




Araştırma Makalesi/ Research Article

Nutritional Experiences and Perceptions of Breast Cancer Patients Receiving Chemotherapy: A Qualitative Study

Kemoterapi Alan Meme Kanseri Hastalarının Beslenmeye İlişkin Deneyim Ve Algıları: Nitel Bir Çalışma

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ABSTRACT

Objective: This study aims to determine the nutritional experiences and perceptions of breast cancer patients receiving chemotherapy. **Methods:** The sample of this qualitative study consisted of 12 breast cancer patients receiving chemotherapy, selected using the purposive sampling method. The data were collected with a semi-structured interview method and evaluated with the phenomenological analysis method.

Results: Three main themes emerged in the research: “hunger for knowledge”, “I want to protect and improve my health” and “the meaning attributed to diet”. According to the results, most of the patients did not get enough information about nutrition in chemotherapy, and they did not know what to eat in this period. Nearly half of the patients considered the foods as medicine and found nutritional solutions to overcome the side effects of chemotherapy.

Conclusion: It is essential to give sufficient nutritional information to patients receiving chemotherapy. The study provides comprehensive information about the nutritional experiences and perceptions of breast cancer patients receiving chemotherapy and is thought to contribute to the planning and implementation of holistic care.

Keywords: Nutrition, phenomenology, chemotherapy, breast cancer, qualitative interviews

ÖZ

Amaç: Araştırmanın amacı; kemoterapi alan meme kanseri hastalarının beslenmeye ilişkin deneyim ve algılarını belirlemektir.

Yöntem: Nitel türde olan araştırmanın çalışma grubunu amaçlı örneklem yöntemine göre seçilmiş kemoterapi alan 12 meme kanseri hastası oluşturdu. Veriler yarı yapılandırılmış görüşme yöntemi ile toplandı ve fenomenolojik analiz yöntemi ile değerlendirildi.

Bulgular: Araştırmanın sonucunda “bilgiye duyulan açlık”, “sağlığımı korumak ve geliştirmek istiyorum” ve “beslenmeye yüklenen anlam” olmak üzere üç ana tema oluşturuldu. Hastaların çoğunluğunun kemoterapide beslenme konusunda yeterli bilgi alamadıkları ve bu süreçte hastaların nasıl besleneceklerini bilemedikleri saptandı. Hastaların yarıya yakınının kemoterapi yan etkileriyle baş edebilmek için beslenmeye yönelik çözümlerde buldukları, besinleri ve beslenmeyi kendilerine şifa olarak gördükleri belirlendi.

Sonuç: Kemoterapi alan bireylere beslenme konusunda yeterli bilginin verilmesi süreç açısından önem taşımaktadır. Bu çalışmada kemoterapi alan meme kanseri hastalarının beslenmeye ilişkin deneyimlerine ve algılarına ilişkin kapsamlı bilgi edinildi. Bu bilgi bütüncül bakımın planlanması ve gerçekleştirilmesine katkı sağlayacaktır.

Anahtar Kelimeler: Beslenme, fenomenoloji, kemoterapi, meme kanseri, nitel araştırma

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Introduction

In the treatment of breast cancer, not only surgical treatment but also therapeutic approaches such as chemotherapy, immunotherapy, and radiotherapy are used (Baykara, 2016). These therapeutic approaches inevitably affect the host cells, nausea, vomiting, mouth sores, diarrhea, fever, and chills are observed, and appetite, physical activity, and body weight decrease (Akyolcu et al., 2019). These adverse effects may expose the patient to nutritional deficiency along with biochemical and histological damages in major organ systems (Hauner et al., 2017).

There is a lack of attention to the nutritional status of cancer patients in clinical practice. However, monitoring and intervention of nutritional status affect both the patient's quality of life and treatment response and clinical outcomes. Since a good strategy for improving nutritional status in cancer patients has not yet been established, it is important to realise personalised treatments for each patient based on nutritional assessments. Factors influencing the nutrition of cancer patients should also be considered (Kim, 2019).

During cancer treatment, patients often experience nutritional problems like appetite changes, constipation, diarrhea, weakness, dry mouth, heavy saliva, mouth sores, nausea, swallowing problems, taste and smell changes, and rapid weight changes (Larsson et al., 2005). Since nutritional issues in cancer patients are complex and variable according to the region and stage of cancer, each patient should be evaluated individually, and appropriate planning should be made based on the evaluation (Kim, 2019).

Various studies report that patients need to be informed about weight control, strategies for health promotion, and nutrition (Halbach et al., 2016; Grob et al., 2020). Many patients with breast cancer advise newly diagnosed people on how to deal with breast cancer based on their own experiences and knowledge (de Kruif et al., 2020). Considering these needs, researchers aimed to determine the nutritional experiences and perceptions of breast cancer patients receiving chemotherapy.

Problem Phrase: The problem phrase of the study; "What are the nutritional perceptions and experiences of breast cancer patients receiving chemotherapy?"

Methods

The type and location of the research

The research was conducted in an interpretative phenomenological design. In interpretive phenomenology, understanding the social world is only possible by comprehending the system of meanings that individuals attribute to it (Kümbetoğlu, 2012). In the interpretative phenomenological approach, the processes of defining and interpreting experiences and making sense of life constitute the most significant steps in describing how individuals perceive reality (Yüksel and Yıldırım, 2015).

People may have trouble expressing what they think and feel, and in some cases, there may be valid reasons for not wanting to explain themselves. Applying interpretative phenomenological analysis, the researcher interprets the mental and emotional orientations of the participants based on what they say. In other words, with this method, it is aimed to examine a certain subject from the participant's own experiential perspective. It is accepted that the researcher's own view of the world is reflected in the process of dealing with the subject, and the interaction between the researcher and the participant also affects the nature of the study. Consequently, in this method, the phenomenological analysis produced by the researcher is always an interpretation of the participant's experience (Smith and Osborn, 2004). The interaction of the researcher with the study does not mean that the research is biased; on the contrary, it is based on the assumption that it is possible to obtain information only through the meanings that the researcher creates in the process of interacting with the data (Smith et al., 1999). For the purpose of the present study, it was found more functional to examine the nutritional experiences and perceptions of breast cancer patients receiving chemotherapy with interpretive phenomenological analysis. In other words, interpretive phenomenological analysis was seen as the most appropriate method for the scope of the present study, as it aimed to address how participants made sense of their personal experiences.

The population of the study included patients with breast cancer followed in the chemotherapy unit of a university hospital. Data was collected between June and August 2021. The criterion sampling method, one of the purposeful sampling methods, was utilised in the study. The patients aged 18 and over, who could speak and understand Turkish, who had undergone breast cancer surgery

for malignancy in the last 2 years, and who received chemotherapy treatment were included in the sample, while those with a psychiatric disorder requiring treatment were excluded from the sample. In qualitative research, when concepts and processes start to repeat each other, the sample size reaches saturation and should be terminated (Baltacı, 2018). Therefore, data collection was continued until the concepts and processes that could answer the research question began to repeat. The study group consisted of 12 patients who met the inclusion criteria. The guidelines for Consolidated Criteria for Reporting Qualitative Research (COREQ) checklist was followed.

Data collection tools

The data were collected using the patient descriptive information form and a semi-structured interview form.

The patient descriptive information form

It is a 7-question form that includes the descriptive characteristics of the participants (age, height, weight, BMI, marital status, educational status, occupation).

Semi-structured interview form

The form prepared using the relevant sources, (Bıçaklı and Yılmaz, 2018; Norouznia et al., 2020; Wampaalu et al., 2016) consists of five open-ended questions investigating the participants' experiences and perceptions of nutrition during the chemotherapy. The questions in the form are as follows:

- What do you think about foods or nutrition?
- Were you informed about nutrition by the health personnel before chemotherapy started? If so, what kind of explanations did they provide to you?
- What have you experienced in your diet during the chemotherapy period?
- What can you tell us if you compare your diet before and after chemotherapy?
- Are there any alternative treatment methods that you are using in this process? If so, what are they?

Data collection

The participants were informed about the research and that a voice recording would be made by the second researcher in a room suitable for the interview in the chemotherapy unit. Both verbal and written consent was obtained from the participants that they agreed to participate in the study. Face-to-face interviews were conducted with each of the participants. The open-ended questions previously created by the researchers were asked by the second researcher and the interview was recorded. The

duration of interviews differed depending on the participants, but the average interview lasted 26 minutes. The interviews were terminated when the data began to recur.

Data analysis

The data were analysed with the phenomenological data analysis (Moustakas, 1994). In this study, firstly, each sentence of the participant was numbered, then repetitive sentences were determined in the participant's expressions and irrelevant sentences were removed (first stage). After this refinement, the expressions were grouped into sets of meanings (second stage), and the grouped meaning clusters were gathered under a theme (third stage). In the next stage, textural and structural descriptions were separated for each participant (fourth stage). In the final stage, the dataset for all participants was organised in the same way for each participant, and common group were formed (fifth stage). After the first draft report, including more specific descriptions and long quotations of the participants, the second draft, including our comments, was prepared.

Informed consent

Each participant was informed about the purpose of the study and that the interview would be recorded with a voice recorder, and their informed consent was obtained from the participants.

Results

The mean age of the participants aged 33-54 was 44.25 (SD±5.91), and the mean BMI was 30.14 (SD±5.27). Participants in the study 41.7% (n=5) were primary school graduates, 33.3% (n=4) were university graduates, 83.3% were married (n=10), and 33.3% (n=4) were working (Table 1).

The three main and four sub-themes that emerged in the research are shown in Table 2:

•Hunger For Knowledge

Complex medical information regarding cancer diagnosis and treatment, decisions to be taken about treatment, disease recurrence, and possible side effects of treatment can significantly affect a patient's life and result in a decrease in her quality of life. Patients should be informed to ensure compliance with chemotherapy and develop strategies to cope with the disease and its side effects. It was determined that most of the patients (n=9) could not get enough information about nutrition during chemotherapy, and they did not know what to eat in this process.

"No one gave me information about nutrition. I ate my own way." (9th Patient)

"We always have questions about nutrition. When we want to eat something, we constantly question whether to eat or not." (7th Patient)

Some of the patients (n=4) emphasised that oncology patients needed a nutritionist or an oncology dietitian.

"It is absolutely necessary to have a nutritionist, an oncology dietitian in oncology hospitals because there is so much, we do not know. When I come here, I want a nutritionist here and ask him/her questions I'm curious about..." (7th Patient)

"...They didn't explain anything to me. I wish they would give us training about nutrition and an oncology dietitian should be available here." (4th Patient)

After receiving their treatment in the chemotherapy unit and going home, patients have to meet their nutritional needs based on their own knowledge and skills. Most of the patients (n=10) obtained nutritional information from the internet and their friends.

"I researched nutrition on the internet, I consumed all the foods that are reported to be healthy on the internet." (1st Patient)

"I looked for information about nutrition on the internet. But when I found a related web page, I didn't say 'Well, that's it'. I decided after reading at least 3-4 pages". (3rd Patient)

"I have a lot of people around me; I did what my friends told me to do. For example, they said that breast milk was good, so I drank breast milk." (4th Patient)

Some of the patients (n=3) received information about nutrition from the doctor.

"My oncologist told me what I should not eat..." (7th Patient)

"I got information about nutrition from my doctor." (10th Patient)

One of the patients explained that s/he followed an oncology dietitian on social media to get information about nutrition.

"There are oncology dietitians that I find reliable on social media, I follow them." (12th Patient)

•I Want to Protect and Improve My Health

Based on the nutritional experiences of the patients, sub-themes of *"my diet has changed"* and *"coping with the side effects by using foods"* have emerged.

-My Diet Has Changed

Nutrition is conscious behaviour that enables the body to take the nutrients needed by the body in sufficient quantities and at appropriate times to

protect and improve health and the quality of life. Most of the patients (n=11) avoided certain foods to protect their health.

"I did not eat pomegranates, grapefruit, oranges. I used to eat molasses before, now I don't consume it either. I tried not to drink much tea and consume coffee and carbonated drinks." (1st Patient)

"...I have never eaten oranges, grapefruits, tangerines, or pomegranates. There are foods I shouldn't eat: I haven't eaten chicken, sausages, salami, or fruit juices for 16 months. I haven't eaten fried food and fatty foods. I never use sugar." (5th Patient)

It was determined that the majority of the patients (n=8) avoided ready-made products to protect their health and preferred natural products more.

"I no longer use packaged products. I consume highland butter and cheese. I try to eat natural products. I prefer natural honey." (2nd Patient)

"I eat natural products in this period, I prepared everything myself. I eat natural eggs and yogurt. I plant vegetables in my own garden." (8th Patient)

It was determined that the majority of the patients (n=9) changed their cooking methods.

"I stay away from frying...I eat a lot of fish. Now I steam them instead of frying." (2nd Patient)

"My cooking method has changed. I used to roast the meat and mushrooms. Now, I try to steam, if possible, so that there is no loss of vitamins anymore, I pay more attention to the nutritional values. I cut vegetables by hand, not with a knife. I learned that cutting with a knife causes vitamin loss." (3rd Patient)

-Coping with The Side Effects by Using Foods

Chemotherapy-induced side effects in cancer treatment can lead to a decrease in the quality of life of patients, and some difficulties in their daily functions and compliance with treatment. More than half of the patients (n=7) were found to have nutritional solutions to cope with the side effects of chemotherapy.

"...I could only drink soup during the period of nausea. There is something for everyone to relieve their nausea. Mine were bagels." (6th Patient)

"I was having nausea after chemotherapy. To relieve nausea, I ate nuts and fruit like almonds, walnuts, hazelnuts, apples, and bananas." (7th Patient)

Table 1. Sociodemographic characteristics of Participants

Participants	Age	BMI	Educational status	Working status	Marital status	Status of having children	Surgery type/applied treatment
1	43	26.8	Primary school	Not working	Married	3	MRM/adjvant chemotherapy
2	48	34.2	Primary school	Not working	Married	-	No surgery yet/neoadjuvant chemotherapy
3	33	28.0	High school	Not working	Married	2	BCS/adjvant chemotherapy
4	35	20.3	Primary school	Not working	Single	-	MRM/adjvant chemotherapy
5	45	31.6	Primary school	Not working	Married	2	MRM/adjvant chemotherapy
6	41	26.6	University	Working	Married	2	MRM/adjvant chemotherapy
7	47	30.8	High school	Not working	Married	2	No surgery yet/neoadjuvant chemotherapy
8	54	41.6	Primary school	Not working	Married	3	No surgery yet/neoadjuvant chemotherapy
9	50	33.9	High school	Working	Single	-	MRM/adjvant chemotherapy
10	47	31.2	University	Working	Married	-	BCS/adjvant chemotherapy
11	45	30.5	University	Working	Married	-	MRM/adjvant chemotherapy
12	43	26.3	University	Not working	Married	1	MRM/adjvant chemotherapy

"I used to peel a quince and put it on my bedside table at night. I used to a piece when I woke up because I was feeling very nauseous. One day I ate so many quinces that I almost choked." (11th Patient)

It was determined that all the patients experienced weight changes.

"I couldn't help myself from eating during the chemotherapy period. I had an increased appetite. I always wanted to eat. I gained a lot of weight, about 30 kilos." (9th Patient)

"I eat a lot of fruit. I gained weight after I started this treatment process." (7th Patient)

Some of the patients (n=3) reported that they were fed up with the foods they frequently consumed during the chemotherapy process.

"I can't eat yogurt and milk. I'm fed up now. I drank goat's milk, and it made me very nauseous. I used turmeric and ginger a lot; I added them to yogurt during my illness. But I can't eat anymore, I'm fed up." (2nd Patient)

"...I ate a lot of nuts during the chemotherapy period to relieve my nausea, I can't eat them anymore. Especially salted peanuts. It makes me sick; we don't even have it at home anymore." (6th Patient)

• **The Meaning Attributed to Nutrition**

This theme was divided into two sub-themes: *"considering food as a medicine"* and *"attitudes towards alternative treatment"*.

-Considering Food as A Medicine

After the treatment has started, some patients not only consume foods to meet the body's energy needs but also believe in foods as a helping agent to recover. At this stage, patients may try to consume the foods they consider part of an adequate and balanced diet more regularly. They can also include foods they have never tried before, as they believe in the healing power of foods. It was determined that most of the patients involved in this study (n=9) considered food as a medicine for themselves.

"I thought that food would heal me." (1st Patient)

“Even though I felt very bad for 3-4 hours, as soon as I felt good, I sat at the table with the feeling of “I must eat”. I didn't eat much, but I motivated myself by thinking “you must eat, you will get better as you eat, you should not miss your meal.” (12th Patient)

A patient stated that her/his diet was interfered with by the people around her/him, but s/he was aware that even though s/he paid attention to a healthy diet, every food would not always have a healing effect.

“My relatives tried to feed me a lot of things. However, unfortunately, not everything can have a healing effect all the time.” (3rd Patient)

It was observed that many patients (n=9) tried the foods they had not consumed before.

“I had never eaten turkey meat before; I included it in my diet.” (3rd Patient)

“I drank breast milk.” (4th Patient)

“I did not use to eat carob, now I eat it. I boil it and drink its water.” (7th Patient)

One patient stated that s/he bought a goat to drink goat milk in line with the recommendations of the people around her/him.

“Goat's milk is very good for this disease,” said my friends and relatives, and we bought a goat. I couldn't drink goat milk at first, then I boiled it and drank. They said, “It would be better if you drink it raw”, but I couldn't drink it, I couldn't drink it anymore, I had to sell the goat.” (2nd Patient)

-Attitudes Towards Alternative Treatment

Patients can use complementary and alternative medicine treatment methods to cope with the side effects of cancer treatment such as nausea, pain, fatigue, relax, reduce their worries about the disease, help their own healing processes and try to treat the disease by themselves. While some receive professional support about alternative treatments, some use them without consulting any healthcare professional. Some patients in this study (n=5) also used alternative treatment methods.

“We had herbalists in Istanbul make medicine. I bought herbal teas like dandelion from herbalists and consumed them.” (2nd Patient)

“In this process, I used bee pollen, propolis, bee bread, resveratrol, curcumin as new food in my diet.” (10th Patient)

“I use nettle and propolis. We bought Anzer honey, for example, I eat it. I make a cure with flaxseed and nettle.” (6th Patient)

Some of the patients (n=3) used alternative treatment secretly from their family or doctor.

“I spent a lot of money on herbal medicines. I used the products secretly from my father and doctor.” (4th Patient)

“...I never asked my doctor when using alternative therapy...” (5th Patient)

It was determined that more than half of the patients (n=7) were skeptical of alternative treatment and did not use it without consulting their doctor, and they did not listen to their friends' and relatives' advice.

“I did not need an alternative treatment method in addition to my diet. My relatives recommended me to use alternative treatment products, but I did not use them because my doctor did not want me to use. I trusted my doctor.” (8th Patient)

“When people around me said anything about Alternative treatments, I never did anything without consulting my own doctor.” (7th Patient)

Some patients (n=3) did not use alternative treatment because they thought that the effectiveness of the drug would decrease or that it would adversely affect the effectiveness of the treatment.

“Some of the products used in alternative treatment can negatively affect the chemotherapy. Receiving chemotherapy is the hardest thing in the world. If I used an alternative treatment, maybe I would turn the effect of the drug into poison.” (3rd patient)

“I never wanted alternative treatment. I even warned the users. I said, “We are taking medication, it can affect the medication negatively.” (12th Patient)

It was determined that some patients (n=5) refused the use of alternative treatment because they witnessed that those who used alternative treatment did not improve, and their condition even got worse.

“I never used it when I saw that those who used alternative treatments or supplements did not improve, or even got worse.” (9th Patient)

“There were many people who suggested alternative treatments, but I'm against it. I didn't listen to those who suggested herbal treatment. “I never believe in alternative treatments. Maybe it's because I've seen people with the same disease as me who used them but could not get any benefit.” (11th Patient)

Table 2. Main and sub-themes

Main Themes	Sub-Themes
<ul style="list-style-type: none"> • Hunger For Knowledge 	
<ul style="list-style-type: none"> • I Want To Protect And Improve My Health 	<ul style="list-style-type: none"> ○ <i>My Diet Has Changed</i> ○ <i>Coping With The Side Effects By Using Foods</i>
<ul style="list-style-type: none"> • The Meaning Attributed To Nutrition 	<ul style="list-style-type: none"> ○ <i>Considering Foods As A Medicine</i> ○ <i>Attitudes Towards Alternative Treatment</i>

Discussion

As the number of breast cancer patients increases, the demand for health services has intensified, leading to greater and more complex information needs. Patients require information on treatment-related side effects, symptoms, health promotion behaviors, body weight changes, and dietary choices (Legese et al., 2021; Hopkinson, 2018). However, in this study, most patients reported receiving no guidance on dietary choices during chemotherapy. This issue is also evident in other studies involving breast cancer patients receiving chemotherapy (Halbach et al., 2016; Lu et al., 2020).

Although patients are often not proactive in seeking health-related information before a cancer diagnosis, they do become interested in obtaining information that will help them lead a healthy lifestyle after their diagnosis (Bahrami et al., 2015). Cancer patients are generally more receptive to health promotion information. In this study, most patients obtained nutrition information from the internet and friends, with family members and friends being the most common sources of information. Mullee et al. found that over one-third of patients obtained nutritional information from sources other than a nutritionist (Mullee et al., 2021). In Sullivan et al.'s study, 56% of patients reported being overwhelmed by information from the media or from people around them (Sullivan et al., 2021). Although cancer patients have access to various sources of health information, healthcare professionals remain a significant source (Finney et al., 2016). In this study, some patients expressed a need for a nutritionist or oncology dietitian in the field of oncology. Lunar et al. found that over two-thirds of patients (69.6%) requested a dietitian consultation (Lunar et al., 2020). Similarly, Shea-Budgell et al. showed that doctors and healthcare professionals were the most reliable sources of information, while radio, newspaper, and television were the least reliable (Shea-Budgell et al., 2014). It is essential to identify the sources that patients refer

to get information and understand their needs (Finney et al., 2016; Lunar et al., 2020; Shea-Budgell et al., 2014). Healthcare professionals should discuss with patients not only their information needs but also their sources of access to information.

Studies show that patients with breast cancer change their eating habits after diagnosis (Lunar et al., 2020; Shea-Budgell et al., 2014). Lunar et al. found that the most basic lifestyle changes in patients with breast cancer were changes in dietary habits (Lunar et al., 2020). Patients group foods as 'must be included' and 'must be avoided' (Mullee et al., 2021). Most patients in this study avoid ready-made products to protect their health, avoid certain foods (pomegranate, grapefruit, orange, sugar, bread, red meat, sausage, salami, and chicken) and prefer natural products more. Consistent with this study, relevant studies report that patients reduce their sugar, red meat, chicken, processed foods, and fat intake, avoid fruits such as grapefruit and oranges, which are strong inhibitors of cytochrome P450, and increase the consumption of fruits and vegetables (Sullivan et al., 2021; Lunar et al., 2020).

Research shows that patients with breast cancer alter their dietary habits following diagnosis (Lunar et al., 2020; Shea-Budgell et al., 2014). A common categorization used by patients includes 'must be included' and 'must be avoided' foods (Mullee et al., 2021). This study found that patients tend to avoid processed foods and certain foods (such as pomegranate, grapefruit, orange, sugar, bread, red meat, sausage, and salami) while preferring natural products. Similar studies have reported that patients decrease their intake of sugar, red meat, chicken, and processed foods, avoid fruits like grapefruit and oranges due to their interactions with medication, and increase their intake of fruits and vegetables (Sullivan et al., 2021; Lunar et al., 2020).

Cooking methods have been reported to have a possible role in the pathogenesis of breast cancer (Boldo et al., 2018). Various cooking methods, especially frying, are associated with an increased risk of breast cancer (Ganesan and Xu, 2020). In this study, many patients have changed their cooking

methods, stayed away from frying, and used the steaming method, consistent with the relevant literature (Beeken et al., 2016; Zainordin et al., 2020).

Breast cancer patients commonly experience chemotherapy-induced nausea, taste changes, early satiety, delayed gastric emptying, and dry mouth, which can alter their relationship with food. Patients may develop self-control behavior to actively manage nausea-vomiting related to chemotherapy through self-management, which emphasizes patient autonomy and responsibility (Hopkinson, 2018). In this study, patients used various coping strategies, such as frequent smaller meals, increased fruit consumption, dietary modifications, and consuming salty foods and nuts. Salty foods were preferred by patients to alleviate nausea. Marinho et al. found that breast cancer patients undergoing chemotherapy had a higher preference for salty foods (Marinho et al., 2017). This may be due to chemotherapy's ability to reduce the perception of salty foods in patients. However, frequent consumption of foods during periods of chemotherapy-induced intense nausea can lead to aversion. Some of the participants in this study reported being tired of eating the same foods repeatedly during chemotherapy. In a similar study, some patients avoided eating during this period, while others made dietary modifications, increased fluid intake, or forced themselves to eat (Wochna Loerzel et al., 2020).

Maintaining ideal body weight, avoiding lifelong excess weight gain, breast cancer prevention, and health promotion are among the public health messages. Overweight and obesity are shown to be associated with increased morbidity and mortality following breast cancer (Abdelaal et al., 2017). In this study, weight changes were observed in all the patients. The patients reported having increased appetite during the treatment. Literature has also citations that breast cancer patients receiving chemotherapy have increased weight (Vagenas et al., 2015). After being diagnosed with cancer, individuals become more aware of the importance of adequate and balanced nutrition in the treatment process and consider food as a medicine. In this study, the majority of the patients included the foods that they had not consumed before in their diets, and they believe in the healing power of the foods. In the study of Nies et al., patients defined eating as a method to survive chemotherapy and stated that although they could not taste, they continued to eat

to get energy and forced themselves to eat (Nies et al., 2018).

In the absence of proper nutrition counseling at treatment centers, patients often turn to alternative solutions for information on nutrition, which can leave them vulnerable to misinformation and non-evidence-based alternative treatments. Breast cancer patients, in particular, are interested in alternative therapies to improve their quality of life, alleviate symptoms, extend lifespan, treat the disease, and support their immune systems, as shown in various studies (Sullivan et al., 2021; Lemanne and Maizes, 2018). Patients often rely on family and friends as well as the media for information about alternative treatments, and they are less likely to inform their physicians about these treatments (Naja et al., 2015). This study found that some breast cancer patients used alternative products such as bee pollen, propolis, nettle, honey, and dandelion, sometimes secretly from their families or doctors. On the other hand, it is known that alternative treatments may cause depression, anxiety, decrease in quality of life, and may even reduce the effectiveness of treatment by interacting with chemotherapy drugs. In this study, the majority of patients were hesitant to use alternative treatments without first consulting their doctor. Some patients were apprehensive about the possibility of negative effects on the efficacy of medication or treatment. These results align with previous research findings, where patients also expressed concerns about the accuracy of information on alternative treatments, potential complications, and the possibility of interactions with medical treatments (Paepke et al., 2020; Tautz et al., 2012; Ciria-Suarez et al., 2021). It is known that patients mostly follow similar cases very well, especially in television and radio programs (Bahrami et al., 2015). In this study, it was observed that the patients followed the approaches of similar cases to alternative treatments, but they also abstained themselves from them because of those who experienced negative outcomes.

Identifying patients' nutritional needs and directing them to relevant resources by healthcare personnel in oncology can facilitate timely access to nutritional support and education. Overall, this study provides valuable information that can contribute to the planning and implementation of holistic care for breast cancer patients undergoing chemotherapy.

Conclusion and Recommendations

This study provides a more personal and intimate understanding of the nutritional experiences of

breast cancer patients, which has been lacking in previous research that often only presents statistical data. As the incidence of cancer increases, the need for evidence-based nutritional support becomes more important. Health professionals should inquire about the use of herbal/dietary supplements and restrictive diets during routine check-ups and address patients' concerns about weight and nutrition. Referring patients to a registered dietitian for nutritional education and possible interventions can be a useful approach. However, despite the importance of nutrition in cancer care, nutritional awareness in the clinical setting is still insufficient.

Limitations

Nutritional habits are influenced by various factors such as geography, socio-economic structure, culture, and religion. One limitation of this study is that it only involved women with an average education level living in a small rural area in the northeast of Turkey, and therefore, may not reflect the nutritional experiences and perceptions of women in other regions.

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What did the study add to the literature?

- As a result of the research, it was determined that breast cancer patients receiving chemotherapy had difficulties with nutrition during this process.
- Nutrition of individuals receiving chemotherapy is an important issue that should be addressed and evaluated by healthcare professionals.

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