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Research Article

Factors Associated with Marital Relationships Among Iranian Women with Mastectomy: From Surgery to End of Life

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Abstract

Background: Breast cancer is the most common cancer among women and has significant negative effects on the relationship between couples, often requiring the patient to undergo mastectomy as part of the treatment.

Objectives: This study aimed to explore the factors influencing marital relationships among Iranian couples after mastectomy.

Methods: This qualitative content analysis study employed purposive and convenience sampling to select 12 participants. Semi-structured interviews were conducted with the participants, and data analysis was carried out using both inductive and deductive reasoning throughout the process.

Results: Seven subcategories were identified: Demographic characteristics, individual characteristics of spouses, individual characteristics of patients, supportive factors, and factors related to spouses' attitudes.

Conclusions: The study concludes that several factors influence marital relationships in patients who have undergone mastectomy, and these factors can be modified. It is essential for researchers and healthcare providers to identify and address these factors to enhance the quality of life for couples, ultimately contributing to improved longevity and well-being for patients.

Keywords: Breast Cancer, Mastectomy, Relationship, Husband, Partner

1. Background

Breast cancer is one of the most significant health challenges faced by women worldwide (1). It ranks as the second leading cause of cancer-related deaths among women in both the United States and Iran (2). The lifetime risk of developing breast cancer is 12.4% in the United States and 29.88 per 100,000 women in Iran, primarily affecting age groups 45 - 65 and 80 - 85 (3). In 2020, approximately 2.3 million new cases of breast cancer were diagnosed globally, and projections estimate that by 2030, the incidence and mortality rates will rise to 2.64 million and 1.7 million, respectively (4). In Iran, the incidence of breast cancer ranges from 15 per 100,000 in rural areas to 34.6 in urban regions. Regional variations include rates of approximately 18.1, 19.1, and 19.7 in the west, north, and east of Iran, respectively, compared to 29.3 and 29.7 in the south and central regions (5).

The occurrence, mortality, and survival rates of breast cancer vary significantly across the world, attributed to factors such as population structure, lifestyle, genetic predisposition, and environmental conditions (6). Breasts are universally regarded as symbols of femininity, motherhood, and sexuality (7, 8). Mastectomy, the surgical removal of the breast, is one of the most psychologically devastating treatment options (9). Despite advancements in safer treatment methods, mastectomy is performed in approximately 50% of cases due to reasons such as advanced-stage tumors, tumor location, small breast size, multicentric tumors, or patient requests. This procedure often leads to negative emotional outcomes, including body image disturbances, anxiety, depression, diminished sexual

attractiveness, hopelessness, fear of recurrence, dissatisfaction with reconstructive outcomes, and, in severe cases, suicide (10).

Quality of life following breast cancer treatment is closely tied to a patient's perception of their body image (11). Women often face profound changes in daily life and psychological trauma while adjusting to their altered bodies (12). Research shows that women undergoing mastectomy report unfamiliarity with their new body image, reduced sexual satisfaction, discomfort from surgical scars, diminished attractiveness, fear of rejection by their partners, and a loss of femininity (13). Similarly, husbands often perceive their wives as less attractive post-mastectomy, affecting their view of the marital relationship (14).

Since breasts play roles in sexual pleasure and oxytocin secretion, their removal can impact sexual function (15). This often leads to adverse effects on the psychological, sexual, and social well-being of patients and their marital relationships (16). Such challenges may disrupt family dynamics and stability (17). According to Marx, the bond between spouses represents an internal dimension of an individual that fosters attention, harmony, and care in the marital relationship. This bond acts as a bridge between independence and solidarity, making the spouse a perceived "other half" (18).

2. Objectives

Given the lack of research addressing the factors influencing marital relationships after mastectomy in Iran, this study aims to explore the elements that affect the dynamics of Iranian couples following mastectomy.

3. Methods

In this conventional content analysis study, participants meeting the inclusion criteria were selected through purposive and convenience sampling in Iran. The participant group consisted of four spouses, five patients, and three therapists undergoing treatment or working between March and May 2024 at the specialized and super-specialized treatment center of Imam Hasan Mojtaba in Dezful, Iran. A total of 12 interviews were conducted with 12 participants. The inclusion criteria for the study were as follows: Familiarity with the Persian language, suitable physical and mental conditions during the interview, at least one year of marriage, six months since the diagnosis of breast cancer, and the need for mastectomy, chemotherapy, and radiotherapy. For therapists, the criteria included a minimum of a bachelor's degree and at least two years of experience working with cancer patients.

Exclusion criteria for patients and their spouses included unwillingness to cooperate and unsuitable physical or mental conditions for an interview. For therapists, exclusion criteria were unwillingness to participate in an interview or having a bachelor's degree with less than two years of work experience.

The researcher, also serving as a nurse and student trainer in the oncology department, provided detailed explanations to participants about the study's objectives, procedures, and confidentiality of information. Written informed consent was obtained, and participants were assured that they would not be deprived of treatment if they chose not to participate and that no charges would apply for their involvement. Interviews were conducted via voice calls or in person, based on the participants' preferences, in a friendly and trusting environment. The time and place of the interview were prearranged, with most interviews conducted in the oncology training room.

Semi-structured questions guided the interviews. Participants were asked questions such as, "Do you think there have been any changes in your relationship with your spouse after surgery?", "Were the changes positive or negative?", "What factors do you think have influenced your relationship?", and "If mastectomy had not affected your relationship, what factors do you think were involved?" Based on participants' responses, probing questions were added.

Interviews were recorded with the participants' consent. For those who did not consent to recording, their statements were transcribed verbatim. Recorded interviews were transcribed and analyzed by the researcher. Through the analysis process, codes, subcategories, and categories were identified and organized.

The interviews were conducted and analyzed thoroughly. A total of 12 interviews were carried out, each lasting between 30 and 51 minutes, with a cumulative duration of 9 hours and 24 minutes. To ensure the participants' comfort, no individuals other than the interviewer and participant were present during the sessions. Data analysis commenced immediately after each interview. Following 10 interviews, saturation of data was observed; however, an additional participant was interviewed to confirm data saturation. Data analysis was conducted manually using the approach of Elo and Kyngas (19), incorporating both inductive and deductive reasoning throughout the process. Codes and subcategories were grouped based on the proximity of meanings and themes.

To ensure the trustworthiness of this study, the criteria proposed by Lincoln and Guba (1985) were utilized, encompassing credibility, transferability, dependability, and confirmability. The credibility of the research was supported by the researcher's extensive 15-year involvement with cancer patients. As a nurse and trainer in the oncology department, the researcher had established strong rapport with the participants, creating a trusting environment conducive to in-depth interviews. Member checking was performed, with sections of the text, including codes and relevant categories, sent to some participants for their feedback on the data analysis process. To ensure the findings' accuracy and appropriateness, the results were shared with several nurses who were not part of the study for their validation.

Maximum diversity sampling was employed to enhance transferability. The coding table was reviewed by another researcher specializing in qualitative studies, and the reliability of the analysis was confirmed with a high agreement rate of 0.9. The research processes were meticulously documented and reported to ensure verifiability and provide a solid foundation for follow-up studies.

Reflectivity was also considered, as the researcher had substantial experience caring for patients with breast cancer. Although efforts were made to minimize personal biases during data collection and analysis, the researcher acknowledged that achieving complete objectivity was challenging. To strengthen the validity of the findings, the data analysis was reviewed and validated by a co-researcher with extensive expertise in qualitative research. This collaborative approach aimed to reduce potential biases and ensure accurate interpretation of the data.

This study was part of a research project approved by the Research Vice-Chancellor of Dezful University of Medical Sciences under the ethics code IR.DUMS.REC.1402.066. The authors extend their gratitude to all patients and their families for their invaluable cooperation.

4. Results

In the current study, there were 12 participants, comprising 5 patients, 4 spouses, and 3 healthcare providers. The educational levels of the patients and spouses included 2 with primary education, 3 with secondary education, 3 with diplomas, and 1 with a post-diploma qualification. The healthcare providers held specialized doctoral degrees in oncology, nursing, and psychology (Table 1).

Seven subcategories were identified in the investigation of factors related to marital relationships after mastectomy, including demographic characteristics, individual characteristics of spouses, individual characteristics of patients, supportive factors, and factors influencing spouses' attitudes (Table 2).

In this subcategory, codes such as education level, place of residence, employment status, having children, age of patients and spouses, duration of marriage, and socioeconomic status were extracted. It was reported that couples with higher education levels, living in urban areas, and possessing better socioeconomic and employment status had more desirable marital relationships. Furthermore, couples who were older, had been married longer, and had children reported more satisfactory relationships.

"When women and men are at older ages during mastectomy, especially when women have reached menopause, the surgery usually has less impact on the relationship between the spouses due to decreased sexual desire in menopause" (P 2).

4.1. Individual Characteristics of Husbands

In this subcategory, codes such as introversion, isolation, and depression of husbands were extracted. Additionally, characteristics such as responsibility, adaptability, and loyalty were identified as factors influencing marital relationships.

"In husbands who are introverted or have depression, facing mastectomy leads to disruption in their relationships with the patient" (P3).

4.2. Individual Characteristics of Patients

Regarding this subcategory, attention should be given to physical and psychological status, independence, adaptability, and efforts to maintain their role in the illness.

"Because I tried to be independent and involve my husband less in my medical affairs, my husband was less affected, and I tried to take care of household chores myself. This helped maintain our relationship" (P 7).

4.3. Disease-Related Factors

In this subcategory, codes such as duration of illness, disease stage, tumor type, mastectomy type, metastasis severity, intensity of chemotherapy side effects, and utilization of cosmetic methods were identified.

"To maintain the quality of our relationship, I always made myself look beautiful with eyebrow tattoos,

Table 1. Characteristics of Demography and Background Information

Participants	Age	Level of Education	Job	Duration of Marriage (y)	Duration of Disease (y)	Number of Children	Participant Type
1	38	Ph.D	Nurse	-	-	-	Therapist
2	52	Ph.D	Oncology specialist	-	-	-	Therapist
3	30	Ph.D	Psychologist	-	-	-	Therapist
4	44	High school	Housewife	18	6	4	Patient
5	35	High school	Housewife	9	3	3	Patient
6	38	Associate degree	Housewife	8	1	2	Patient
7	57	Diploma	Housewife	40	1	4	Patient
8	27	Diploma	Housewife	8	4	2	Patient
9	42	Elementary	Manual worker	17	4	3	Husband
10	46	Elementary	freelance job	15	4	3	Husband
11	47	Diploma	Employed	22	8	3	Husband
12	50	High school	freelance job	50	4	3	Husband

Table 2. Factors Affecting Relationships Between Iranian Couples in Mastectomy Women After Surgery Until the End of Life

Category and Sub Categories	Codes
Effective factors on couple communication in mastectomy patients	
Demographic characteristics	Education, place of residence, job status, having children, age, duration of marriage, economic status, social status
Individual characteristics of husbands	Introversion, isolationism, depression, responsibility, coping, loyalty
Individual characteristics of patients	Physical condition, mental condition, coping, trying to keep the role, independence
Disease-related factors	Duration of the disease, stage of the disease, type of pathology, type of mastectomy, severity of the metastases, severity of chemotherapy side effects, application of beautification methods and cosmetic surgeries
Relationships between couples	Quality of sexual life, relationship status between couples before mastectomy
Support systems	Social support, financial support, psychological counseling, couples support each other
Factors related to attitude in husbands	Looking at the sexual relationship of the patient as an inhuman behavior, having a paternal attitude of the husband towards the patient

makeup, wigs. I even got breast prosthetics" (P 6).

4.4. Marital Relationships

In this subcategory, codes such as pre-illness sexual quality of life and pre-illness relationship status were identified.

"My husband and I already had disagreements before, and the illness has made my husband constantly criticize and taunt me" (P 8).

4.5. Supportive Systems

In this subcategory, social and financial support, psychological counseling, and mutual support between spouses were highlighted.

"Having insurance for medications and surgeries reduced our financial burden. Also, the counseling classes provided by the chemotherapy department psychologist greatly improved our situation" (P 7).

4.6. Spouses' Attitudes

In this subcategory, codes such as having an inhumane view of sexual intercourse with the patient and adopting a paternalistic attitude towards the patient were identified.

"I don't feel like requesting sexual intercourse from my spouse at all because I think it is an inhumane behavior in that situation" (P12).

5. Discussion

In the investigation of factors related to marital relationships after mastectomy, seven subcategories were identified (Table 2).

The subcategory of demographic characteristics included education level, place of residence, employment status, having children, age of the patient and spouse, duration of marriage, and socio-economic status. The findings revealed that couples with higher education levels, living in urban areas, and having

better socio-economic and occupational status reported more desirable marital relationships. Considering that cancer treatment is often expensive, having a better job and income can potentially improve the compatibility of couples and help improve marital relations (20).

In addition, this study revealed that individuals with higher levels of education were more focused on self-preservation, which is consistent with the findings of another study (21). Similarly, Williams et al. reported that patients with cancer living in rural and economically or socially deprived areas are diagnosed at more advanced stages, which can disturb couples' relationships more than those of the urban population, whose cancer is diagnosed in the early stages (22).

Furthermore, couples who had been married longer had better relationships after the disease. Factors such as having children and receiving support from family members were also identified as effective in improving patient care, which aligns with previous research findings. These factors not only improve the overall quality of life but also strengthen the bond between couples (23).

This study also showed that psychological characteristics of spouses, such as introversion, social withdrawal, and depression, play a significant role. These traits reduce the quality of life and disrupt the marital bond. This finding is similar to the results of other studies (24).

Among the other factors that affect the marital relations of couples after mastectomy are adaptation, efforts to maintain roles, and independence, which have been shown in other studies to have a positive effect on relationship dynamics (25). On the other hand, limitations in the patient's activities after illness and the loss of role can restrict interaction between spouses (20). Additionally, the physical and mental conditions of the patient influence their self-efficacy and independence, which, in turn, impact the overall marital relationship (26).

Furthermore, this study showed that factors such as the type of tumor, severity of metastasis, type of chemotherapy, side effects of chemotherapy, and use of reconstructive surgeries are significant in the relationship between couples after mastectomy. For example, various studies have shown that after mastectomy, many husbands report decreased sexual activity, and women often cover their breasts during intercourse. This negatively affects the quality of sexual relations and disrupts the overall relationship. These changes can be attributed to the physical alterations caused by alopecia and mastectomy, which may reduce the sexual attractiveness of women from the perspective of their husbands (27). Additionally, the speed of tumor metastasis is a factor that can influence the patient's adjustment and ultimately affect the relationship between the patient and the spouse (28).

This study also revealed that factors such as support from family and friends, financial assistance, psychological counseling, and spousal support impacted marital relationships (29). Another crucial factor is the mutual support between spouses. Similar to the findings of Younes Barani et al., this study found that husbands made considerable efforts to manage their spouses' illness, enduring the challenges, pains, and hardships that accompanied it. This support was perceived as enhancing both the quality of life and the strength of the relationship (30).

The quality of pre-existing marital communication emerged as another influential factor in this study. Dionigi et al. demonstrated that pre-existing differences between spouses prior to marriage were a contributing factor to increased tensions following breast cancer and mastectomy. These misunderstandings led to a decrease in the quality of life and were perceived as disruptive factors (31). Other researchers also found that individuals who experienced tension and conflicts in their lives prior to their spouse's cancer diagnosis faced increased conflicts and arguments after the diagnosis (32).

The attitudes of spouses were identified as another influential factor in marital relationships in this study. Viewing sexual relationships with the patient as inhumane behavior was considered disruptive to the relationship. Additionally, having a paternalistic attitude towards the patient was found to be influential, as supported by other studies. The spouse's attitude towards the patient depends on their level of knowledge about the illness, and increasing awareness can improve their attitude towards both the patient and the illness (33).

Despite the majority of studies showing a decline in the quality of sex life after the disease, some participants in this study admitted that their sexual relationships actually improved after the disease. They attributed this improvement to increased self-confidence, improved self-image, and the use of prosthetics. These findings align with the results of other researchers and demonstrate that these factors, in addition to improving the quality of life, also strengthen marital relationships (34).

Among the limitations of this study, it should be noted that the findings may not be applicable outside the specific cultural context of Iranian women. Additionally, the lack of a longitudinal perspective, due

to the type of study being content analysis, prevents tracking changes over time. It is recommended that longitudinal studies be conducted to examine couples' relationships after mastectomy to observe these changes over time.

One of the challenges in conducting this research was the cultural sensitivity regarding marital relationships. Efforts were made to ensure that the interviewee and interviewer were of the same gender; however, the shame of the patients and their spouses was still evident during the interviews.

5.1. Conclusions

The study concludes that several factors influence marital relationships in patients who have undergone mastectomy, and these factors can be modified. It is crucial for researchers and healthcare providers to recognize and address these factors. By prioritizing the improvement of these relationships, there is potential to enhance the quality of life for couples, ultimately leading to improved longevity for patients.

The results of this study can be utilized in nursing education and clinical psychology. Additionally, the findings can inform the review of service packages for patients with breast cancer. Furthermore, the results can be applied to couple therapy interventions aimed at improving the quality of marital life for patients with breast cancer after mastectomy.

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Footnotes

Authors' Contribution: Study concept and design: H. E.; Acquisition of data: M. B. B. Sh.; Analysis and interpretation of data: M. B. B. Sh., Drafting of the manuscript: B. Z., D. Z., and Sh. J.

Conflict of Interests Statement: The authors declared that they have no conflict of interest.

Data Availability: The dataset presented in the study is available on request from the corresponding author during submission or after publication.

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