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# Facilitating and Inhibiting Factors in Deciding to Start Retreatment in Survivors of Breast Cancer Recurrence

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## Abstract

**Background:** Cancer recurrence is an important care challenge for breast cancer survivors. It is necessary to understand and identify the barriers and facilitators that affect the decision to start retreatment by those facing breast cancer recurrence compared to factors affecting their decision to start the initial treatment, which is different.

**Objectives:** This study is part of a qualitative study with a grounded theory approach, which was conducted to explain the facilitating and inhibiting factors affecting the decision to start retreatment in survivors of breast cancer recurrence, using a qualitative content analysis method.

**Methods:** This study was conducted based on the experiences of 16 patients with breast cancer recurrence and 2 oncologists to confirm the findings of the effective inhibiting and facilitating factors in patients' decisions to start retreatment for breast cancer recurrence in one of the hospitals in Tehran, Iran. The samples were selected, using the purposeful sampling method trying to have maximum diversity. Data were collected through in-depth semi-structured telephone interviews from November 2020 to November 2021 and analyzed, using the conventional content analysis method following the Elo and Kyngas method, which includes 3 phases, including the preparation phase, the organizing phase, and the reporting phase. Credibility, transferability, dependability, confirmability, and authenticity were used for determining the trustworthiness of data.

**Results:** Both groups of inhibiting and facilitating factors were divided into 5 categories, including individual factors, social factors, family factors, illness characteristics, and treatment-related factors. Also, each category included sub-categories in two groups of inhibiting and facilitating factors affecting the decision to start treatment again.

**Conclusions:** Based on the results of the present study, it is necessary to increase the awareness of patients with breast cancer by the treatment staff about the possibility of recurrence and to know the factors influencing their decision-making process to start retreatment. Nurses should play the role of advisors, educators, and supporters of the patients in this field.

*Keywords:* Breast Cancer, Qualitative Research, Decision-making, Recurrence

## 1. Background

Breast cancer is a chronic and growing disease, which is considered one of the most common types of cancer in women (1). In Iran, the annual incidence of breast cancer and its mortality rate is reported to be 36.8% and 11.9 % (2). Around 30% of patients, even those who were diagnosed to be in the early stages of the disease, experience recurrence (3, 4). The highest probability of recurrence (locally or metastatic) is 5 to 10 years after the initial get sick (5).

Compared to the initial diagnosis, the recurrence of breast cancer is a destructive and very distressing event for the sufferers, and although they expected the initial treatment to destroy and control the proliferation of all malignant cells, they face the return of cancer again (6). And this has caused most of the survivors of primary breast cancer to worry and fear and have negative emotional feelings in most of the survivors of early breast cancer (7).

The importance and role of different factors influencing the process of treatment decisions are different from the point of view of different people. When a patient participates in treatment decisions, he should consider different factors (8). These factors influence the treatment decisions of patients in a facilitating or inhibiting way. In this regard, the results of some studies have shown that the lack of awareness or insufficient knowledge of patients about

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breast cancer and its complications are effective factors in the treatment process (9, 10).

It seems that due to the experience of primary treatment, the understanding of barriers and facilitators affecting the decision to start treatment again in cancer recurrence is different compared to the decision for primary treatment by women with breast cancer recurrence; so, this research was designed and implemented to identify and explain a deeper understanding of the experiences of breast cancer relapse patients, with a comprehensive analysis of their experiences about the facilitating factors and barriers affecting the decision to start treatment again.

## 2. Objectives

This study is part of a qualitative study with a grounded theory approach, which was designed and conducted to explain facilitating and inhibiting factors effective in deciding to start retreatment in survivors of breast cancer recurrence, using a qualitative content analysis method.

## 3. Methods

### *3.1. Design and Setting*

This qualitative study was conducted, using conventional content analysis to answer this research question: What are the inhibiting and facilitating factors in deciding to start retreatment in women with breast cancer recurrence?

### *3.2. Participants*

The participants included 16 eligible women with breast cancer recurrence, who had been referred to the specialist breast cancer clinic in Emam Hossein Hospital in Tehran, Iran, to start the retreatment period and were selected following purposive sampling with consideration of the maximum variation in the selected sample included in the study based on the following criteria: (1) confirmation of breast cancer recurrence by histopathological examination and experiencing at least one recovery period after primary breast cancer treatment; (2) an age of over 18 years; (3) no history of mental disorders since the initial diagnosis of the disease; and (4) being able to communicate verbally and willingness to share experiences. People who stopped cooperating and participating in the research for any reason or were unable to continue cooperation due to the progress of the disease were excluded from the study.

Two oncologists were interviewed based on the analysis of primary data and the confirmation of issues related to the diagnosis and treatment of the disease. Patients were invited to participate in the study, using a purposeful sampling method with maximum diversity (in terms of age, marital status, occupation, time of diagnosis of recurrence after completion of initial treatment, and type of treatment).

### *3.3. Data Collection*

Data collection was done, using semi-structured interviews after initial arrangements with the patients. The oncologist introduced the patients, who came to the clinic to restart treatment due to breast cancer recurrence; retreatment had not been restarted for them. Face-to-face interviews were not possible due to the risk of transmission of coronavirus disease to patients and the need to comply with health protocols. Therefore, telephone interviews were used to collect data. During the first face-to-face meeting with the patients in the clinic, the patients' consent to participate in the study was obtained and an appropriate time was set for telephone communication. The patients did not consent to the video call; so, the interviews were conducted over the phone. Before starting the interview, the participant was contacted first, and to make the arrangements with the patient, the approximate duration of the interview was determined with the help of the patients. By evaluating the patients' responses in the initial conversations, the interviewer made sure of the listening ability of the patients and asked them to share their experiences with her during the interview in a quiet place without noise. To control the flow of the interview, the researcher wrote down the questions that came to her mind during the interview and tried not to interrupt the participants' talking. The participants were asked to let the interviewer know whenever they felt tired and did not want to continue the conversation so that the conversation would end and be postponed to another session. At the end of each discussion session, there was an opportunity for the patients to express what they wanted. Some of the questions asked from the participants included: "Tell me about breast cancer recurrence," "Tell me about making the decision to start retreatment," "What factors helped you with your decision to start retreatment?" and "What factors prevented you from deciding to start retreatment?" Based on the shared experiences, the interviewer later asked probing questions such as "Can you elaborate on that? What do you mean by that?" The process of data collection and analysis continued until data saturation was reached. After conducting 20 interviews with 16 patients, no new categories or findings different from the previous ones were obtained. To clarify ambiguities or to confirm some of the findings of the interview, 4 short interview sessions were conducted. Also, to confirm some findings obtained from interviews with patients, 2 interviews were conducted with

2 oncologists, who were involved in the patients' treatment plans. All the interviews were recorded and transcribed with the consent of the interviewees. Each interview session with the patients lasted from 25 to 100 minutes with an average of 48.38 minutes. The average time of 2 interviews with oncologists was 48.38 minutes. A total of 22 telephone interviews were conducted (by one of the authors of the article, M. M.).

### 3.4. Data Analysis

An inductive qualitative content analysis method suggested by Elo and Kyngas was used to analyze the data collected in this study (11). This method consists of 3 phases, including the preparation phase, the organizing phase, and the reporting phase (11). Based on the revision by Kyngas et al. of qualitative content analysis with an inductive approach, the steps involved in the data analysis were as follows (12):

In the preparation stage, a general understanding of the data was obtained by reviewing the data several times. Then, units of analysis related to the purpose of the study and in line with the answer to the research question were identified and selected. After selecting the units of analysis, the researcher reread the data to more accurately identify open codes. After extracting the open codes, the codes with the same name or content were put together and combined based on manifest or latent meanings. Subcategories and generic categories later emerged gradually. Similar concepts were grouped into primary categories, and the process of abstraction was used for the reduction of the groupings. Using concepts and categories to focus more on the answer to the research question and explain the purpose of the study and obtain a general and true insight from the data, the researcher was constantly searching for answers to the questions that came to mind in relation to the phenomenon under investigation. The questions included: "Who were the participants?" "What did they mostly talk about?" "What common experiences did they mention in relation to the subject under investigation?" "What is happening here?" "When did it happen?" and "What are the details of the phenomenon that is happening or the event that happened in the past?" In the next step, to further organize the data, similar concepts were grouped into two groups of inhibiting and facilitating factors in the form of primary categories that had the same meaning, and 3 generic categories emerged and served as the basis for presenting the results report in response to the research question. Since this type of analysis is sensitive to the data, the researcher returned to the original data several times during the process of analyzing the data to ensure that the results showed a strong relationship with the data being analyzed. In this way, the abstraction stage was completed by achieving a general description of the research subject. Next, in the final stage, which is the reporting stage, the generic categories, and main categories derived from the analysis of the initial data were presented and explained (13). Data management was done, using MAXQDA (v10).

### 3.5. Rigor

The 5 criteria proposed by Kyngas et al. were used to ensure the trustworthiness of the data in this study (12). These included credibility, transferability, dependability, confirmability, and authenticity (14).

### 3.6. Ethical Considerations

This study has been approved by the Ethics Committee of Semnan University of Medical Sciences under the number IR.SEMUMS.REC.1399.026. The purpose of the research was clearly stated. The participants were told that entering the study is voluntary and that they could withdraw from the study at any time they wanted. Before conducting the telephone interview, in the first face-to-face meeting with the patients in the clinic, written informed consent was obtained from them, and the necessity of conducting a telephone interview in the conditions of the Coronavirus pandemic.

## 4. Result

A total of 18 participants, including 16 patients with breast cancer recurrence and 2 oncologists participated in the study. The participants' other demographic information is presented in Tables 1 and 2.

Based on an in-depth analysis of the participants' descriptions and the information collected in explaining the inhibiting and facilitating factors affecting breast cancer patients' decision-making process to start retreatment, 5 main categories were obtained. These categories included: (1) individual factors; (2) social factors; (3) family factors; (4) illness characteristics; and (5) treatment-related factors (Table 3).

### 4.1. Individual Factors

#### 4.1.1. Fears and Concerns

The recurrence of breast cancer has caused fear and concern in the patients.

**Table 1.** Participants' Characteristics (Individuals with Cancer) in Research

| Id | Age (y) | Type of Initial Treatment | Education Level | Recurrence Detection Time After the Initial Treatment (y) | Job | Marital Status |
|---|---|---|---|---|---|---|
| **P1** | 45 | Surgery - chemotherapy - radiation therapy - hormone therapy | High school diploma | 2 | Housewife | Married |
| **P2** | 54 | Surgery - chemotherapy - radiation therapy | High school diploma | 15 | Housewife | Divorced |
| **P3** | 51 | Surgery - chemotherapy - radiation therapy | High school diploma | 3 | Housewife | Married |
| **P4** | 52 | Surgery - chemotherapy - radiation therapy - hormone therapy | High school diploma | 8 | Housewife | Married |
| **P5** | 50 | Surgery - chemotherapy - radiation therapy | Junior high school | 14 | Housewife | Married |
| **P6** | 53 | Surgery - chemotherapy - radiation therapy - hormone therapy | Master's degree | 10 | Disabled | Married |
| **P7** | 53 | Surgery - chemotherapy - radiation therapy | High school diploma | 20 | Housewife | Married |
| **P8** | 63 | Surgery - chemotherapy - hormone therapy | Bachelor's degree | 3 | Retired | Widowed |
| **P9** | 63 | Surgery - chemotherapy - radiation therapy - hormone therapy | High school diploma | 8 | No job | Single |
| **P10** | 52 | Chemotherapy - radiation therapy - hormone therapy | Bachelor's degree | 2 | No job | Single |
| **P11** | 51 | Surgery - chemotherapy - radiation therapy | Junior high school | 3 | Housewife | Married |
| **P12** | 45 | Surgery - chemotherapy - radiation therapy | Junior high school | 1 | Tailor | Married |
| **P13** | 48 | Surgery - chemotherapy - radiation therapy - hormone therapy | Junior high school | 1 | hair stylist | Married |
| **P14** | 38 | Surgery - chemotherapy - radiation therapy - hormone therapy | Master's degree | 1 | Teacher | Married |
| **P15** | 33 | Surgery - chemotherapy - radiation therapy - hormone therapy | Bachelor's degree | 2 | Employee | Single |
| **P16** | 45 | Chemotherapy - radiation therapy - hormone therapy | High school diploma | 2 | Housewife | Married |

**Table 2.** Oncologists' Characteristics

| Row | Gender | Age (y) | History of Work in Cancer Unit (y) |
|---|---|---|---|
| **1** | Male | 44 | 12 |
| **2** | Female | 40 | 10 |

*4.1.1.1. Facilitators*

*4.1.1.1.1. Fear and Concern About the Progress of Cancer and Becoming Disabled*

The recurrence of breast cancer had caused concerns about metastasis to other organs in the patients. Therefore, to prevent the spread of cancer, the patients tried to start retreatment as soon as possible and, thus, prevent the further development of the disease.

P10: "I knew that cancer spreads fast in the body, and then the doctor told me that cancer had recurred. I was very scared and concerned."

*4.1.1.2. Inhibitor*

*4.1.1.2.1. Concerns About Changes in the Appearance of the Face and Body*

Hair loss, pale appearance, changes in skin color, and brittle nails made the participants uncomfortable and worried. They were worried that these unpleasant changes would recur with the retreatment. Also, the need for a complete mastectomy after the initial breast-conserving surgery had made them dissuade from retreatment.

P7: "In the initial surgery, the doctor only removed the tumor. After the operation, I saw that my breast was still there. It raised my spirits. But I was very upset about my hair, eyelashes, and eyebrows falling out. Now I'm worried that my whole breast would be removed and my hair would fall out."

**Table 3.** Facilitators and Inhibitors in Deciding-making to Retreatment in Breast Cancer Recurrence

| Main and Generic Categories | Sub-categories | |
|---|---|---|
| | **Facilitators** | **Inhibitors** |
| **Individual factors** | | |
| Fears and concerns | Fear and concern about the progress of cancer and becoming disabled | Concerns about changes in the appearance of the face and body |
| Beliefs | Seeking help from spiritual beliefs | Believing that cancer is incurable; Believing that traditional treatments are more effective for recurrence |
| Age at the time of recurrence | Recurrence of cancer at the reproductive age | Recurrence of cancer after the reproductive age |
| **Social factors** | | |
| Received support | Support associations for cancer patients; Comprehensive support from those around | Non-supportive structure of treatment and care systems |
| Social isolation | Loss of professional responsibilities | Hiding cancer recurrence from others |
| **Family factors** | | |
| Family structure | Living with the family | Living alone |
| Behavioral response of the family to recurrence | The willingness of the family to participate in taking care of the patient | Imposing the burden of care on the family |
| The financial situation of the family | Favorable financial situation | Financial difficulties |
| **Illness characteristics** | | |
| Type of initial surgery | Removing the tumor while conserving the breast | Complete mastectomy |
| Characteristics of recurrence | Local and limited recurrence with Mild clinical symptoms | Metastatic recurrence to other organs with Severe clinical symptom |
| **Treatment-related factors** | | |
| Treatment facilities | Easy access to advanced medical centers | Limited facilities of medical centers |
| The therapist's behavior and relationship with the patient | Empathetic communication between treatment staff and the patient | Requiring the patient to comply with authoritarian approaches |

*4.1.2. Beliefs*

The participants' personal beliefs were among the individual factors that they said were effective in deciding to start retreatment.

*4.1.2.1. Facilitator*

*4.1.2.1.1. Seeking Help from Spiritual Beliefs*

From the point of view of the participants, making a vow, praying, prayers, and asking God for help had created conditions that decided to start treatment easier and with the least doubts about the process of treatment and its result.

P1: "I believe in God's power, and I decided to start the new course of chemotherapy by trusting and relying on him. I will make a vow and pray for all the sick to get their health back."

*4.1.2.2. Inhibitors*

*4.1.2.2.1. Believing That Cancer Is Incurable*

The long-term treatment of cancer and the possibility of frequent recurrences in patients with breast cancer had created the belief that cancer is incurable. Therefore, the belief that cancer is incurable acted as an obstacle in treatment decisions.

P9: "The first time I finished my treatment, I did not think that I have a recurrence, I am sure that, even if I treat it a hundred times, there is still the possibility of recurrence and there is no definitive cure for cancer at all."

*4.1.2.2.2. Believing That Traditional Treatments Are More Effective for Recurrence*

Considering the initial cancer treatment as a failure because of recurrence encouraged the participants to search for alternative treatment methods. When the recurrence of cancer was confirmed, the participants turned to various traditional treatments or complementary medicine on the advice of others or their desire, because they believed that if chemotherapy drugs or other common treatment methods were useful, cancer would not recur. Therefore, believing in traditional and complementary treatments and their being more effective compared to the current treatments from the point of view of some people made

the participants insist on using them.

P12: "When it relapsed, one of my friends suggested I not go for chemotherapy this time and to use traditional medicine and humorism-based therapy. Chemotherapy had devastated me, and I thought to myself that in the old days when there were no such drugs and traditional drugs were used instead, patients would get well soon."

*4.1.3. Age at the Time of Recurrence*

The patient's age at the time of breast cancer recurrence was one of the factors that facilitated or hindered their decision to start retreatment.

*4.1.3.1. Recurrence of Cancer at the Reproductive Age*

For participants who were of reproductive age and younger, the desire to be fertile in the future was a factor that facilitated the patients' decision to start retreatment, and they quickly accepted retreatment.

P15: "I'm young but I have developed cancer and it now has recurred. Doctors have advised me to freeze ovum so that I wouldn't have infertility issues in the future. I have to start retreatment immediately because my cancer needs to be completely cured first."

*4.1.3.2. Inhibitor*

*4.1.3.2.1. Recurrence of Cancer After the Reproductive Age*

Participants who were middle-aged or older or those who were past menopause and past childbearing ages, were in no rush to start treatment again, and this acted like inhibiting factors in deciding to start retreatment.

P8: "Thank God I developed the disease after menopause because I heard from my doctor that older women respond to treatment better. It has recurred now, but I don't care much now. I'm in no rush to receive treatment because I know that there is still the possibility of recurrence."

*4.2. Social Factors*

*4.2.1. Received Support*

Patients facing cancer recurrence need to receive support from society and people. The long treatment period and the problems that arise from cancer and its treatment require the help of those around them and the community so that the patient can endure the suffering and hardship of the disease and survive and overcome the hardships caused by cancer with the help of others.

*4.2.1.1. Facilitators*

*4.2.1.1.1. Support Associations for Patients with Cancer*

The participants used the services of support associations and charities during the treatment period and after that and they were satisfied with them, in such a way that they volunteered to participate in peer groups to present their experiences to newly admitted patients. The founding of these institutions at the community level to help and support cancer patients was among the facilitating factors.

P8: "I am a member of the Ambassadors of Health Association and I talk to the patients to raise their spirits. It really helps them cope with the disease and its recurrences and live on. I am personally very satisfied with these associations."

*4.2.1.1.2. Comprehensive Support from Those Around*

The participants stated that the support of friends and acquaintances during the treatment and even after it made them more determined to go through this difficult path no matter how difficult it is. This support has been effective in the conditions of cancer recurrence and in their decision to start retreatment. When the patient feels that he/she is not alone in the course of treatment, he/she continues the treatment with hope and a strong will.

P5: "When the patient realizes that everybody is doing their best so that he/she gets better, he/she feels encouraged and continues the treatment. If you are not left alone and realize that there is someone you can always rely on for help, you feel at peace and go after treatment to get better."

*4.2.1.2. Inhibitor*

*4.2.1.2.1. Non-supportive Structure of Treatment and Care Systems*

The participants stated that they are not very satisfied with the performance of the current treatment and care system because patients with cancer are not supported; in addition to enduring the pain and suffering from a serious and chronic disease such as cancer, the patient is also under pressure and discomfort from other aspects of treatment and must endure a lot of stress. When patients with breast cancer recurrence had to decide on retreatment, they reviewed the initial treatment experiences and these experiences indicated the inefficiency of the care and treatment system.

P4: "It's so hard to see that the government doesn't care how your treatment is going. The doctors only do their duty. They don't care if the drugs are available or not, if there's a bed for the patient in the hospital or not. I complained to many authorities that cancer patients need more facilities, but they wouldn't pay attention at all."

*4.2.2. Social Isolation*

Social isolation means any factor that causes patients to stay away from society and isolate themselves due to cancer. These factors are explained in two groups' facilitators and inhibitors.

*4.2.2.1. Facilitator*

*4.2.2.1.1. Loss of Professional Responsibilities*

With the recurrence of breast cancer, patients were worried about losing their jobs due to the long treatment process or becoming disabled due to the complications of the disease and its treatment. Therefore, upon the confirmation of recurrence, they decided to start retreatment as soon as possible to maintain their professional positions and not lose their businesses.

P9: "I was a practical nurse and had been working for many years. After I developed cancer, I was unable to work my shifts in the hospital and had to leave my job. Now that the disease has recurred, I need to start retreatment as soon as possible, or I will lose this job, too."

*4.2.2.2. Inhibitor*

*4.2.2.2.1. Hiding Cancer Recurrence from Others*

The participants admitted in their statements that they did not want others to know about their illness, especially because some people believe that you develop serious and incurable diseases to pay for your sins, and the stigma of cancer caused pain and more discomfort, especially at the time of recurrence. Also, physical changes in the body due to the side effects of the treatment bothered most of the patients, and they preferred to hide the recurrence of cancer from others. Some patients were not willing to start retreatment because they did not want their families to stress out because of the recurrence of the disease and the subsequent side effects of the disease.

P17: "For my initial treatment, I didn't let anyone know that my hair had fallen out. I wore a headscarf all the time, and I used a postiche. I had my eyebrows tattooed. My mom didn't know about it at all. I just can't get treatment do all the hiding and concealing again."

*4.3. Family Factors*

*4.3.1. Family Structure*

From the point of view of the participants, structure means whether the patient lives with their family or live alone, which influenced their decision to start retreatment as facilitating or inhibiting factors.

*4.3.1.1. Facilitator*

*4.3.1.1.1. Living with the Family*

Living with the family alongside parents or a spouse and children made patients with cancer feel a sense of commitment and responsibility toward them. Being able to provide for part of the family's needs was a motivating factor and facilitator of the decision to start retreatment in patients.

P10: "My mother is old and sick. I myself need help, but I will go for treatment so that I will be able to do my mom's tasks. I will continue the treatment until my body can't tolerate any further treatment."

*4.3.1.2. Inhibitor*

*4.3.1.2.1. Living Alone*

Being away from the family, being single, or living alone prevented the decision to start retreatment in patients with breast cancer recurrence.

P9: "I am single. I have no children, and my parents are dead. No one needs me, so I prefer not to bother myself anymore. It will definitely recur. Cancer is incurable. If I weren't alone, I would be happy to stay healthy and be useful for others."

*4.3.2. Behavioral Response of the Family to Recurrence*

From the point of view of the participants, the behavioral response of the family of cancer recurrence patients means the way they behaved toward the patients during the recurrence crisis.

*4.3.2.1. Facilitator*

*4.3.2.1.1. The Willingness of the Family to Participate in Taking Care of the Patient*

The patients stated that after the recurrence of cancer was confirmed, their families' reactions towards this unexpected event were effective in their decision to start retreatment. If the family behaves in such a way that the patient feels that the family is with her in the treatment process and participates to help her and is supported by the people around her during the retreatment period, they will decide to continue the treatment.

P13: "After all the treatment expenses, trouble, and grief, I didn't know how to tell my husband that it had recurred. All those bad things were going to happen again. When he found out, he consoled me a lot and said that it must have been God's will. He told me he would be by my side and that I wouldn't be alone in this. His words raised my spirits and encouraged me to start my treatment again."

*4.3.2.2. Inhibitor*

*4.3.2.2.1. Imposing the Burden of Care on the Family*

With the recurrence of cancer, in addition to the fact that the patients were disturbed physically and mentally, the family was again involved in caring for and enduring the adverse effects of the disease.

P15: "During the treatment, you need to be taken care of like a little child. I really feel that my family will be bearing

a heavy burden if I want to continue the treatment. Everyone's life would be disturbed because of me, and it doesn't feel good."

*4.3.3. Financial Situation of the Family*

The family's ability to pay treatment expenses was among the influential factors in the process of deciding to start retreatment in patients with breast cancer retreatment.

*4.3.3.1. Facilitator*

*4.3.3.1.1. Favorable Financial Situation*

From the participants' point of view, not having financial problems and being able to pay for treatment, especially in the case of cancer recurrence were factors that facilitated the decision to start and continue treatment.

P6: "I am employed and have a monthly salary, and thank God, I have no problem paying the expenses. Although it becomes hard at times and some drugs are very expensive, I don't think about how to provide the money for my treatment, I will proceed with the treatment much faster."

*4.3.3.2. Inhibitor*

*4.3.3.2.1. Financial Difficulties*

Financial problems and being unable to pay for treatment were obstacles that deterred participants from starting retreatment. This issue also affected breast cancer recurrence patients' decisions to start retreatment.

P5: "In the first course of treatment, I would tell myself I would get better and that the treatment is worth paying for, but now I'm sure it's useless, no matter how hard you try. I'd rather spend my income on my life and my child that spend it on something useless. Now the price of my medicines has increased three to four times. I really can't afford to spend a lot of money on medicine every three weeks."

*4.4. Illness Characteristics*

*4.4.1. Type of Initial Surgery*

By type of initial surgery, we mean whether only the tumor and the surrounding tissues were removed during the operation or the breast was completely removed.

*4.4.1.1. Facilitator*

*4.4.1.1.1. Removing the Tumor While Conserving the Breast*

In patients who underwent surgery to remove a malignant tumor in the breast, in cases where only the tumor was removed and the breast tissue was kept in the initial surgery, it would facilitate retreatment, because the patients stated that in case of recurrence, it was still possible to completely remove the involved breast through surgery and that they still had the choice to go for a complete mastectomy.

P7: "A large part of my breast was still intact and there was room for further removal and I could try my luck once more. I was hoping that recurrence wouldn't happen again after the complete removal of my breast."

*4.4.1.2. Inhibitor*

*4.4.1.2.1. Complete Mastectomy*

In patients who, due to the progress of the tumor, had undergone a complete mastectomy with lymph node drainage during the initial course of treatment, since there was no tissue to be removed to perform surgery after recurrence, their choices for treatment were limited. They thought that there was no option for them to start retreatment; so, it acted like an obstacle for them in deciding to start retreatment.

P1: "Both my breasts were removed over a period of two months. Now that it has recurred, there's nothing to be removed, and I have no chance of receiving a successful treatment."

*4.4.2. Characteristics of Recurrence*

The characteristics of cancer recurrence mean the amount of progress and the severity of abnormal symptoms.

*4.4.2.1. Facilitator*

*4.4.2.1.1. Metastatic Recurrence to Other Organs with Severe Clinical Symptoms*

In patients whose clinical symptoms caused by cancer recurrence were so severe that their lives were at risk, they went to the doctor to start retreatment as soon as possible to recover the symptoms and alleviate the problems.

P13: "I would have stomachaches from time to time. At first, I didn't know it was related to my breast cancer and didn't take it seriously until I gradually started to have nausea too. Since two days ago, my eyes have turned yellow. I went to see the doctor without hesitation."

*4.4.2.2. Inhibitor*

*4.4.2.2.1. Local and Limited Recurrence with Mild Clinical Symptoms*

Having mild abnormal clinical symptoms caused by breast cancer recurrence and not taking them seriously by the participants suffering from cancer recurrence were obstacles for them in deciding to start retreatment.

P14: ". I didn't think about recurrence at all and didn't take it seriously, let alone having to decide to start retreatment. I just found out that cancer has metastasized to my uterus and that was the reason for my vaginal bleeding."

*4.5. Treatment-related Factors*

*4.5.1. Treatment Facilities*

By treatment facilities, we mean all the people or equipment that were helpful in breast cancer recurrence patients' decision to choose and benefit from the best treatment options.

*4.5.1.1. Facilitators*

*4.5.1.1.1. Easy Access to Advanced Medical Centers*

The distance from the place of residence to the treatment center and the availability of specialist treatment centers for the care and treatment of cancer patients were two other factors that facilitated the decision to start retreatment. The abundance of specialist centers and easy accessibility made it easier to start retreatment.

P11: "The hospital is near my house I usually go there on my own and get my drugs. After a couple of hours when I feel better, I return home. I have no problem commuting to the hospital."

*4.5.1.2. Inhibitors*

*4.5.1.2.1. Limited Facilities of Medical Centers*

Some medical centers' not being equipped with the devices and other facilities needed to treat cancer patients and the additional cost of providing and accessing these necessities from other centers were among the factors that inhibited cancer recurrence patients' decision to start retreatment.

P14: "When you have to go to every hospital to find one that has the device to treat you, no energy and patience will be left for you. If problems like that keep happening, I'd rather give up than put myself in trouble and go after something that ends in recurrence again."

*4.5.2. The Therapist's Behavior and Relationship with the Patient*

This sub-category concerns interpersonal relationships between patients and treatment staff, which can affect the patients' willingness to start and continue retreatment.

*4.5.2.1. Facilitator*

*4.5.2.1.1. Empathetic Communication Between Treatment Staff and the Patient*

The participants stated that the doctor's friendly communication with them made them feel comfortable and safe. When the doctor gives the chance to the patients and listens to their words, they feel that their health is important to the therapist and that the therapist will do their best to achieve complete recovery, and this friendly relationship creates trust between the patient and the therapist.

*4.5.2.1.2. Requiring the Patient to Comply with Authoritarian Approaches*

Ignoring the patient's statements and requests by the doctor and forcing them to follow the doctor's orders without question were obstacles to the patients' desire to start and continue retreatment.

P16: "The doctor doesn't ask my opinion at all; he himself decides what to do, and he also told me that if I want to get good results, I should not interfere in the treatment and just obey his orders."

## 5. Discussion

This study aimed at explaining the factors that inhibit and facilitate the decision to start retreatment in the survivors of breast cancer recurrence.

In the present research, the satisfaction or dissatisfaction of the sufferers from the results of participation in making decisions was presented as inhibitors and facilitators. Factors related to the patient, such as fears and worries, beliefs, age at the time of relapse, and personal experience from the initial treatment were identified. The findings of the present study also show that various factors, including individual, family, social, and economic factors, influence the process of deciding to start retreatment in patients with breast cancer recurrence. The findings of a study by Angarita et al. showed that factors related to the patient, the doctor, and the system affect the decision-making process for treatment (15).

The findings of a review study by Covvey et al. showed that uncertainty and unanimity about treatment, patients' concern about adverse effects and treatment complications, and poor communication between doctors and patients were the main obstacles in the participation of cancer patients in treatment decisions, and factors such as the doctor's attention to the patient's preferences, from the patients' point of view, the doctor's behavior and activities related to the treatment, such as inducing a feeling of caring in the patient, trust, establishing friendly relations, and receiving support from the treatment system were facilitators that encouraged patients to continue treatment and participate in treatment decisions, which are consistent with some findings of the present study (16).

As cited by Shabason et al., part of the international shared decision-making program is to pay attention to patient support and provide cost-effective care (17). The goal of this program is to create joint processes between patients, caregivers or authorized representatives, and physicians who engage the patient, caregiver, or legal representative of the patient in decision-making. Therefore, they provide patients, their caregivers, or authorized representatives with information about choosing treatment

options. Accordingly, integrating the patient's preferences and values with the treatment plan facilitates the continuation of the treatment process (17). In the current study, the financial constraints and the increase in treatment costs were among the barriers to treatment decisions to start retreatment again in cancer recurrence patients. Therefore, the cost-effectiveness of treatment can be a facilitating factor in making treatment decisions.

The support and positive beliefs of the family against breast cancer help in making the patient more flexible in the face of cancer complications and help to improve his quality of life (18).

A study in China showed that family structure and support play a major role in treatment decisions related to breast cancer. This finding is in line with the findings of the present study. In this study, the effect of family functioning and cultural factors can act as facilitating and inhibiting factors in treatment decisions (19).

Smit et al. investigated African women's experiences of breast cancer recurrence in a qualitative study (6). The findings are in line with the current study; religious beliefs and support structures were among the factors influencing the acceptance of recurrence; women's perception of their changed body from least concern to the most disturbing aspect was different. In this study, changes in body appearance and beliefs were among the important factors in treatment decisions by patients (6).

Similar to many studies conducted during the COVID-19 pandemic, this study also had limitations in terms of conducting in-depth interviews in person. The interviews were conducted via phone calls, and it was not possible to accurately observe the behavior and non-verbal gestures of the participants when recounting their experiences. The video call was not used due to the unwillingness and satisfaction of the participants. The discomfort and negative psychological reactions experienced by some of the patients during the discussions about their cancer recurrence prevented them from providing a complete and in-depth account of their experiences. The classification of factors identified as inhibitors and facilitators is only based on the experiences of the participants in the present study. These factors can also have the opposite effect on other cancer recurrence patients.

### *5.1. Conclusions*

Based on the results of the present study, it is necessary to increase the awareness of patients with breast cancer by the treatment staff about the possibility of recurrence and to know the factors influencing their decision-making process to start retreatment. Nurses should play the role of advisors, educators, and supporters of the patient in this field.

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## Footnotes

**Authors' Contribution:** M. S. and M. M. were involved in study design and data collection. M. S., M. M., M. S. were involved in data analysis. M. M. wrote the initial draft manuscript. M. S. reviewed and edited the draft and final manuscript and submitted the paper.

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