ISSN 2618-1584 Vol. 7, Issue 5: 103-108, DOI: 10.25236/FMSR.2025.070512

Research Advances on Parenting Concerns in Breast Cancer Patients of Reproductive Age

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Abstract: *A comprehensive overview of parenting concerns among reproductive-age women with breast cancer is presented, encompassing their definition, available assessment instruments, associated factors, and existing intervention approaches. This review seeks to raise awareness among healthcare providers and to establish a theoretical basis for the future design of targeted supportive care interventions addressing these specific psychosocial needs.*

Keywords: *Breast Cancer; Parenting Concerns; Patients; Review*

1. Introduction

The incidence of breast cancer in women has been rising in recent years with a trend toward younger age at diagnosis, posing a significant threat to women's health as approximately 60% of cases occur during reproductive age [1, 2]. Under the "Healthy China 2030" plan (a national strategic blueprint), breast cancer is now categorized and managed as a chronic disease. Concurrently, societal trends such as the general delay in childbearing and the implementation of the "three-child" policy have led to a growing number of breast cancer patients who are responsible for raising minor children at the time of diagnosis [3, 4]. The physical and psychological burdens of treatment not only affect patients' health but may also impair their ability to fulfill parental roles, creating dual challenges for both families and society. Research shows that mothers with breast cancer often experience a greater cancer burden, more psychological distress, and a higher fear of recurrence than patients without children; these dual pressures of parenting and treatment subsequently influence family dynamics and treatment decisions [5, 6]. "Parenting concerns" refer to the distress patients experience regarding their illness's impact on their children or their self-efficacy as a parent. This specific psychosocial aspect has not yet been sufficiently investigated within the fields of oncology and supportive care [7, 8]. Research has shown that addressing parenting concerns effectively can lead to reduced negative emotions, more rational treatment decisions, and an enhanced parent-child relationship [9]. However, the current focus of healthcare professionals in China primarily revolves around disease treatment, psychological support for spouses, and fertility issues, while the parenting-related pressures and specific worries concerning their children have received comparatively less attention. Therefore, this review synthesizes current research on parenting concerns in reproductive-age breast cancer patients. It aims to raise awareness among healthcare professionals and to inform the development of targeted psychosocial support interventions for this population.

2. Overview of Parenting Concerns

Parenting concerns are broadly defined as the distress or anxiety experienced by parents arising from worries about child-rearing issues [10]. Relevant studies indicate that parents with cancer often identify first and foremost as parents, and secondarily as cancer patients, demonstrating that their mental health is profoundly shaped by their role as a parent [11]. Hymovich [12] conceptualized parenting concerns in cancer patients as the distress stemming from the competing demands of managing their illness and fulfilling their parental responsibilities. Muriel et al. [13] defined parenting concerns as encompassing three key dimensions: worries about the practical impact of the illness on their children, concerns about its emotional impact on them, and anxieties regarding the co-parenting partner. In Chinese, parenting concerns among cancer patients primarily encompass worries about the potential impact of their illness on their children's development and anxieties regarding their spouse's parenting and caregiving capacity

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[9]. While research on parenting concerns in this population is gaining attention, there remains no consensus on its definition. It is therefore imperative for future studies to engage in deeper conceptual exploration to gradually advance the theoretical framework.

3. Instruments for Assessing Parenting Concerns

3.1 Parenting Concerns Questionnaire (PCQ)

The PCQ was developed by Muriel et al. in 2012 [13]. The instrument is composed of 15 items grouped into three dimensions, assessing worries regarding the practical effects of the illness on the child, the emotional effects on the child, and concerns about the co-parent. The questionnaire employs a 5-point Likert scale, with responses ranging from "Not at all concerned" (1) to "Extremely concerned" (5). Higher total scores indicate a greater level of parenting concerns in the cancer patient. The total Cronbach's α coefficient of the questionnaire was 0.83, and the Cronbach's α coefficients of the three dimensions were 0.79, 0.79, and 0.85 respectively. In 2021, Chinese researchers Kang Tingting et al. [9] translated and validated the PCQ. When applied to populations with lung, breast, and prostate cancer, the adapted questionnaire demonstrated good reliability: the overall Cronbach's α was 0.850, with the three dimensions yielding α coefficients of 0.908, 0.899, and 0.888, respectively, and the test-retest reliability was 0.917. Given the relatively recent emergence of research on parenting concerns in China, the application of existing translated questionnaires remains limited. Furthermore, cultural differences in design may restrict their validity and applicability in the Chinese context. Therefore, future research urgently needs to develop assessment tools suitable for China's national conditions in order to better evaluate the mental health problems of cancer patients caused by raising children.

3.2 Parenting Concerns Scale for Breast Cancer Patients (PCS-BC)

This scale was developed by Chinese scholar Qian Meiyan [14]. It comprises 25 items across five dimensions: Disease Communication, Child Health, Child Emotion, Role Restriction, and Family Support. The scale uses a 5-point Likert scale (from 1='Very unconcerned' to 5='Very concerned'). The total score, calculated by summing all item scores (range 25-125), corresponds to different levels of concern: mild (25-62), moderate (63-76), and severe (77-125), with a higher total score indicating a greater degree of parenting concerns. The total Cronbach's α coefficient of its scale was 0.929, and the content validity was 0.940. The reliability and validity were good, but it has not been widely used in clinical practice yet.

4. Factors Influencing Parenting Concerns in Reproductive-Age Breast Cancer Patients

4.1 Sociodemographic Factors

Research has shown that factors such as lower monthly household income, lower education level, having more minor children, and having younger children are significantly associated with heightened parenting concerns. The study by Liu Jie et al. [15] found that breast cancer patients with lower household income levels often report higher levels of parenting concerns. Following diagnosis, patients frequently face dual financial pressures from treatment and childcare. This may lead some to conceal their worries or curtail treatment expenses, thereby compromising their quality of life and treatment efficacy, and further impairing their parenting capacity. Patients with less education frequently have a poorer understanding of their disease, resulting in a more passive stance during medical decisions and rehabilitation [16]. This situation can create a sense of helplessness when they need to discuss the illness with their children. The resulting negative psychology undermines their confidence in parenting, ultimately heightening their anxieties about child-rearing [17]. Furthermore, patients experience significant stress from juggling the dual roles of managing their illness and caring for their children. This pressure is compounded when patients have multiple dependent children, particularly if the youngest child is of a very young age, requiring substantial physical and emotional investment [18]. Consequently, they are more susceptible to developing intense anxiety stemming from the fear of failing to meet their children's needs. However, Arès et al. [19] pointed out that when children enter adolescence, their need for independence may conflict with the expectations of their sick mothers due to their dependent psychology. This tension in the parent-child relationship may instead intensify the parenting pressure on mothers. Therefore, healthcare professionals should systematically assess the risk of parenting concerns by integrating patients' personal characteristics, family circumstances, and social context, to enable the

ISSN 2618-1584 Vol. 7, Issue 5: 103-108, DOI: 10.25236/FMSR.2025.070512

timely provision of tailored support and interventions.

4.2 Disease-Related Factors

The study by Liu Jie et al. [15] found that patients with a higher TNM stage experienced significantly greater parenting concerns. A higher TNM stage indicates more serious illness and a greater risk of metastasis. This situation frequently results not only in reduced physical functioning and ability for self-care [20] but also makes patients vulnerable to intense negative emotions, including fear of disease progression and death, and feelings of helplessness. While in this state, patients harbor specific anxieties about their spouse's ability to raise the children alone and about the long-term negative impact of their condition on their children's emotional and cognitive well-being [21]. These profound psychological and physical stresses subsequently diminish their own capacity for emotional support and their confidence in parenting, which in turn exacerbates their overall parenting concerns. Therefore, it is recommended that healthcare professionals promptly identify the physical and psychological status of cancer patients and implement timely interventions to alleviate their symptoms and psychological distress, thereby mitigating their parenting concerns.

4.3 Family Support

A robust family support system can strengthen emotional bonds among the patient, spouse, and children, enhance treatment confidence and adherence, and facilitate the management of daily tasks through active family involvement, thereby alleviating parenting concerns to some extent [22, 23]. Research by Tavares et al. [24] indicated that poor family functioning or decreased cohesion is closely associated with greater emotional distress in patients, while a lack of family communication exacerbates parenting concerns. Furthermore, a study by Laura et al. [25] found that over two-thirds of parents expressed a need for information and support regarding how their children cope with parental illness, underscoring the critical role of family support in alleviating parenting stress. Therefore, healthcare professionals should prioritize assessing the family support system and implement family-centered intervention strategies to facilitate effective communication and collaborative coping within the family, enabling them to face the challenges of illness together.

4.4 Psychological Factors

Psychological factors constitute significant variables influencing parenting concerns in breast cancer patients and can be categorized into risk factors and protective factors. Regarding risk factors, anxiety, depression, and fear of cancer recurrence have been shown to significantly exacerbate these concerns. Babore et al. [26] confirmed a positive correlation between parenting concerns and anxiety/depression in patients. Such emotional distress compromises psychological adjustment and negatively affects parent-child interactions, thereby exacerbating worries about child-rearing [27, 28]. Furthermore, Arès et al. [19] indicated that fear of cancer recurrence, as a disease-specific psychological stressor, is particularly prominent in younger breast cancer patients with lower psychological resilience and limited coping experience. This fear can indirectly impair parenting efficacy by reducing emotional adaptability. Regarding protective factors, self-efficacy and a sense of parenting competence can conversely mitigate parenting concerns. Self-efficacy refers to an individual's belief in their ability to cope with challenges and achieve goals, which directly influences psychological adaptation [29]. Parenting concerns are closely linked to a patient's self-efficacy; high self-efficacy enhances psychological resilience and the capacity to manage parenting stress, whereas its erosion during diagnosis and treatment can foster a sense of incompetence in parent-child interactions, thereby exacerbating concerns [30]. Parenting competence refers to parents' perception of their efficacy in and satisfaction with fulfilling child-rearing responsibilities [31]. Research by Lewis et al. [21] demonstrated an inverse relationship between parenting concerns and parenting competence in cancer patients. Specifically, a stronger sense of competence is associated with greater confidence in one's parenting abilities, thereby reducing the level of parenting concerns. In summary, healthcare professionals should pay close attention to patients' psychological status by implementing specialized counseling and intervention services to provide individualized psychological support, thereby helping them manage negative emotions effectively and enhance their psychological adjustment capabilities.

4.5 Information Needs

The diagnosis and treatment of breast cancer are often characterized by significant uncertainty,

ISSN 2618-1584 Vol. 7, Issue 5: 103-108, DOI: 10.25236/FMSR.2025.070512

encompassing factors such as disease severity, treatment options, and prognosis. A discrepancy between patients' information needs and the actual situation can predispose them to negative emotions like anxiety and fear, which may, in turn, trigger or exacerbate parenting concerns. The study by Zhu Pingting et al. [32] found that the informational uncertainty faced by patients after diagnosis not only affects their expectations regarding long-term health but may also intensify challenges and conflicts in interactions with their adolescent children. Furthermore, the extent of a patient's need for disease information often reflects an underlying lack of psychological security. This uncertainty can precipitate broader worries about their children's well-being, the family's financial stability, and the future, thereby increasing their psychological burden and parenting concerns [33]. Therefore, it is recommended to implement a patient-centered information support system within clinical practice. This involves providing individualized, stage-appropriate disease education through multiple channels to meet patients' information needs during diagnosis and treatment. This approach can reduce uncertainty about disease progression, thereby effectively mitigating parenting concerns stemming from information gaps and promoting overall psychological adaptation.

5. Intervention Strategies to Alleviate Parenting Concerns in Reproductive-Age Breast Cancer Patients

5.1 Provision of Disease-Related Information Support

Most parents diagnosed with cancer express a strong desire for personalized information support from professional sources. A lack of relevant information often makes it difficult for patients to communicate their condition to their children in a timely and appropriate manner, thereby hindering the quality of parent-child communication and family psychological adaptation [34, 35]. A web-based cross-sectional study by Kosugi et al. [36] found that patients could acquire knowledge about disease symptoms and treatments via the internet, and participation in online peer support groups helped alleviate parental anxiety and loneliness by fulfilling their need for emotional support. Meanwhile, a telephone-based support program for 31 mothers with cancer, conducted by Amy et al. [37], demonstrated that regular information sessions and parenting guidance provided by nurses significantly enhanced the mothers' ability to guide their children's emotional expression and boosted their confidence in addressing parent-child psychological issues. In conclusion, healthcare professionals should recognize the critical role of effective disease-related communication in alleviating parenting concerns. They should proactively provide personalized, multi-channel information support to help patients master skills for discussing their illness with their children, promote the children's understanding of the disease, and thereby improve the overall psychological adaptation of the family.

5.2 Enhancing Parent-Child Communication and Interaction Skills

Effective parent-child communication is a critical factor in helping minor children adapt to a parent's cancer diagnosis. Stiffler et al. [38] revealed that uncertainty regarding the illness course and management often leads to low confidence in discussing cancer with one's children, which constitutes a major source of psychological distress. Effective communication contributes to reducing patients' own negative emotions, as well as lowering their parenting concerns [27]. Lewis et al. [39] conducted the "Parenting Cancer Plan," offering communication training and health education, which significantly boosted the parenting confidence and skills of mothers with breast cancer and aided their children's emotional adaptation. In summary, healthcare professionals should integrate support for parent-child communication into routine care systems. By providing theory-based and evidence-informed communication interventions, they can strengthen emotional bonds and adaptive capacities within the family, thereby improving the psychological health and quality of life for both patients and their children.

6. Conclusion

To conclude, research on parenting concerns among reproductive-age breast cancer patients in China remains preliminary, hampered by a lack of validated assessment tools and a comprehensive intervention framework. Future work must be grounded in the local sociocultural context to systematically investigate the current landscape, develop and validate specific instruments, and build multifaceted psychosocial support interventions. These efforts are essential to enhance patients' parenting coping abilities, improve their quality of life and well-being, and inform evidence-based policy.

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