

## Illness Perception in Breast Cancer Patients: A Mixed-Method Research

### Abstract

**Background:** Breast cancer is perceived as a fatal disease causing physical, psychological, and sexual problems. The perception of the individuals regarding their disease affects the treatment process and physical/mental/social health. Therefore, identifying the perception of patients regarding breast cancer may help to reduce anxiety and improve quality of life.

**Aim:** This study was conducted to investigate the perceptions of patients with breast cancer regarding illness.

**Methods:** This mixed-method study was carried out between June and September 2019 at the oncology clinic of a university hospital. The study sample consisted of 17 patients. The data were collected face to face using a semi-structured interview form and the illness perception questionnaire. The qualitative data were analyzed using thematic analysis, and the main themes were determined.

**Results:** The mean age of the patients was  $55.47 \pm 15.23$ , the disease stage of four of the patients was stage I, nine received chemotherapy, and six had metastasis. The patients obtained the highest mean score from personal management ( $20.52 \pm 2.03$ ) and the lowest mean score ( $10.64 \pm 3.87$ ) from the duration (cyclical) perception. It was found that the patients saw psychological attributions as the cause of their illness. The content analysis determined six main themes and eight sub-themes. The themes were body image, spirituality, social/professional support, fear/sadness, awareness of early diagnosis, and role change.

**Conclusion:** It was concluded that the patients perceived breast cancer as a chronic disease with negative consequences. It was also determined that the patients believed in the cyclical nature of the disease, and their negative emotions provoked by the illness were high.

**Keywords:** Breast cancer, illness perception, mixed method research

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### Introduction

Breast cancer (47.8%) became the most commonly diagnosed cancer type in the world, and there were more than 2.26 million new cases of breast cancer and almost 685 000 deaths from breast cancer worldwide in 2020.1 It was reported that 69.2 of every 100.000 women in the world and 46.6 in Türkiye are diagnosed with breast cancer in all age groups.1,2 As a result of the improvements in breast cancer screening and treatment methods, 90% of women with breast cancer live at least 5 years after their diagnosis.3 In this process, individuals with breast cancer experience physical, psychological, and spiritual problems. These problems negatively affect the quality of life, well-being, and perception of the disease.4-7 The perception of the individuals with breast cancer regarding their disease and its treatment affects the treatment process, disease control, physical/mental/social health, and their adaptation to treatment.3,4,8-10 The findings from the literature show that breast cancer is perceived as a fatal disease causing problems related to physical, psychological, sexual, and professional life, threatening the life, and the role of the individual, especially as a woman.8,9,11,12 The changes in the breast and the body of the woman are perceived as a traumatic life experience and affect the well-being and health perception of the woman negatively by disrupting her body image,6,13,14 due to breasts are considered as the symbol of womanhood, sexuality, physical attractiveness, and motherhood in most societies.8,12

Understanding the meaning and effect of the disease is an important dimension of modern nursing philosophy.5 Identifying the perception of patients regarding breast cancer may help to ensure compliance with the treatment and the disease and improve quality

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of life. At the same time, it is also important in terms of planning nursing care interventions to determine the disease perceptions of patients with breast cancer, to examine their experiences in depth, their current needs in this process and to plan care interventions for these needs. Therefore, this study was conducted as a mixed study to investigate the perceptions of patients with breast cancer about the disease. As far as the authors have researched, no mixed study has been found in the literature that qualitatively and quantitatively evaluates the disease perceptions of patients with breast cancer. We believe that the data obtained in this study can be used to better understand the disease perception of patients with breast cancer and to structure nursing practices that will positively improve disease perception.

### Study Questions

- What are the perceptions of the patients regarding breast cancer?
- What do the patients think about breast cancer and their treatment process?
- How did breast cancer affect the patients' view of life?

## Methods

### Research Type

The research was conducted in mixed methodology qualitative and quantitative types.

### Population and Sample of Research

The study universe consisted of 571 patients who received treatment due to breast cancer (chemotherapy and radiotherapy) at the radiation oncology clinic of a university hospital. The study group was determined using the criterion sampling method from purposeful sampling methods.<sup>15</sup> In the in-depth interviews, it was reported that when data saturation is reached and the data start to repeat itself, the research application can be terminated and qualitative interviews can be conducted with 5–25 people who have experienced the phenomenon. This study was based on the principle of data saturation and the interviews were terminated after the 17th individual interview.<sup>16</sup>

In the framework of the predetermined essential criteria, 17 patients between the ages of 18 and 65 (16 females, 1 male) who received chemotherapy or radiotherapy treatment due to breast cancer between June 20 and September 5, 2019, who did not have any vision/hearing/communication disabilities, who agreed to participate in the study, constituted the sampling of the study. Patients with breast cancer who could not speak Turkish did not receive chemotherapy and radiotherapy, had vision/hearing/communication problems, had a psychiatric diagnosis, and did not agree to participate in the study were excluded. The same sample group of 17 patients was used in the quantitative part of the study.

### Data Collection Tools

The “descriptive characteristics form, semi-structured interview form, and illness perception questionnaire-revised (IPQ-R)” were used as data collection tools. Qualitative data were obtained by the researchers in the room prepared for the interview in the oncology ward, face-to-face interview, and voice recording with breast cancer patients who agreed to participate in the study. Both qualitative and quantitative collection tools were applied at the same time.

### Descriptive Characteristics Form

The form that was developed by the researchers consisted of two parts.<sup>8,17-20</sup> There were 7 questions including some sociodemographic characteristics of patients in the first part of the form and 6 questions about determining the patients' history of breast cancer (history of breast cancer in the family/immediate relatives, time of diagnosis of breast cancer, treatments received, operations, presence of metastasis, and perception of social support after the diagnosis) in the second part of the form.

### Semi-Structured Interview Form

The form was developed by the researchers as a result of the review of the relevant literature<sup>7,17-21</sup> and had 8 open-ended questions to determine the perceptions of the patients regarding breast cancer. It was then presented to two experts in the field of nursing to receive their opinions, and the form was finalized by making the necessary arrangements in line with the recommendations of these experts. The questions on the form are listed below:

1. What does breast cancer mean for you?
2. How did you feel when you first learned that you had breast cancer?
3. How did breast cancer/treatment affect your close relations with your spouse, your children, and your friends?
4. How do you feel as a breast cancer patient? (As a woman, mother, spouse, son/daughter, friend)?
5. What do you think about the disease and your treatment process?
6. What do you think about your coping with breast cancer status?
7. How did breast cancer affect your view of life? Why?
8. What is the most important target in your life at the moment?

### Illness Perception Questionnaire-Revised

The scale was developed by Weinman (1996)<sup>22</sup> and was revised by Moss-Morris et al. (2002)<sup>23</sup> afterward. The validity and reliability study of the Turkish version of the scale was performed by Kocaman et al.<sup>24</sup> The IPQ-R consists of three dimensions: Illness identity, perceptions about the illness, and the causes of illness.<sup>24</sup> “The illness identity” sub-dimension was not used in this study. The “opinions on disease” dimension of the scale includes seven subscales, which are duration (acute/chronic), results, personal control, treatment control, ability to understand the disease, duration (cyclical), and emotional representations.<sup>24</sup> Higher scores in sub-dimensions mean that the condition is chronic and has a cyclical nature, the disease has negative consequences, a person has positive beliefs about the disease and his/her ability to control the treatment, personal understandability of the situation, and negative emotions provoked by the disease, respectively. The “causes of disease” dimension of the scale investigates the person's thoughts on possible causes of the disease and includes four subscales, which are psychological attributions, risk factors, immunity, accident, or chance.<sup>24</sup> The alpha coefficients of the sub-scales of the Turkish version of the scale varied between 0.69 and 0.77.<sup>24</sup> In this study, Cronbach's alpha coefficients of the sub-dimensions varied between 0.59 and 0.77. The alpha reliability coefficients of the subscales of the causes of the disease varied between 0.25 and 0.72,<sup>24</sup> and it was found that this varied between 0.53 and 0.77 in our study.

### Data Collection

Before data collection, a pilot study was conducted with two patients who met the inclusion and exclusion criteria. Then, questions that were not understood or needed to be removed were revised. Patients included in the pilot study were not included in the sample. It was stated to each patient who accepted to participate in the study that the interviews would be recorded and that the confidentiality of voice recordings and other data received would be ensured. The quantitative data were collected using the descriptive characteristics form and IPQ-R. Afterward, in-depth interviews were conducted with each patient by asking a semi-structured interview form using a face-to-face interview technique by each researcher. The statements of the patients were transcribed verbatim without any changes because a detailed report of the collected data is one of the important criteria ensuring the validity of a study with qualitative data.<sup>25</sup> Questioning and summarizing techniques were used by the researchers to reveal the thoughts and experiences of the patients. Each interview lasted for 45–50 min on average. A summary was made at the end of the interview, and the patients were offered the opportunity to add information or remove. The study is reported by consolidated criteria for reporting qualitative research guidelines.<sup>26</sup>

### Data Analysis

The quantitative data were analyzed in the SPSS 22.0 software (IBM statistical package for the social sciences statistics version 22 software package, IBM SPSS Corp.; Armonk, NY, USA). Frequencies, mean, and standard deviation were used for the descriptive variables. The qualitative data were subjected to content analysis, and the main themes were determined.

Content analysis as a research method is a systematic and objective means of describing and quantifying phenomena.<sup>16</sup> First, all interviews were transcribed by three researchers as a word document which consists of 16 pages with 12-point font and 1.5 line spacing, and each of the three researchers read the interview transcripts independently of the other researcher. After that, the study data were analyzed in four stages: (1) Data encoding, (2) finding the themes, (3) editing the codes and themes, and (4) identifying and interpreting the findings.<sup>16</sup> In the first step, the data obtained from the answers of the patients were divided into sections as meaningful wholes and were then encoded. The encoding process was completed according to the code obtained from the data. Based on the resulting codes, the codes were grouped under certain categories, and themes were formed.<sup>16</sup> The findings were revealed in light of these themes, and results were reached. To ensure the reliability of the content analysis, the analyses were finalized after being reviewed by another expert in the field.<sup>27</sup> Patients were coded according to participation order (P1F, P2F, P14P).

### Ethical Considerations

Ethical approval was obtained from Sivas Cumhuriyet University Non-Interventional Research Ethics Committee (decision no: 2019-05/29; Date: May 22, 2019). Written informed consent was obtained from the patients with breast cancer. Moreover, while written informed consent was obtained from the patients with breast cancer, it was stated both verbally and in the consent form that the voice recordings would remain confidential and their names would be coded in the study. The confidentiality of all research data was respected. The study was conducted following the principles of the Declaration of Helsinki.

### Results

The mean age of the patients was  $55.47 \pm 15.23$ , while 16 were women, five were illiterate, the disease stage of four of the patients was stage I, nine received chemotherapy, and six had metastasis (Table 1).

The illness perception dimension has seven sub-scales duration (acute/chronic), outcomes, personal management, treatment management, ability to understand the illness, duration (cyclical), and emotional representations. The mean scores in these dimensions were  $18.82 \pm 2.89$ ,  $18.00 \pm 5.46$ ,  $20.52 \pm 2.03$ ,  $16.64 \pm 1.90$ ,  $14.29 \pm 4.28$ ,  $10.64 \pm 3.87$ , and  $20.17 \pm 5.32$ , respectively. The cause dimension has four sub-scales psychological attributions, risk factors, immunity, and accident or chance. The mean scores in these dimensions were  $16.41 \pm 5.14$ ,  $15.70 \pm 6.08$ ,  $6.76 \pm 2.72$ , and  $3.88 \pm 1.79$ , respectively (Table 2).

In the content analysis of the interviews, six main themes and eight sub-themes were determined. The themes that were determined were body image, spirituality (fatalism, hope/belief in treatment, coping), social/professional support, fear/sadness, awareness of early diagnosis, and role change (spouse, mother, woman, daughter/son, professional role) (Table 3).

#### Theme 1: Body Image

It was found that most of the patients who had a mastectomy had their body image deteriorated and their physical and emotional health was adversely affected ( $n=14$ ). As the process progressed, it was found that they got used to this situation and that their priority was health. In addition, patients with mastectomy stated that they tried to find various solutions such as padded bras and prostheses to improve their body image.

"At first, I felt bad especially due to the fear of losing my breast. I wondered what would happen, would they take my breast. Now I don't care at all, I even say they should take both of them."(P11)

"Of course, I was shocked when I first learned about it. I never expected this. I feel incomplete as a woman because my breast was removed. It's irritating to be seen this way."(P13)

"Removal of my breast did not affect me negatively. What will I do with breasts after this age..."(P9)

#### Theme 2: Spirituality

All patients had a disease caused by Allah and it was difficult for them to accept the disease (tearful tone of voice, tears in their eyes), but they still had hope of recovery ( $n=17$ ). At the same time, it was determined that the patients had plans and positive expectations for the future (especially for their children), but their coping could be ineffective or inadequate. Three sub-themes were identified under the main theme of "spirituality" as a result of the analysis of the answers of the patients with breast cancer.

##### Sub-theme 1: Fatalism

"I said I did not have breast cancer, I would overcome it, I sometimes say whatever Allah wills will happen, if I die, I die."(P6)

"My life is over. I have been ill for not 12 days, but 12 years."(P8)

"I was afraid when I learned for the 1<sup>st</sup> time. Thankfully, I believe in Allah. If I did not, it would be more difficult to cope."(P10)

##### Sub-theme 2: Hope/ belief in the treatment

Table 1. Descriptive Characteristics of Patients (n=17)	
Descriptive characteristics of patients	n (%)
<b>Age</b>	
Mean age: 55.47±15.23 years (min: 28 years, max: 80 years)	
<b>Gender</b>	
Female	16 (94.1)
Male	1 (5.9)
<b>Educational status</b>	
Illiterate	5 (29.2)
Literate with no formal degree	2 (11.8)
Primary-secondary school	8 (47.2)
High school	2 (11.8)
<b>Family history of breast cancer</b>	
Yes	6 (35.3)
No	11 (64.7)
<b>Time elapsed after diagnosis</b>	
Shorter than 1 year	8 (47.1)
1 year	3 (17.6)
2 years	1(5.9)
3 years	2 (11.8)
4 years and above	3 (17.6)
<b>The disease stage</b>	
Stage I	4 (23.5)
Stage II	5 (29.5)
Stage III	4 (23.5)
Stage IV	4 (23.5)
<b>Treatments she/ he received</b>	
Chemotherapy	9 (52.9)
Radiotherapy	8 (47.1)
<b>Type of operation performed</b>	
Simple	7 (41.2)
Modified	8 (47.0)
Not operated	2 (11.8)
<b>Metastasis</b>	
Yes	6(35.3)
No	11(64.7)
<b>Social support perception level</b>	
Sufficient	13(76.5)
Insufficient	1(5.9)
Partially sufficient	3(17.6)

Table 2. The Perceptions of Illness and Causes of Illness Dimension of Illness Perception Questionnaire Scales			
Illness perception questionnaire	X±standard deviation	Min	Max
<b>The illness perception</b>			
Timeline (acute/chronic)	18.82±2.89	14	25
Outcomes	18.00±5.46	6	26
Personal management	20.52±2.03	17	23
Treatment management	16.64±1.90	14	21
Ability to understand the illness	14.29±4.28	8	25
Duration (cyclical)	10.64±3.87	4	18
Emotional representations	20.17±5.32	8	29
<b>The causes of illness</b>			
Psychological attributions	16.41±5.14	7	25
Risk factors	15.70±6.08	7	26
Immunity	6.76±2.72	3	12
Accident or chance	3.88±1.79	2	7

“What will happen, until when the disease will last, will I be able to beat it? Is the treatment long or short?.”(P1)

“I thought I would overcome it because it is stage I and 3 years passed like this. Bone and liver metastasis developed at the end of the 3 years.... I still have high hopes, .... It is a long and troublesome path.”(P2)

“How will I become, what will I get, will it spread?” (crying)(P3)

“My children, my children, and living. My children.”(P4)

“I want to live in peace. ... also writing a book about how I overcame the disease and give seminars to young people.”(P17)

Table 3. Themes and Sub-Themes Generated According to Qualitative Data of Breast Cancer Patients	
Theme	Sub-Theme
Body image (14)	-
Spirituality (17)	Fatalism (17) Hope/belief in treatment (10) Coping (11)
Social/professional support (16)	-
Fear/sadness (15)	-
Awareness of early diagnosis (17)	-
Role change (13)	Spouse (13) Mother (13) Woman (10) Daughter/son (4) Profession (6)

**Sub-theme 3: Coping**

"I was sad, very sad. ... but when I looked around, I said 'Everyone is like me'. There are patients younger than me. If I think positively, I beat the disease, but if I think negatively, the disease beats me."(P7)

"I think of positive things, I am trying not to keep a bad thought in my mind. Attention, care, morale... All of these are very, very important to overcome this disease."(P11)

"I am not saying I am ill, nor do I accept the disease. I say it is like the flu, I will beat it."(P15)

**Theme 3: Social/Professional Support**

It was determined that most of the patients had sufficient social and professional support and this had a positive effect on them (n=16).

"I came to live with my sister in the treatment process. My friends, people in my environment changed. This made it very difficult for me."(P1)

"I have no one. There are no friends or relatives in my neighborhood, all solitary, only old people. .... May Allah help me."(P8)

"The support of people around me, nurses and doctors make me feel good. I could be affected negatively if they were indifferent."(P16)

**Theme 4: Fear/Sadness**

The majority of the patients were very sad, afraid, and thinking about their children when they first learned about the disease (n=15).

"I was crushed when I learned about it first. I was afraid my children would become orphans."(P4)

"I was sad first, experienced fear of death."(P12)

"I was shocked when I heard first, my world ended. I experienced sadness."(P1)

"It is a very bad thing. Not something I expected. I was shocked, I constantly cried ...."(P3)

"I stop right there when someone says cancer."(P4)

"I am 28 years old. ... I got this disease in the early times of my pregnancy, which made me feel very complicated emotions. I am still not used to it."(P14)

**Theme 5: Awareness of Early Diagnosis**

All patients went to the doctor for reasons such as swelling in the breast tissue, palpable mass, and armpit pain (n=17). In addition, it was determined that only two patients were diagnosed with breast cancer early and they felt lucky.

"I believe having breast cancer is not a situation to get all sad about. Mine was caught at the first stage. Treatment is possible."(P2)

"I did not feel very bad when I first learned about it. I even felt lucky because it was caught at the first stage."(P17)

**Theme 6: Role Change**

It has been determined that most of the patients have problems with the role of femininity and spouse in connection with the removal of breast tissue and deterioration of body image (n=13). As a result of the analysis of the responses, five sub-themes were identified under the main theme of "role change".

**Sub-theme 1: Spouse**

"My spouse and I were very influenced by it, and we connected more closely."(P1)

"My spouse and I did not have a problem. He is attentive, and he provides morale."(P10)

**Sub-theme 2: Mother**

"Maybe, there were people to take care of my children, but it was difficult. Also, inevitably, I thought what they would do if I could not get well."(P2)

"My children were sad. They are attached to me a lot, especially my older son. Our connections were strengthened."(P7)

"Although they cannot fully comprehend, my children ask questions like "Why are you ill, what will happen, will you be well". My husband's mother is taking care of my 20-day-old baby. I am very sad because I cannot attend adequately."(P14)

**Sub-theme 3: Woman**

"It is difficult to accept the disease of cancer because of its name. I look down, and one of my breasts is absent. I feel I am in a void."(P1)

"I said, I swear, let one breast go. ... because I had not felt like a woman all my life. My husband was very indifferent."(P6)

**Sub-theme 4: Daughter/son**

"My mother-in-law is bedridden. I am also in need of care, but my husband and I are responsible for taking care of her."(P1)

"Even with this state of mine, I fulfill my responsibilities as a daughter. I even called my mother here so that "I could take care of her."(P4)

"My mother's and father's hands are always with me, especially my father's. We go to chemotherapy together."(P11)

**Sub-theme 5: Profession**

"Only my supervisor knows at work. I did not want everyone to know. I did not say it because I am in front of people, everyone would ask, and I would be affected more, and this hasn't been very good for me."(P13)

**Discussion**

The perception of illness is a condition that can vary from individual to individual. The level of knowledge, values, beliefs, experiences, and requirements of individuals are factors that affect perceptions regarding the illness.<sup>9,10</sup> It was found that the highest scores were detected in the sub-dimension of personal control perception. Similarly, in many previous studies that compared disease perception and different variables of women who have breast cancer, the mean scores of personal control perception were higher than in other sub-dimensions.<sup>3,8,9,28</sup> A study conducted on disease perception and the ability to cope with breast cancer reported low perception scores in the personal control dimension.<sup>29</sup> The high perception scores in personal control of the patients in the current study show that their internal control ability was so strong that they could control "the process regarding the duration, course, and treatment of the disease". However, the lowest perception of the patients regarding their opinions on the disease was the perception of the duration dimension (cyclical). The perception of duration (cyclical) was also the dimension in which the lowest scores were recorded in some previous studies conducted on women who had breast cancer.<sup>4,9,30</sup> The perception of duration (cyclical) is about the belief that the disease symptoms

vary from day to day, symptoms sometimes exist and sometimes disappear, and there are good-bad periods of the disease.<sup>22</sup> This can be interpreted as the patients of this study having difficulties in the breast cancer process. It was also found in our study that individuals who had breast cancer most often perceived psychological attributions as the cause of their disease. In the study of Yilmaz Karabulutlu et al. (2019),<sup>9</sup> women who had breast cancer perceived the most frequent risk factors as the cause of the disease. These different findings reported by previous studies show that the different objective and subjective experiences of individuals in both studies changed the perception of the cause of the disease.

In the content analysis of the interviews, six main themes were determined. The themes were body image, spirituality, social/professional support, fear/sadness, awareness of early diagnosis, and role change.

It was determined that the patients with breast cancer experienced deterioration in body image due to aesthetic appearance and femininity loss related to breast loss. This finding may be related to the fact that the patients' disease outcome subscale scores are above the moderate level and the body image change is perceived as a negative consequence of the disease. This finding is similar to the literature. Breast is perceived as a symbol of femininity, sexuality, aesthetic appearance, and motherhood in most societies. Therefore, it was reported that most women experienced body image disturbances because of feelings of loss of femininity and attractiveness perceived together with breast loss, fatigue caused by chemotherapy and other treatments, physical appearance changes due to hair loss and weight changes, and surgical scars.<sup>11,13,18,19,21,27-29,31-33</sup> For this reason, it is recommended that prevention and intervention strategies should be planned and implemented to reduce the problems of body image.

The diagnosis of breast cancer is perceived as a tragic event and a life-changing experience.<sup>34</sup> Women begin to question the meaning and purpose of life during the disease and treatment process and experience spiritual anxiety.<sup>34</sup> Spirituality is, beyond having any religious beliefs, the individual's effort to provide peace of mind regarding the meaning and purpose of life.<sup>35,36</sup> In this study, it was determined that the patients give more importance to spirituality during the disease process and use the word "Allah" and their religion/spirituality as a source of coping. Similarly, in studies investigating women's spiritual experiences, it was reported that the majority of women used the word "Allah" in their interviews.<sup>37-39</sup> In the studies, it was determined that patients used spiritual/religious approaches more as a method of coping with the disease and that this positively affected individuals' expectations about the disease and their coping skills.<sup>19,39</sup> This finding can be interpreted as patients having high personnel management scale subscale scores and therefore using spirituality to control the disease.

It is known that social support has an impact on the physical health, well-being, and adaptation of cancer patients and sufficient social support increases the quality of life and coping strength in patients with breast cancer.<sup>40</sup> Most of the patients with breast cancer, who participated in the current study, expressed that they received social support from their environment and health professionals and that this increased their coping with the disease and psychological well-being.<sup>18,19,41</sup> Therefore, we think that the health-care team should involve the family in care to increase the quality of life and well-being of patients with breast cancer.

In the current study, patients with breast cancer expressed that cancer is a bad and devastating experience, and they fear death and the future of their children. This finding may be related to the patients' high emotional representations subscale score and the negative emotions associated with the illness are high. In studies, it was determined that breast cancer patients expressed uncertainty about the future, inability to cope, and fear of dying. Emotions such as fear, sadness, anxiety, anger, depression, despair, and helplessness are non-negligible parts of the experience among the cancer-affected population to be reckoned with.<sup>41</sup> Therefore, patients should be enabled to express their fears about breast cancer, and nursing interventions related to these fears should be planned, implemented, and evaluated. A multidisciplinary approach may be recommended when necessary.

It was determined in the current study that the patients with breast cancer believed in the importance of early diagnosis of breast cancer and they emphasized that early diagnosis was an important chance for survival. It can be argued that patients had a high awareness of the early diagnosis in this study. Early detection of cancer reduces mortality rates, improving survival and quality of life.<sup>1,2</sup> For this reason, social awareness should be increased using methods such as training, brochures, and social media on the importance of early diagnosis of breast cancer.

In this study, all of the patients stated that they felt inadequate due to the changes in their roles and that they were also worried about their children and parents. This finding is thought to be related to the fact that women are seen as family members primarily responsible for the care of children and family members in Turkish society and shows that role change is perceived as one of the negative consequences of disease by patients. In a study, women who had breast cancer especially said that they experienced a change in their caregiver roles.<sup>19</sup> In a study, it was determined that patients with breast cancer experienced an inability to take responsibility for their family members.<sup>41</sup> Cancer is a lifelong disease that causes significant changes in the lives and roles of cancer patients. For this reason, it is important for health professionals to evaluate the changes in the roles of breast cancer patients in the treatment process and other influences. In this direction, it can be recommended to plan and implement interventions with a multidisciplinary approach that can minimize the effects.

## Conclusion

In this study, the patients with breast cancer perceived breast cancer as a chronic disease with negative consequences, while they had positive beliefs in terms of their disease and their management of treatment. The study also found that they experienced disturbed body image, role changes, and fear of death, used spirituality as a source of coping, and needed social and professional support to survive. Based on the data, it is recommended that all health professionals, especially nurses, take active responsibility in determining the perceptions of patients with breast cancer about their disease and in meeting the need-based counseling care interventions.

**Ethics Committee Approval:** Ethics committee approval was received for this study from Sivas Cumhuriyet University Non-Interventional Research Ethics Committee (date and number: 22.05.2019, 2019-05/29).

**Informed Consent:** Written consent was obtained from all patients participating in the study.

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