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THE IMPACT OF PSYCHOSOCIAL FACTORS ON QUALITY OF LIFE AMONG YOUNG WOMEN WITH BREAST CANCER: A SYSTEMATIC REVIEW

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ABSTRACT

Young women with breast cancer experience complex psychosocial challenges resulting from physical, emotional, and social changes during treatment, which significantly affect their quality of life (QoL). Objective to identify and analyze psychosocial aspects influencing the quality of life among young women with breast cancer. This systematic review followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. Literature searches were conducted across five databases (PubMed, ScienceDirect, Scopus, Sage Journals, and Taylor & Francis) for studies published between 2015 and 2025. Inclusion criteria included young women (≤40 years) diagnosed with breast cancer, using quantitative observational designs (cross-sectional or prospective cohort). A total of 11 eligible studies from 5761 articles were included and analyzed narratively. Five major themes influencing QoL were identified: (1) psychological distress (anxiety, depression, and fear of cancer recurrence); (2) sexual dysfunction and negative body image; (3) reproductive and fertility concerns; (4) social support and partner relationships; and (5) long-term QoL decline up to five years post-diagnosis, which is improved with strong social support and adaptive coping strategies. Psychosocial factors have a significant impact on the quality of life of young women with breast cancer. A holistic nursing approach that integrates psychological, social, and family support is essential to enhance emotional well-being and improve the long-term quality of life of these patients.

Keywords: breast cancer; psychological distress; quality of life; social support; spirituality; young women

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INTRODUCTION

Breast cancer is a malignant neoplasm with the highest prevalence among women worldwide and is one of the leading causes of morbidity and mortality in the productive age group (Bray et al., 2024). The incidence of breast cancer among women under the age of 40 has continued to increase, rising from 23.93 to 25.95 per 100,000 population between 1990 and 2021, with an average annual increase of 0.64% (Cai et al., 2025). Advances in early detection and treatment have improved survival rates; however, many patients now face long-term side effects such as fatigue, cardiovascular complications, infertility, and depression, all of which negatively impact quality of life (Sari et al., 2021). This situation highlights that treatment success should not only be measured by survival rates, but also by the ability to maintain patients' physical and psychosocial well-being.

Young women with breast cancer have distinct clinical and psychosocial characteristics compared to older patients (Paluch-Shimon & Warner, 2015). Breast cancer in younger women tends to be more aggressive and often requires multimodal therapy, including surgery, chemotherapy, and endocrine therapy, which frequently leads to long-term consequences. Side effects such as alopecia, premature menopause, altered body image, and sexual dysfunction result in emotional distress, reduced self-esteem, and disruptions in interpersonal relationships (Darmajayanti Febry, 2025; Miaja et al., 2017). Additionally, being diagnosed during the productive stage of life creates conflicts between family responsibilities, work demands, and uncertainty about the future, further intensifying psychological stress.

Psychosocially, young women with breast cancer often experience anxiety, depression, and a high fear of cancer recurrence (FCR), even after treatment has been completed (Ferrigno Guajardo et al., 2024). Emotional problems are exacerbated by social pressures such as stigma related to loss of body integrity and limited opportunities to express their feelings (Tisnasari et al., 2022). Moreover, economic instability and lack of family support further worsen patients' psychological conditions (Borstelmann et al., 2022). These factors indicate that psychological distress is not only caused by the disease process itself but also by social and environmental influences.

The quality of life (QoL) of young women with breast cancer encompasses physical, emotional, social, and spiritual well-being, all of which are often diminished due to the effects of the disease and its treatment. Young women tend to experience emotional disturbances such as anxiety, depression, and fear of cancer recurrence, along with changes in body image and sexual dysfunction that lower self-confidence and life satisfaction (Schapira et al., 2022; Wettergren et al., 2020). Side effects such as infertility, premature menopause, and chronic fatigue further impair physical and social functioning (Miaja et al., 2017). Conversely, social support, self-compassion, and self-acceptance have been shown to be protective factors that enhance adaptive capacity and improve psychological well-being in young patients (Vaca-Cartagena et al., 2025; Zhu et al., 2023). Therefore, the quality of life of young women with breast cancer is strongly influenced by the balance between physical and psychosocial factors. The aim of this study is to systematically identify, synthesize, and analyze scientific evidence on the psychosocial factors that influence the quality of life of young women with breast cancer.

METHOD

This systematic review was conducted following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Page et al., 2021). The review process consisted of four phases: identification, screening, eligibility assessment, and inclusion of articles. The inclusion criteria were women aged ≤40 years with a primary breast cancer diagnosis; full-text articles published between 2015–2025; studies using quantitative designs such as cross-sectional or prospective cohort; and publications written in English or Indonesian. Articles were excluded if they were review papers, interventional studies (RCTs or quasi-experimental), qualitative studies, meta-analyses, editorials, book chapters, unavailable in full text, or focused solely on clinical aspects without discussing psychosocial factors and quality of life.

Literature searches were conducted in September 2025 across five major databases PubMed, ScienceDirect, Scopus, Sage Journals, and Taylor & Francis using the following keyword combination: (“breast cancer” OR “breast carcinoma” OR “breast neoplasm”) AND (“young women” OR “young adult” OR “early-onset” OR “adolescent and young adult” OR “AYA”) AND (“psychosocial issues” OR “psychological distress” OR “body image” OR “social support” OR “coping” OR “fear of recurrence” OR “anxiety” OR “depression”) AND (“quality of life” OR “psychological well-being” OR “psychosocial impact”). All search results were imported into Mendeley Reference Manager for reference management and duplicate removal prior to title, abstract, and full-text screening.

Methodological quality and risk of bias were assessed using the Joanna Briggs Institute (JBI) Critical Appraisal Checklist, aligned with each study design (cross-sectional or cohort), employing four assessment categories: “Yes,” “No,” “Unclear,” and “Not Applicable” (Aromataris et al., 2024). Extracted data included first author, year of publication, study location, research objectives, population and sample, study design, instruments, and key findings. All data were analyzed using narrative synthesis, due to heterogeneity across studies in terms of research design, population characteristics, and measurement instruments used to assess psychosocial aspects and quality of life among young women with breast cancer.

RESULT

The literature search yielded a total of 5,761 studies, which were screened following the PRISMA flow diagram. After removing 138 duplicate records and excluding 5,239 articles based on predetermined limiters (publication year, full text availability, English language, open access, age criteria, and female population), 384 articles remained for title and abstract screening. Of these, 38 articles met the initial inclusion criteria. Further critical appraisal using the Joanna Briggs Institute (JBI) Critical Appraisal Checklist identified 18 eligible articles, with 11 studies meeting the methodological quality threshold and included in the final analysis (Table 1).

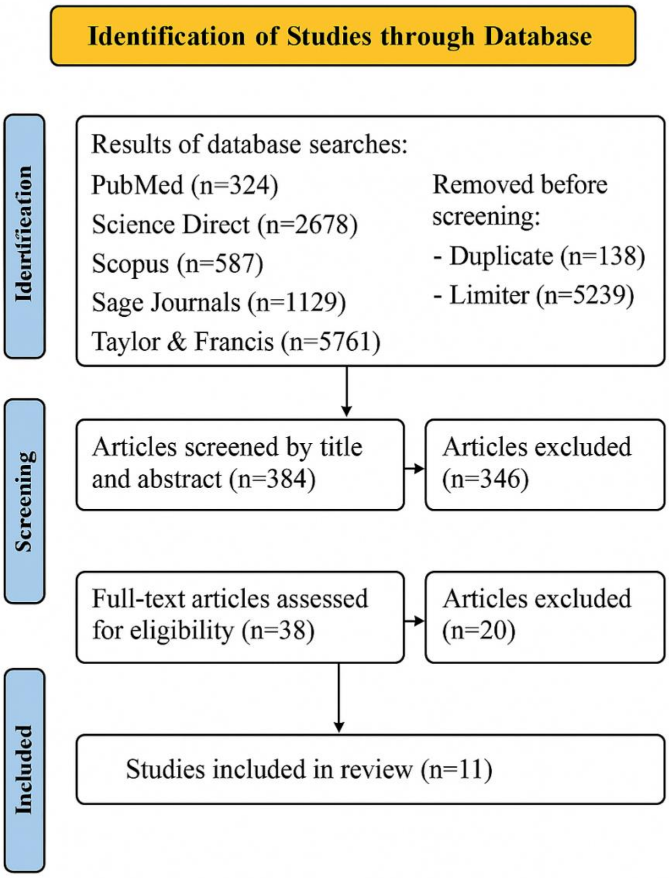

Figure 1. PRISMA Flowchart

Study Characteristics

A total of 11 studies met the inclusion criteria and were included in the final analysis. The publication years ranged from 2015 to 2025, covering research conducted in Europe (the Netherlands, Italy, Sweden), the Americas (the United States, Brazil, Mexico, Peru), and Africa (Nigeria). Most studies employed quantitative observational designs, consisting of six cross-sectional studies and five prospective cohort studies. Sample sizes varied from 106 to 4,010 participants, with the primary population being young women aged ≤40 years diagnosed with primary breast cancer who were undergoing or had completed treatment.

Most studies assessed quality of life using validated instruments such as the EORTC QLQ-C30, QLQ-BR23, FACT-B, WHOQoL-BREF, and the McGill Quality of Life Questionnaire (MQoL). Psychosocial variables were measured using standardized tools, including the Hospital Anxiety and Depression Scale (HADS) for emotional distress, the Body Image Scale (BIS) and Body Image and Relationship Scale (BIRS) for body image perception, the Fear of Cancer Recurrence Inventory

(FCRI) for recurrence-related fear, the Female Sexual Function Index (FSFI) for sexual function and satisfaction, and the Reproductive Concerns After Cancer (RCAC) scale for fertility- and reproduction-related concerns.

Psychological Distress (Anxiety, Depression, and Fear of Cancer Recurrence)

Psychological distress particularly anxiety, depression, and fear of cancer recurrence (FCR) were the most dominant factors influencing quality of life (QoL) among young women with breast cancer. Studies by Muzzatti et al. (2020), Patel et al. (2024), and Vrancken Peeters et al. (2025) found that 30–40% of patients experienced high FCR, which was negatively correlated with emotional and social functioning ($p < 0.001$). Symptoms of anxiety and depression often persist for several years after diagnosis.

Borstelmann et al. (2022) reported that 44% of partners experienced high anxiety, and 54% exhibited maladaptive coping, which significantly impaired relationship quality and increased emotional strain within families. These relational dynamics further increased patients' psychological distress and reduced the emotional support needed throughout treatment. Collectively, psychological distress showed a significant negative association with emotional, social, and role functioning domains of QoL. These findings indicate that young women with breast cancer face a substantial and enduring psychological burden, highlighting the need for integrated, family-based psychosocial interventions to support emotional well-being, psychological adjustment, and overall quality of life.

Sexual Dysfunction and Body Image Disturbance

Sexual dysfunction and negative body image were among the most prevalent psychosocial problems experienced by young women with breast cancer. Vrancken Peeters et al. (2024) reported that 50–70% of patients experienced sexual dysfunction after treatment, characterized by decreased desire, reduced sexual satisfaction, and impaired intimacy with partners. Contributing factors included treatment-related side effects (chemotherapy and endocrine therapy), premature menopause, alopecia, altered breast appearance, and feelings of diminished femininity, all of which negatively impacted self-esteem and personal satisfaction.

Ferrigno Guajardo et al. (2024) found an increase in sexual dysfunction from 33.6% to 52.9% within five years post-diagnosis, while Battistello et al. (2025) demonstrated that negative body image was significantly associated with reduced emotional and social QoL ($p < 0.01$). Partner support, body image counseling, and psychosocial interventions were identified as protective factors that improved body perception and interpersonal satisfaction. Overall, sexual dysfunction and body image disturbance showed a strong negative association with QoL among young women with breast cancer, underscoring the need for holistic approaches incorporating sexual health education, couples counseling, and body image–focused therapies to promote psychosocial well-being.

Reproductive and Fertility Concerns

Concerns about infertility and reproductive impairment were significant sources of psychological distress. Up to 58% of patients reported high reproductive concerns, and 21.5% indicated they would refuse chemotherapy if infertility risk exceeded 25%. These concerns include fears of losing the ability to have children, uncertainty about future fertility treatment success, and understanding about pregnancy safety.

Ljungman et al. (2018) reported that women who did not receive pre-treatment fertility counseling experienced higher anxiety levels and poorer QoL compared to those who received reproductive guidance. These findings were supported by Werutsky et al. (2025), who showed that patients with access to fertility preservation services and reproductive support exhibited better psychological adjustment and higher emotional QoL. Overall, reproductive and fertility concerns demonstrated a significant negative association with emotional and social domains of QoL and played a critical role in shaping therapeutic decision-making. Therefore, comprehensive, emotionally sensitive fertility counseling services are essential to support informed decision-making, psychological well-being, and long-term QoL.

Social Support and Partner Relationship Factors

Social support and partner relationships played a crucial role in sustaining psychological well-being and improving QoL among young women with breast cancer. Borstelmann et al. (2022) reported that 44% of partners experienced high anxiety and 54% adopted maladaptive coping, contributing to increased emotional distress and reduced family well-being. Patients with strong emotional support, open communication, and positive relational dynamics demonstrate better emotional and social QoL compared to those with strained relationships. Muzzatti et al. (2020) also found that adequate social support—from partners or peers—was associated with lower depression levels and more stable emotional adjustment following treatment. These findings emphasize the importance of strengthening partner and family support systems as part of psychosocial care.

Long-Term Quality of Life

Reductions in quality of life persist up to five years after diagnosis, with the most affected domains being emotional, social, and sexual functioning. However, patients with strong social support, harmonious partner relationships, and adaptive coping strategies demonstrated more robust recovery in psychological and social functioning over time. Vaca-Cartagena et al. (2025) also noted that positive body perception and sustained family support were associated with improved health-related quality of life (HRQoL) during survivorship.

Table 1.
Article Analysis

Author & Year	Location	Research purposes	Population & Sample	Research Design	Instruments	Research result
Peeters et al., 2024	Dutch	Assessing long-term sexual quality of life in young breast cancer survivors.	4,010 AYA cancer survivors; 944 breast cancer survivors.	*Cross-sectional cohort study*	*EORTC QLQ-SURV100.*	Young breast cancer survivors have a lower sexual quality of life than other cancer survivors. Factors contributing to this include hormonal therapy, chemotherapy, negative body image, and maladaptive coping.
Vrancken Peeters et al., 2025)	Dutch	Analyzing long-term health-related quality of life in AYA breast cancer survivors compared to the normative population.	944 AYA breast cancer survivors and 409 cancer-free controls.	*Cross-sectional cohort study*	*EORTC QLQ-C30, EORTC QLQ-SURV100, CERQ-short*	AYA breast cancer survivors had significantly lower HRQoL compared to the normative population ($p < 0.001$) in physical, emotional, and social functioning. Positive body image and partner support improved HRQoL.
Muzzatti et al., 2020	Italy	Assess changes in quality of life and psychological distress during the first year after diagnosis.	106 women aged 25–45 years post-breast cancer surgery	*Prospective observational*	*SF-36 Health Survey Questionnaire, Hospital Anxiety and Depression Scale (HADS)*	Mental function improved after 1 year but physical function declined. Anxiety and depression decreased; distress was negatively associated with QoL.

Author & Year	Location	Research purposes	Population & Sample	Research Design	Instruments	Research result
Sarimiye et al., 2024	Ibadan, Nigeria	Assessing the relationship between body image perception and quality of life in breast cancer patients.	160 women with breast cancer	*Cross-sectional*	*Body Image Scale (BIS), EORTC QLQ-C30.*	More than 50% of patients have a negative body image; significant factors: education, social support, economic status, and therapeutic effects.
Battistello et al., 2025	Brazil	To assess the relationship between body image perception and cancer-related quality of life in women who have undergone breast cancer surgery.	106 women post breast cancer surgery	*Cross-sectional*	*Body Image and Relationships Scale (BIRS), Functional Assessment of Cancer Therapy–Breast (FACT-B v4)*	Negative body image and psychiatric medication use reduce QoL. *Body image* mediates the relationship between clinical and emotional factors.
Borstelmann et al., 2022	United States of America	Assessing psychosocial factors that influence the quality *of life (* QOL) of couples co - *parenting* young women with breast cancer.	219 male partners of women ≤40 years who had children <18 years at the time of breast cancer diagnosis.	*Cross-sectional*	*CQOLC, PCQ,, HADS,, Brief COPE, MOS Social Support Survey, PTGI-SF, GMSEX*	Couples experienced high anxiety (44%), maladaptive coping (54%), and decreased QOL. Significant factors included low social support, parenting concerns, low sexual satisfaction, relationship stress, and advanced stage. Family-based psychosocial support is needed.
Ferrigno Guajardo et al., 2024	Mexico	Identifying factors influencing sexual activity, sexual function and sexual satisfaction in young women with breast cancer up to 5 years after diagnosis.	474 women aged ≤40 years with non-metastatic breast cancer	*Prospective cohort*	*FSFI), SSI, EORTC QLQ-C30* and *QLQ-BR23, HADS*	Sexual dysfunction increased from 33.6% to 52.9% over 5 years. Significant factors included treatment-induced amenorrhea, depression, anxiety, bilateral oophorectomy, and low education. Quality of life, body image, and treatment side effects significantly impacted sexual function. Long-term interventions are needed to address sexual function in young survivors.
Ljungman et al., 2018	Sweden	To identify the types, prevalence and predictors of sexual dysfunction and reproductive concerns in young women with breast cancer.	181 women aged 21–39 years, approximately 2 years post-diagnosis of invasive breast cancer.	*Cross-sectional*	*PROMIS Sexual Function and Satisfaction (SexFS), RCAC, BIS, EORTC QLQ-C30 (QoL)*	Young women reported sexual dysfunction in at least one domain in 68%, and high reproductive concerns in 58%. Predictors: endocrine therapy, chemotherapy, negative body image, and desire for children. Sexual and reproductive issues are interrelated and reduce QoL.
Patel et al., 2024	England, United States, Aust	Assessing the relationship between *fear of cancer recurrence (FCR)* and *scan anxiety* in young survivors of breast	111 young women survivors of breast (N=75) and gynecological (N=36)	*Cross-sectional*	*FCRI-SF, IES-R, IUS-12, BTMS, PSS, MQoL*	Young women experienced significant FCR in 84%, severe FCR in 38%, and *scanxiety* in 99%. FCR and *scanxiety* were associated with decreased quality of life (HRQoL), particularly in

Author & Year	Location	Research purposes	Population & Sample	Research Design	Instruments	Research result
	ralia	and gynecological cancer.	cancer			physical, psychological, and existential aspects.
Vaca-Cartagena et al., 2025	Mexico	To assess long-term changes in quality of life (QoL) in young women with breast cancer and factors associated with decreased QoL.	477 young women (age ≤40 years) with stage 0–III breast cancer	Prospective longitudinal cohort	*EORTC QLQ-BR23*	Two QoL trajectories were identified: "Good" (38%) and "Poor" (62%). Most patients experienced significant declines in sexual function, sexual pleasure, and body image, as well as distress due to hair loss. However, perceptions of the future improved over time. Patients with HER2-positive (aOR=0.57; p=0.028) and public insurance (aOR=0.41; p=0.035) had a lower risk of being in the poor QoL group.
Werutsky et al., 2025	Multinational (Brazil, Mexico, Peru)	To evaluate the attitudes and preferences of young Latina American women with breast cancer toward the risk of infertility due to chemotherapy, as well as factors influencing the decision to accept or refuse chemotherapy.	270 women aged 18–40 years, premenopausal, stage I–III, underwent *(neo)adjuvant chemotherapy* .	*Prospective cohort multicenter study*	*EORTC Fertility Questionnaire, EORTC QLQ-C30, EORTC QLQ-BR23*	Young women's decisions about whether to accept or refuse chemotherapy are heavily influenced by concerns about infertility and loss of reproductive ability. These concerns are closely related to psychological, emotional, and social aspects of quality of life (QoL).

DISCUSSION

The findings of this systematic review indicate that psychosocial factors have a significant impact on the quality of life (QoL) of young women with breast cancer. Receiving a cancer diagnosis during the productive years of life generates complex emotional distress, characterized by anxiety, depression, and fear of cancer recurrence (FCR), which may persist even after treatment completion (Vrancken Peeters et al., 2025; Patel et al., 2024; Muzzatti et al., 2020). Body image disturbances resulting from treatment-related side effects such as mastectomy, alopecia, and premature menopause further impair self-perception, reduce self-confidence, and disrupt interpersonal relationships (Ferrigno Guajardo et al., 2024; Battistello et al., 2025). In addition, concerns regarding infertility and the loss of reproductive ability serve as additional stressors that negatively affect emotional and social well-being (Ljungman et al., 2018; Werutsky et al., 2025).

Conversely, strong social support and positive partner relationships play a protective role by enhancing psychological well-being and improving QoL (Borstelmann et al., 2022; Muzzatti et al., 2020). Patients with adequate emotional support exhibit lower levels of distress, more adaptive coping abilities, and better adjustment during both active treatment and survivorship. Thus, psychosocial factors act as both determinants and mediators in maintaining the emotional and social balance of patients. A nursing approach grounded in psychosocial and family-centered care—which includes distress screening, reproductive counseling, partner support, and body image therapy—is essential to facilitate patient adaptation to disease-related changes and to enhance long-term quality of life among young breast cancer survivors.

Research reviewed in this analysis consistently shows that quality of life (QoL) and sexual health among young women surviving breast cancer are significantly lower compared to the general population and survivors of other cancer types. Studies by Peeters et al. (2024) and Vrancken Peeters et al. (2025) highlight that AYA survivors face long-term challenges in physical, emotional, social, and sexual functioning. Hormonal therapy, chemotherapy, and body-image disturbances are major contributing factors, while positive body image and partner support have protective effects. These findings point to the need for early psychosocial and psychosexual interventions during and after treatment.

Body image emerges as one of the most dominant determinants of QoL and sexual functioning. Evidence from Sarimiye et al. (2024), Battistello et al. (2025), and Ljungman et al. (2018) shows that more than half of young women experience negative body image, influenced by socioeconomic conditions, treatment effects, and psychological stressors. Negative body image not only diminishes QoL but also mediates the relationship between clinical factors and emotional well-being. This suggests that interventions promoting body-image resilience such as psychosocial counseling and cognitive reframing are critical to reducing the psychological burden in young survivors.

Beyond body image, sexual functioning and reproductive health remain persistent long-term concerns. Studies by Ferrigno Guajardo et al. (2024), Ljungman et al. (2018), and Vaca-Cartagena et al. (2025) demonstrate increasing rates of sexual dysfunction up to five years after diagnosis, including reduced libido, low sexual satisfaction, and physical discomfort. Treatment-induced amenorrhea, oophorectomy, anxiety, depression, and therapy-related side effects contribute significantly to sexual impairment. Moreover, reproductive concerns and the desire for future fertility further complicate sexual well-being, particularly among women in their twenties and thirties, ultimately reducing overall quality of life.

Psychological aspects, such as distress, anxiety, and fear of cancer recurrence (FCR), are also strongly linked to decreased QoL. Muzzatti et al. (2020) found that psychological distress was negatively associated with QoL, despite improvements in mental functioning over time. Patel et al. (2024) further reported high prevalence rates of FCR (84%), severe FCR (38%), and scanxiety (99%) among young survivors, all of which significantly impaired physical, emotional, and existential functioning. These findings underscore the importance of systematic psychological interventions particularly cognitive-behavioral approaches and structured psychosocial support to address FCR and long-term anxiety.

Social and family dynamics also play an important role in shaping survivors' quality of life. Borstelmann et al. (2022) found that partners of young breast cancer survivors experienced high anxiety, maladaptive coping, and reduced QoL due to caregiving burdens and relationship stress. Limited social support further exacerbated these challenges, highlighting the need for family-centered interventions. Additionally, Vaca-Cartagena et al. (2025) identified the influence of insurance type and cancer subtype (e.g., HER2-positive) on QoL trajectories, suggesting that social inequities and access to care significantly affect long-term outcomes.

Overall, the findings demonstrate that young breast cancer survivors face multidimensional and persistent challenges involving sexual health, psychological well-being, body image, and social functioning. Variations in long-term outcomes are shaped by biological, psychosocial, familial, and healthcare-system factors. Therefore, comprehensive survivorship care models are neededintegrating psychosexual counseling, FCR management, family-based support, and body-image strengthening programs. Tailored, age-specific interventions are essential to improving the long-term quality of life of young breast cancer survivors.

CONCLUSION

The quality of life of young women with breast cancer is strongly influenced by psychosocial factors. Psychological challenges such as FCR, negative body image, and sexual dysfunction have been shown to reduce emotional and social well-being. Conversely, strong social and partner support, along with appropriate psychosocial interventions, can improve QoL and assist patients in adapting to the changes caused by the disease and its treatments. These findings underscore the importance of a holistic, psychosocial, and family-centered survivorship care approach that integrates psychological interventions, sexual and fertility counseling, and continuous social support to maintain and improve the long-term quality of life of young breast cancer survivors.

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