Journal of Multidisciplinary Care (JMDC)
doi: 10.34172/jmdc.1324 2024;13(3):150-158 http://jmdc.skums.ac.ir

Review Article

Determinants of Quality of Life Among Women Diagnosed with Breast Cancer: A Review Study

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Abstract

Background and aims: Breast cancer is one of the most prevalent cancers globally and significantly affects women's health. This disease has profound physical and psychological repercussions, often leading to an identity crisis among affected women. The aim of this study is to review literature concerning the factors that influence the quality of life in women with breast cancer.

Methods: This review study gathered information on factors affecting the quality of life in women with breast cancer from Persian and English databases, utilizing both Persian keywords and their English equivalents for "quality of life" and "breast cancer" from the years 2000 to 2024. Initially, 72 articles were selected for review. Following an examination of the titles, 53 relevant articles were identified and progressed to a second stage involving qualitative evaluation of their abstracts, ultimately yielding 29 suitable articles for inclusion in the present study. Information was meticulously extracted from these studies based on a thorough review of the articles.

Results: The review of the selected articles revealed several factors influencing the quality of life of women with breast cancer. These factors included training and rehabilitation classes, socio-economic support, massage and exercise movements, yoga, spirituality, social capital, peer training, and psychological support and counseling.

Conclusion: Various factors, including anxiety, depression, and fatigue, can adversely affect the quality of life of women with breast cancer. Consequently, to enhance the quality of life and empower women facing this disease, it is essential for authorities to prioritize not only medical and surgical treatments but also to implement effective supportive care measures.

Keywords: Quality of life, Breast cancer, Women

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Received: August 11, 2024
Revised: June 15, 2025
Accepted: July 13, 2025
ePublished: October 19, 2025

Cite this article as: Khodarahmi S, Kiani M, Tavakol Z, Simbar M. Determinants of quality of life among women diagnosed with breast cancer: a review study. Journal of Multidisciplinary Care. 2024;13(3):150–158. doi: 10.34172/jmdc.1324.

Introduction

According to the World Health Organization, breast cancer is one of the most prevalent cancers globally and significantly affects women's health. In 2022, an estimated 2.3 million women worldwide were diagnosed with breast cancer, resulting in approximately 670 000 deaths (1, 2). This disease has profound physical and psychological impacts on women (3). Given that breasts are often regarded as a defining female characteristic in many societies and cultures, numerous women experience an identity crisis following a breast cancer diagnosis (4). Consequently, this condition can lead to feelings of worthlessness, anxiety, depression, an overwhelming sense of burden, helplessness, and a diminished quality of life for these patients (5).

Despite significant advancements in breast cancer treatment that have improved tumor responses to therapy, many of these treatments are associated with side effects, including lymphedema, weakness, pain, numbness, and psychosocial disorders. These side effects can considerably diminish the functional capabilities of women with breast cancer, resulting in lower overall functioning compared to healthy women (6). Research indicates that individuals who possess confidence in their abilities are more likely to engage actively in health-promoting programs, which in turn enhances their

quality of life (7). However, prolonged treatments and elevated stress levels experienced by breast cancer patients can negatively impact their self-confidence over the long term. This decline in self-confidence ultimately affects various aspects of their lives, including family dynamics, marital status, overall health, empowerment, and quality of life (8, 9).

The World Health Organization (WHO) defines quality of life as an individual's perception of their position in life, taking into account the context of their culture, value systems, goals, expectations, standards, and concerns. This definition highlights the subjective and personal nature of quality of life, rendering it a multidimensional concept that varies among individuals and societies (10). Considering that quality of life is a crucial outcome measure in oncology (11) and that the survival rate of women with breast cancer is improving due to advancements in diagnostic and therapeutic methods, it is essential for breast cancer patients to receive comprehensive physical, psychological, and social care to fully enjoy their lives (12). In this context, there is a strong need for initiatives focused on empowerment, self-sufficiency, and the enhancement of their quality of life (13).

Given the numerous studies conducted globally on this topic, we have decided to synthesize the relevant information through a comprehensive review of these studies. Therefore, the objective of this study is to examine articles that address the factors influencing the quality of life in women with breast cancer.

Materials and Methods

This research was carried out through a comprehensive search of literature in both Persian and English databases, including Elsevier, Proquest, UpToDate, Scopus, Magiran, Irandoc, SID, Iran Medex, ScienceDirect, EBSCO, PubMed, and Google Scholar. The keywords used for extracting related articles included "quality of life," "empowerment," "women," and "breast cancer." In this study, we considered articles published from 2000 to 2024 that focused on improving the quality of life of women with breast cancer in relation to their capabilities. We systematically extracted the titles and sources of all relevant articles, reviewed them, and selected those that aligned with the objectives of the present study. Irrelevant and duplicate items were subsequently removed from the dataset. In the second stage, the researcher evaluated the selected articles based on criteria such as title, abstract, sampling method, measured variables, statistical analysis, and study objectives. Initially, 72 articles were selected for review. After assessing the titles, 53 relevant articles were identified and progressed to the second stage of qualitative evaluation of the abstracts. Ultimately, 29 suitable articles were chosen for inclusion in the present study. To gather information from these studies, the articles were meticulously reviewed, and the relevant results were extracted (Flowchart 1). The inclusion criteria for this study comprised articles written in either Persian or English, focused on improving the quality of life in women with breast cancer, and employed appropriate methodologies. There were no restrictions regarding race or ethnicity in the selection of articles. The information extracted from the studies included study location, number of participants, demographic characteristics of participants, duration of the study, and quality of life improvement strategies for women with breast cancer.

Results

After reviewing the selected articles, several key factors affecting the quality of life of women with breast cancer were identified. These factors include Training and Rehabilitation Classes, Socio-Economic Support, Massage and Exercise Movements, Yoga, Spirituality, Social Capital, Peer Training, and Psychological Support and Counseling. Each of these factors plays a crucial role in improving the quality of life for women diagnosed with breast cancer, and they will be explained in detail in the subsequent sections of the study.

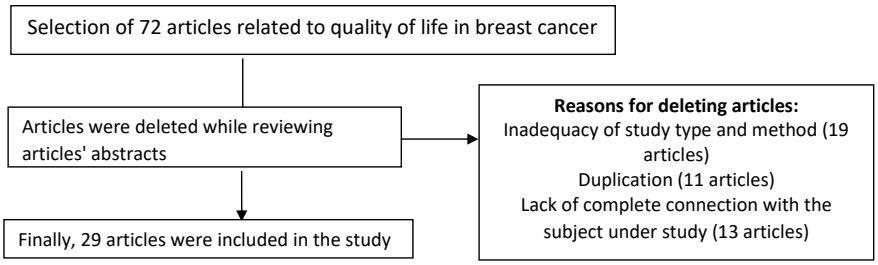
Training and rehabilitation classes

The results from Moradi et al indicated a statistically significant positive relationship between self-efficacy and various domains of quality of life, including physical health, mental health, social relationships, and life satisfaction. This suggests that enhancing self-efficacy can lead to improved quality of life for patients with breast cancer (14).

In a related study, Baghaei et al conducted a quasi-experimental study involving 106 breast cancer patients undergoing chemotherapy. The participants were randomly assigned to either a control group or an intervention group. Both groups completed the Breast Cancer Quality of Life Questionnaire at the beginning of chemotherapy and again after four cycles. The intervention group received a manual designed to help manage chemotherapy side effects after two cycles. The findings demonstrated that the training package for controlling chemotherapy-related complications significantly improved the quality of life for those in the intervention group (12).

Regarding the effect of rehabilitation on the quality of life of women after mastectomy, Wang et al conducted a randomized controlled trial (RCT) that demonstrated the benefits of a 12-week upper limb rehabilitation program. This program included face-to-face education on upper limb rehabilitation and monthly monitoring of the participants' upper extremity activity. The results indicated that the intervention group experienced improvements in functioning and symptom levels compared to the control group. Furthermore, both groups showed a gradual increase in quality of life from baseline to week 12, suggesting that rehabilitation efforts can have a positive impact on post-mastectomy recovery (15).

Similarly, Kucuk et al carried out a randomized



Flowchart 1. Selection of articles

controlled pilot study where the intervention group participated in a nurse-led supportive care program over 8 weeks. This program consisted of four weeks of face-to-face sessions followed by four weeks of support through phone sessions. The control group received only routine treatment. The results indicated a significant increase in the mean global health status and functional status scores of women with breast cancer in the intervention group compared to those in the control group by the ninth week, relative to baseline measurements. Furthermore, the women in the intervention group exhibited a lower mean symptom status score in the ninth week than their counterparts in the control group, with a statistically significant difference observed in the change in mean scores between the groups over time. These findings suggest that the nurse-led supportive care program can serve as a reliable and effective nursing intervention to enhance the quality of life for women with breast cancer undergoing adjuvant chemotherapy (16). Additionally, the results of the study conducted by Paolucci et al demonstrated an improvement in the average quality of life among breast cancer patients following 10 rehabilitation sessions, administered twice a week for one hour each (17). In this context, Leclerc et al concluded in their study that a multidisciplinary rehabilitation program, which encompasses physical fitness and psychological sessions, is effective in enhancing the quality of life for women with breast cancer (18). Similarly, Cheon et al investigated the impact of an educational program on the awareness and quality of life of women with breast cancer. Their training program included care strategies addressing both physical and psychological symptoms of breast cancer, follow-up treatment, screening for secondary malignancies, recognition of warning signs, and guidance on maintaining a healthy lifestyle. The study indicated that while the implementation of an educational program can increase awareness, improve quality of life, and enhance psychosocial status, its effect is insufficient to induce significant changes in health behaviors (19).

Socio-economic support

Studies have demonstrated that the presence of family and children, along with psychological, familial, socio-economic, and financial support, can significantly enhance the quality of life for patients with breast cancer undergoing various treatments, including surgery, chemotherapy, and radiotherapy (20). Researchers have recommended that health policymakers establish family counseling clinics to support breast cancer patients and improve their overall quality of life (21). Furthermore, attention to the psychosocial and economic needs of breast cancer patients has been identified as effective in enhancing both the quality of life and empowerment of these patients and their families (5).

Given the established relationship between educational and occupational status and the quality of life of breast cancer patients, enhancing economic and educational conditions can lead to improvements in their overall quality of life (5,22,23). Additionally, government-provided economic support and initiatives aimed at early disease diagnosis have been shown to positively impact the quality of life for these patients (24). Numerous studies conducted across various countries have reported the beneficial effects of social support on the quality of life of women with breast cancer (25-29). Support from friends and family members is also recognized as a significant factor in enhancing the quality of life for these patients (30). The findings from the study by Shen et al indicated that hope, social support, self-efficacy, and income level serve as positive predictors of quality of life, while the clinical stage of cancer functions as a negative predictor (31).

Massage and exercise movements

Regarding the effect of massage on the quality of life of women with breast cancer, the results of a RCT conducted by Demirci et al demonstrated that after six sessions of massage therapy, a significant difference was observed between the intervention and control groups both before and after the intervention. The findings indicated that massage therapy can serve as an effective intervention to enhance the quality of life for patients with breast cancer (32). To assess the impact of an exercise program on the quality of life in breast cancer survivors, Karkou et al conducted a protocol study in 2021 involving 54 women with breast cancer. The intervention consisted of 32 hours of movement exercises, and the research findings revealed a significant improvement in quality of life among participants following the movement program (33). Additional studies have highlighted the effectiveness of aerobic and resistance exercises (34,35), as well as home exercise programs (36). Overall, exercise has been shown

to improve shoulder function, reduce stress, and enhance the quality of life in patients with breast cancer (37).

The descriptive intervention study conducted by Köse et al in Brazil indicated that a mixed exercise program combining fitness center activities and home-based exercises over a 12-week period leads to improvements in general health and quality of life for breast cancer patients (38). Similarly, Lipsett et al reported in their study that engaging in exercise during radiotherapy is beneficial for patients with breast cancer and can enhance their quality of life (39). Additionally, Mirandola et al examined the effects of physical activity on upper limb disability and quality of life among Italian women with breast cancer. After eight weeks of physical activity, the study assessed quality of life as well as the severity of back and shoulder pain following surgery. The results demonstrated that this intervention significantly reduced upper limb disability and improved quality of life (40).

However, Furmaniak et al concluded in their study that while exercise may have a small positive effect on cancer-specific quality of life and cognitive function, it does not significantly impact health-related quality of life (41). Furthermore, negative factors affecting the quality of life of breast cancer patients include depression, anxiety, insomnia, fatigue, and comorbidities, all of which can substantially influence the physical and mental well-being of these individuals (42). Additionally, psychological factors stemming from societal influences, such as lack of social support and feelings of hopelessness, play a significant role in diminishing the quality of life for these patients (43).

Yoga

Evidence has demonstrated that yoga positively impacts various quality of life criteria in patients with breast cancer (44-47). In a study examining the effects of yoga on the functional domain of quality of life in breast cancer patients undergoing chemotherapy, Yazdani and Babazadeh reported improvements in the functional scales of quality of life among these patients as a result of yoga practice. The yoga sessions were conducted for 75 minutes on every other day over an 8-week period. The researchers concluded that the yoga program can serve as an effective, convenient, and low-cost method for enhancing the quality of life of this patient population (48).

Hsueh et al demonstrated that yoga enhances quality of life (QOL) in patients with breast cancer who are experiencing post-treatment complications. They recommend yoga as a supportive therapy to alleviate post-treatment distress and improve QOL for these patients (49). In a related study, Pasyar et al examined the effects of an 8-week yoga program on quality of life and upper extremity edema in women with breast cancer suffering from lymphedema. The results were evaluated at the fourth and eighth weeks of the intervention. Findings indicated that yoga may improve both the physical and psychological aspects of quality of life while simultaneously reducing fatigue, pain, and insomnia in these patients. Consequently, yoga was recommended as an effective intervention for this population (50).

Spirituality

Spiritual therapy can serve as a suitable and effective resource for addressing the physical and psychological challenges faced by patients with breast cancer (51). Evidence suggests that spirituality not only enhances the quality of life but also increases the life expectancy of patients with breast cancer (52-54).

In the study conducted by Davari et al, it was found that reframing illness perception and fostering inner strength through spiritual and religious-based interventions can enhance coping mechanisms and improve the quality of life for women hospitalized with breast cancer. In this study, the experimental group participated in religion-based cognitive therapy over ten sessions, each lasting 90 minutes, conducted once weekly for 10 weeks. In contrast, the control group did not receive any intervention (55). Furthermore, training in spiritual mental skills and promoting spiritual health are effective in enhancing mental health, increasing hope, life satisfaction, and happiness, thereby improving the quality of life for breast cancer patients (56-58).

In their study on the effectiveness of religious-spiritual psychotherapy, Nasiri et al found that spirituality significantly enhances the quality of life in women with breast cancer (59).

Social capital

Hosseini et al conducted a descriptive-analytical study to examine the impact of social capital on the quality of life of patients with breast cancer. The intervention group received targeted interventions designed to enhance social capital. The researchers ultimately concluded that an increase in social capital, along with enhanced morale and hope, positively influences the quality of life for breast cancer patients. They suggested that methods aimed at promoting social capital could serve as effective strategies for improving the quality of life of these individuals (60). Recent research has indicated that the desired quality of life in these women is associated with strong social support, elevated levels of social capital, high degrees of hope and resilience, as well as a higher level of education and an age of 50 years or older (61).

Peer training

Regarding the effect of peer education on the quality of life in patients with breast cancer following surgery, a study conducted by Sharif et al involved 99 patients who had undergone radical mastectomy. These patients were randomly assigned to experimental and control groups. The experimental group was subsequently divided into four subgroups, each participating in a peer education program once a week for one month. The results of the

study indicated that peer education significantly enhances the quality of life for patients following breast resection. The authors recommended that peer education programs be integrated into the treatment plans for these patients (62).

Psychological support and counseling

Evidence suggests that identifying negative factors affecting the quality of life in patients with breast cancer—such as depression, anxiety, and stress—through psychological interventions can help control and mitigate the impact of these detrimental factors, thereby improving the quality of life for these women (63). Findings from a RCT conducted by Zhu et al demonstrate that participants in the psychosocial intervention group, over the course of eight weeks, experienced significantly better outcomes in terms of quality of life and psychological distress compared to the control group. The psychosocial intervention proved effective in enhancing the quality of life for patients with breast cancer undergoing early chemotherapy, while also significantly reducing levels of anxiety, depression, and negative cognitive emotion regulation strategies (64).

In two studies conducted by Belay and Lotfi Kashani et al, the effectiveness of four psychotherapy factors—awareness raising, hope, the establishment of an appropriate therapeutic relationship, and behavior regulation—on improving the quality of life of women with breast cancer was investigated. The results indicated that an increase in hope for recovery and treatment correlates with an enhancement in the quality of life of the patients (65, 66).

Esmali Kooraneh et al conducted a quasi-experimental study to evaluate the effectiveness of group psychotherapy based on acceptance and commitment in enhancing the quality of life of women with breast cancer. In this study, the experimental group participated in eight sessions, each lasting 90 minutes, focused on acceptance and commitment therapy. The findings indicated that this form of group psychotherapy is effective in improving the quality of life for patients with breast cancer (67). Additionally, counseling involving family members has been shown to enhance the quality of life for breast cancer patients. Based on their findings, Pardede et al suggested that family support is a crucial factor in improving the quality of life for these women. They recommended that healthcare professionals assess mood-related issues and the level of family support when providing treatment for breast cancer patients (68).

In this context, Banaee et al conducted a quasi-experimental study involving 80 breast cancer patients to investigate the impact of couple training on quality of life. In the intervention group, both the patients and their husbands participated in a couple-training program over three consecutive chemotherapy sessions, each lasting between 40 to 60 minutes. In contrast, the control group received only routine training in the chemotherapy departments. The findings revealed that couple education significantly enhances the quality of life for patients with breast cancer. Moreover, the study highlighted the positive effect of couple training on patients' adherence to treatment, suggesting that it is essential to incorporate educational interventions that involve spouses into training and care programs for these patients (69).

Discussion

Given the low quality of life reported among women with breast cancer (5) and their need for empowerment (6), it is crucial to develop appropriate care and treatment programs aimed at enhancing their quality of life. The results of this review study indicate that various interventions can effectively improve the quality of life for women with breast cancer. These interventions include training and rehabilitation classes, peer education, encouragement of exercise and yoga, strengthening spirituality, socio-economic support, counseling and psychological support, and promoting social capital.

The negative impact of breast cancer and chemotherapy on women's quality of life and self-efficacy highlights the urgent need for psychosocial interventions aimed at enhancing self-efficacy and, in turn, improving overall quality of life (70,71). Research by D'Egidio et al demonstrated that a multidisciplinary approach can effectively sustain and restore physical, psychosocial, and quality of life outcomes for breast cancer patients (25). Aghajari's cross-sectional study further emphasized that breast cancer patients require a variety of supportive care during treatment, particularly during chemotherapy or hormone therapy. Implementing supportive care programs is essential for addressing patients' unmet needs and improving their quality of life (72). Additionally, the empowerment of patients in making therapeutic decisions significantly contributes to enhancing their quality of life. Andersen et al found that involvement in decision-making regarding cancer treatment is associated with better quality of life outcomes in breast cancer survivors (73).

On the other hand, the high prevalence of depression among breast cancer patients underscores the importance of timely identification and referral to psychiatric or psychological clinics. Providing counseling services at the time of breast cancer diagnosis can significantly enhance the quality of life for these patients (74). Additionally, it is crucial to recognize that depression in caregivers of breast cancer patients can also diminish their quality of life. Therefore, equipping both patients and their caregivers with necessary information from healthcare professionals in the early stages of the disease can improve their capacity to provide care. This, in turn, can enhance the overall quality of life for both patients and their caregivers (75).

Neglecting the mental health of patients after mastectomy can lead to mood swings and significantly impair their quality of life. Researchers emphasize that healthcare professionals can play a pivotal role in addressing these issues through the application of

psychological techniques and psychosocial support in clinical settings.

Effective strategies may include individual counseling, relaxation techniques, stress management, and the enhancement of adaptive skills. Fostering positive relationships with breast cancer patients is crucial, as is establishing a connection based on mutual understanding and respect. These factors are key in improving the quality of life for individuals undergoing treatment (76). Moreover, healthcare professionals should actively identify and refer patients experiencing psychological stress to counseling centers. This proactive approach can help prevent mood disorders, ultimately paving the way for improved quality of life for breast cancer patients (9).

Conclusion

In summary, various studies have highlighted numerous interventions aimed at improving the quality of life for women with breast cancer, focusing on empowerment and holistic support. Key strategies identified include enhancing patient education, training classes, psychological support in chemotherapy departments, providing manuals for managing chemotherapy side effects, comprehensive support systems, access to family counseling clinics, rehabilitation programs, physical fitness interventions, spiritual and psychological skills training, couple therapy, adaptation to breast cancer, and post-surgery massage therapy. To effectively enhance the quality of life and empower women with breast cancer, it is essential for healthcare authorities to prioritize not only medical and surgical treatments but also to implement comprehensive supportive care initiatives.

Acknowledgements

This article is the result of a project approved by Shahid Beheshti University of Medical Sciences (Grant no. 21231). We would like to extend our gratitude to all the members of the Shahid Beheshti University Student Research Committee for their invaluable support and contributions to this research.

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Competing Interests

Nil.

Ethical Approval

The present study received approval following the acquisition of the code of ethics (IR.SBMU.RETECH.REC.1398.552) from Shahid Beheshti University of Medical Sciences.

Funding

Nil.

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