancer fatalism perceptions of mothers (Table 4).

**Table 1. Distribution of socio-demographic characteristics of mothers (n=355)**

Variables	n	%
<b>Age (years)</b>		
20-29	90	25.4
30-39	159	44.8
40-49	81	22.8
≥50	25	7.0
<b>Education level</b>		
Not literate	112	31.5
Literate	97	27.3
Primary school	62	17.5

Secondary school	30	8.5
High school and over	54	15.2
<b>Marital status</b>		
Married	341	96.1
Single	14	3.9
<b>Social security</b>		
Yes	302	85.1
No	53	14.9
<b>Employment status</b>		
Employe	34	9.6
Unemploye	321	90.4
<b>Number of children</b>		
1-3 child	109	30.7
4-6 child	155	43.7
7 and over	91	25.6
<b>Family type</b>		
Small family	108	30.4
Large family	247	69.6
<b>Place of residence</b>		
Village	106	29.9
County	96	27.0
City center	153	43.1
<b>Total</b>	<b>355</b>	<b>100.0</b>

**Table 2. Health belief model scale and breast cancer fatalism scale score averages of mothers**

Scales	X ± SS	Min - Max scores
<b>Health belief model scale</b>		
Susceptibility	5.72 ± 2.36	3.00 - 15.00
Seriousness	21.42 ± 4.60	6.00 - 30.00
Health motivation	21.47 ± 4.52	5.00 - 25.00
BSE benefits	21.75 ± 4.77	4.00 - 20.00
BSE barriers	21.75 ± 4.77	8.00 - 40.00
BSE self-efficacy	27.70 ± 8.51	10.00 - 50.00
<b>Breast cancer fatalism scale</b>		
Total score	5.41 ± 1.47	00.00 - 11.00

**Table 3. A comparison of the health belief model scale and breast cancer fatalism scale score averages of mothers according to their socio-demographic characteristics**

Characteristics	Health belief model scale sub dimensions						Breast cancer fatalism scale
	Susceptibility	Seriousness	Health motivation	BSE benefits	BSE barriers	BSE self-efficacy	
	X ± SD	X ± SD	X ± SD	X ± SD	X ± SD	X ± SD	X ± SD
<b>Age(years)</b>							
20-29	5.20 ± 2.05	21.57 ± 4.31	21.47 ± 6.30	21.44 ± 4.50	21.44 ± 4.50	28.18 ± 7.36	5.27 ± 1.55
30-39	5.64 ± 2.29	21.60 ± 4.37	21.89 ± 4.49	21.28 ± 4.84	21.28 ± 4.84	29.07 ± 9.40	5.25 ± 1.39
40-49	6.23 ± 2.74	21.66 ± 4.69	20.91 ± 2.14	22.20 ± 4.83	22.20 ± 4.83	25.58 ± 7.82	5.72 ± 1.49
≥50	6.44 ± 2.06	18.92 ± 6.12	20.60 ± 1.80	24.44 ± 4.27	24.44 ± 4.27	24.12 ± 6.38	5.96 ± 1.36
<b>Statistical value</b>	<b>K-W=10.077 p=.018</b>	K-W=4.544 p=.208	<b>K-=11.041 p=.012</b>	<b>K-=12.128 p=.007</b>	<b>K-=12.128 p=.007</b>	<b>K-W=9.742 p=.021</b>	<b>K-= 14.940 p=.002</b>
<b>Education level</b>							
Not literate	6.10 ± 2.46	20.95 ± 5.38	20.27 ± 2.49	23.50 ± 4.20	23.50 ± 4.20	24.67 ± 6.99	5.72 ± 1.46
Literate	5.39 ± 2.17	21.34 ± 4.23	21.21 ± 5.33	22.44 ± 4.03	22.44 ± 4.03	25.60 ± 7.19	5.45 ± 1.35
Primary school	5.82 ± 2.37	22.29 ± 3.79	21.17 ± 2.04	22.24 ± 4.09	22.24 ± 4.09	27.08 ± 6.93	5.56 ± 1.40
Secondary school	5.66 ± 2.29	21.13 ± 4.36	21.63 ± 1.90	21.13 ± 4.64	21.13 ± 4.64	29.86 ± 8.94	5.50 ± 1.50
High school and over	5.42 ± 2.45	21.70 ± 4.46	24.66 ± 7.17	16.70 ± 4.55	16.70 ± 4.55	37.25 ± 8.10	4.50 ± 1.42
<b>Statistical value</b>	<b>F=1.470 p=.211</b>	F=.925 p=.449	<b>F=9.710 p=.000</b>	<b>F=24.988 p=.000</b>	<b>F=24.988 p=.000</b>	<b>F=29.932 p=.000</b>	<b>F=7.111 p=.000</b>

<b>Marital status</b>							
Married	5.73 ± 2.36	21.48 ± 4.59	21.48 ± 4.58	21.78 ± 4.73	21.78 ± 4.73	27.67 ± 8.38	5.42 ± 1.48
Single	5.42 ± 2.27	20.00 ± 4.75	21.07 ± 2.78	21.21 ± 5.79	21.21 ± 5.79	28.35 ± 11.68	5.14 ± 1.09
<b>Statistical value</b>	MU=-.425 p=.671	MU=-1.205 p=.228	MU=-.025 p=.980	MU=-.138 p=.890	MU=-.138 p=.890	MU=-.350 p=.726	MU=-1.178 p=.239
<b>Social security</b>							
Yes	5.66 ± 2.22	21.13 ± 4.65	21.65 ± 4.80	21.65 ± 4.86	21.65 ± 4.86	27.82 ± 8.85	5.42 ± 1.46
No	6.03 ± 3.01	23.07 ± 3.94	20.41 ± 2.06	22.33 ± 4.17	22.33 ± 4.17	27.03 ± 6.24	5.37 ± 1.49
<b>Statistical value</b>	t= -1.058 p=.291	<b>t= -2.861 p=.004</b>	t=1.853 p=.065	t= -.962 p=.337	t=-.962 p=.337	t=.785 p=.434	t=.212 p=.832
<b>Employment status</b>							
Employe	5.88 ± 2.84	21.97 ± 4.54	23.38 ± 2.20	17.05 ± 4.89	17.05 ± 4.89	36.61 ± 8.83	4.70 ± 1.29
Unemploye	5.70 ± 2.30	21.36 ± 4.61	21.27 ± 4.65	22.25 ± 4.48	22.25 ± 4.48	26.76 ± 7.92	5.49 ± 1.47
<b>Statistical value</b>	t=.418 p=.676	t=.729 p=.466	<b>t=2.609 p=.009</b>	<b>t=-6.365 p=.000</b>	<b>t=-6.365 p=.000</b>	<b>t=6.817 p=.000</b>	<b>t=-2.997 p=.003</b>
<b>Family type</b>							
Small family	5.75 ± 2.63	20.84 ± 4.50	23.03 ± 5.52	18.89 ± 4.89	18.89 ± 4.89	31.88 ± 9.48	4.82 ± 1.53
Large family	5.70 ± 2.23	21.67 ± 4.63	20.78 ± 3.82	23.00 ± 4.14	23.00 ± 4.14	25.87 ± 7.36	5.67 ± 1.36
<b>Statistical value</b>	t=.201 p=.841	t= -1.572 p=.117	<b>t=4.418 p=.000</b>	<b>t= -7.616 p=.000</b>	<b>t= -7.616 p=.000</b>	<b>t=5.862 p=.000</b>	<b>t=-5.202 p=.000</b>
<b>Place of residence</b>							
Village	5.42 ± 2.24	21.55 ± 5.46	20.28 ± 5.24	23.35 ± 3.79	23.35 ± 3.79	24.77 ± 6.27	5.80 ± 1.58
County	5.97 ± 2.44	21.88 ± 4.16	21.48 ± 2.33	21.54 ± 5.27	21.54 ± 5.27	29.34 ± 8.93	5.27 ± 1.42
City center	5.76 ± 2.38	21.03 ± 4.19	22.30 ± 4.84	20.76 ± 4.78	20.76 ± 4.78	28.73 ± 9.12	5.23 ± 1.37
<b>Statistical value</b>	F=1.413 p=.245	F=1.053 p=.350	<b>F=6.469 p=.002</b>	<b>F=9.815 p=.000</b>	<b>F=9.815 p=.000</b>	<b>F=9.656 p=.000</b>	<b>F=5.443 p=.005</b>



**Table 4. Correlation between the health belief model scale and breast cancer fatalism scale averages of mothers**

Health belief model scale	Breast cancer fatalism scale	
	Total score averages	
	r	p
Susceptibility	.088	.098
Seriousness	-.001	.984
Health motivation	-.100	.059
BSE benefits	.283	.000
BSE barriers	.283	.000
BSE self-efficacy	-.241	.000

### Discussion

Breast cancer is the most common type of cancer among women. Thus, having adequate information about breast cancer will facilitate early diagnosis and treatment process. In this study, it was seen that majority of individuals had no information about breast cancer (57.2%). In addition, it was determined that the rate of those who were familiar with breast self-examination was high (95.9%); however, only very few of them (8.5%) did BSE regularly every month. It was found that they generally obtained information about breast cancer early diagnosis and screenings from medical personnel (11.8%). In a study conducted, it was determined that 43% of women had no information about breast cancer and they generally obtained information about breast self-examination from medical personnel (19.8%) (Kocuyigit et al. 2011). Also in the study conducted by Lostao *et al.* (2001) and Dewal (2006), it was indicated that women had no adequate information about screening methods and even if they did, they neither did BSE nor had mammography regularly (Lostao et al. 2001; Dewal 2006). In studies conducted in our country, the rates of breast self-examination are not adequate either (Aydin, Uludag & Şahin 2004; Duman, Buyukgonenc & Pınar 2013; Duman et al. 2015; Dundar et al. 2006; Secginli & Nahcivan 2006). Fact that only a part of mothers do BSE despite being familiar with the method at higher rates, may indicate that they are not aware of the importance of early diagnosis behaviors. This reveals the necessity of providing more training on this matter.

Health beliefs of individuals play a key role in breast cancer early diagnosis behaviors (Ersin & Bahar 2012; Yarbrough & Braden 2001; Nahcivan & Secginli 2003). In this study, it was seen that mothers obtained the highest score average among health beliefs from the self-efficacy perception ( $27.70 \pm 8.51$ ), whereas their susceptibility and health motivation perceptions were lower. In the study conducted by Kulakci *et al.* (2015) with nursing students, it was seen that their susceptibility, seriousness and self-efficacy perceptions were higher (Kulakci et al. 2015). In the study conducted by Aydin, Uludag & Şahin (2004), it was found that students' susceptibility and seriousness perceptions were moderate, health motivation, benefit and self-efficacy perceptions were higher and barrier perceptions were lower (Aydin, Uludag & Şahin 2004). In another study carried out with students, it was found that their susceptibility, seriousness, self-efficacy and health motivation perceptions were moderate, benefit perceptions were higher and barrier perceptions were lower (Yucel et al. 2014). In another study, it was determined that their seriousness, health motivation, BSE benefit and self-efficacy perceptions were moderate and susceptibility and BSE barrier perceptions were lower (Altıntas-Kulakci & Aslan-Korkmaz 2019). In the study, mothers did not have adequate levels of health belief, which makes us think that they do not have adequate information about this matter.

Fatalistic approach is important in realizing early diagnosis behaviors (Ersin & Bahar 2012; Pehlivan, Yildirim & Fadilolu 2013;

Niederdeppe & Levy 2007; Akhtari-Zavare 2013; Talbert 2008; Charkazi et al. 2013; Ersin & Bahar 2013). In this study, breast cancer fatalism score averages of mothers were found to be moderate. Breast cancer fatalism perception was found to be lower (Kulakci et al. 2015; Altintas-Kulakci & Aslan-Korkmaz 2019; Altintas et al. 2017; Powe, Daniels & Finnie 2005) in some studies conducted with different groups and higher (Azaiza et al. 2010; Vrinten, Wardle & Marlow 2016) in some others. In the study, fatalism perceptions of mothers were moderate, which significantly indicates that they have a fatalistic tendency and inadequate awareness on this matter. Fact that their fatalism perceptions were lower might have been associated with engaging in a sick child's care at that moment and being affected by disease process. This finding can be considered important as it also reflects cultural characteristics of their society. Thus, it is important that training programs that may increase the awareness levels of individuals are conducted (Pehlivan, Yildirim & Fadiloglu 2013).

In this study, it was seen that health motivation perception, BSE benefit, barrier and self-efficacy perceptions and breast cancer fatalism perception were affected by educational background; seriousness perception by social security; health motivation, BSE benefit, barrier and self-efficacy perceptions and breast cancer fatalism perception by employment; health motivation, BSE benefit, barrier and self-efficacy perceptions and breast cancer fatalism perception by family type; health motivation, BSE benefit, barrier and self-efficacy perceptions and breast cancer fatalism perception by surrounding area. In the study conducted by Altintas-Kulakci and Aslan (2019), it was determined that there was a significant difference between age and health motivation perception and BSE barrier perceptions; between educational background and health motivation, BSE barrier perception and self-efficacy perception; between marital status and health motivation perception, family type and susceptibility, barrier and self-efficacy perceptions (Altintas-Kulakci & Aslan-Korkmaz 2019). In the study conducted by Tastan *et al.* (2011), it was determined that there was a significant difference between educational background and health motivation, BSE benefit, BSE barrier and self-efficacy perceptions; between marital status and BSE benefit and self-

efficacy; between having breast cancer history in family and susceptibility and self-efficacy perceptions. In the study, health-related behaviors of individuals were thought to be affected by socio-demographic characteristics (Tastan et al. 2011).

In this study, it was determined that there was a positively weak and significant correlation between BSE benefit and BSE barrier perceptions and breast cancer fatalism perceptions of individuals. Considering that both barrier and fatalism perceptions are the two hindering factors in realizing breast cancer early diagnosis behaviors; in the study, barrier perception increased whereas breast cancer fatalism perception decreased, which was an expected result. However, fact that breast cancer fatalistic perception increased as benefit perception increased makes us think that individuals have inadequate susceptibility and seriousness levels on this matter. In the study, it was determined that there was a negatively weak and significant correlation between BSE self-efficacy perception and breast cancer fatalistic perception. Self-efficacy perception is important as it indicates individual's belief to realize a behavior. The study result shows that as self-efficacy perception increases, breast cancer fatalistic perception decreases. In the study conducted by Kulakci *et al.* (2015), it was indicated that there was a positively weak correlation between breast cancer fatalistic perceptions of individuals who participated in the study and perceived susceptibility and perceived benefit (Kulakci et al. 2015). The results acquired from the studies are important as they demonstrate the correlation between fatalism perception and health beliefs.

**Conclusion and Recommendation:** It was seen that individuals who participated in the study had inadequate information about breast cancer and they generally obtained that information from medical personnel. In addition, it was seen that individuals had inadequate levels of health beliefs and breast cancer fatalism perceptions and these perceptions were affected by a number of factors. Also it was determined that there was a positively weak and significant correlation between BSE benefit and barrier perceptions and breast cancer fatalism perceptions; a negatively weak and significant correlation between self-efficacy perceptions and breast cancer fatalism perceptions. In line with these results; it is suggested that interventional nursing studies



peculiar to the culture of individuals are conducted to increase their breast cancer susceptibility, seriousness, benefit, health motivation and self-efficacy perceptions and to decrease their barrier perceptions and breast cancer fatalism perceptions and also studies in larger samples are conducted to determine the correlation between health beliefs and fatalism perceptions of individuals.

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