

Parenting concern in young and middle-aged women with breast cancer: A qualitative study grounded in the Transactional Model of Stress and Coping

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Abstract

Purpose

Guided by the Transactional Model of Stress and Coping, this qualitative study explored the real-life parenting concerns, influencing factors, and supportive care needs among young and middle-aged women with breast cancer. The findings aim to inform the development of targeted clinical interventions and evidence-based practice.

Methods

A qualitative descriptive design with theory-driven thematic analysis was employed. Using purposive extreme-case sampling, 12 young and middle-aged women with breast cancer were recruited and stratified into high- and low-parenting-concern groups. Semi-structured, face-to-face in-depth interviews were conducted, audio-recorded, and transcribed verbatim. Data were analyzed following Braun and Clarke's six-phase thematic analysis procedure. An a priori coding template derived from the stress-coping framework was applied, while simultaneously allowing for inductive open coding of emergent themes. The study was reported in accordance with the COREQ guidelines.

Results

Three overarching domains were identified. (1) The nature of parenting concerns encompassed multidimensional worries—including children's daily care, education, emotional well-being, health status, and future development—alongside role conflict between maternal and patient identities, perceived family burden, work impairment, and difficulties in illness communication. (2) Influencing factors comprised positive and negative cognitive appraisals (emotional distress, meaning-making, and illness uncertainty), differentiated coping strategies (disease acceptance, active confrontation, and enhanced health awareness), and multiple social support sources (family, spousal, and peer support). (3) Supportive care needs included informational support, psychological counseling, social support, and healthcare policy and service improvements.

Conclusion

Young and middle-aged women with breast cancer experience complex, multidimensional parenting concerns shaped by dynamic interactions between cognitive appraisals, coping strategies, and support systems. These findings extend the stress-coping framework by highlighting the relational and other-oriented nature of threat appraisal in caregiving contexts. Healthcare providers should prioritize routine parenting-role assessment and develop tailored, multi-component interventions—integrating specialized information support, psychological counseling, and family-centered care—to alleviate parenting distress, improve quality of life, and promote healthy parent-child relationships.

Introduction

The concept of parenting apprehension was initially proposed in the 20th century, and over time, more and more scholars have begun to pay attention to parenting apprehension in cancer patients, and its connotation has been continuously expanded and improved with in-depth research, and it has become a hotspot of oncological psychology research in recent years. Parenting apprehension refers to cancer patients' concern about the impact of their disease on the growth and development of their children, as well as their concern about the ability of their spouses or other family members to care for their children^[1]. As a negative psychological stress response, parenting apprehension is often closely associated with poor physical and psychological outcomes in young and middle-aged cancer patients. As their energy is heavily consumed by illness and anxiety, breast cancer patients are often unable to fulfill their motherly duties, are unable to patiently accompany their children to complete their homework as usual, miss important activities at their children's school, and show an inability to cope with their children's need for emotional support at critical moments. Parenting concern add to the psychological burden of young and middle-aged breast cancer patients, putting them in a difficult situation of worrying about both their illness and their children's development. Studies have confirmed that high and medium levels of parenting concern are associated with depression, anxiety and other negative emotions^[2], and 27% to 88% of parents have a significant increase in depression or anxiety levels after a cancer diagnosis^[3]. Tavares et al. ^[4]found that breast cancer patients not only have to suffer from the physical pain and psychological stress of the disease, but also need to be concerned about the growth and development of their children at all times, which is a double pressure that can easily lead to a decrease in patients' self-efficacy. This dual pressure is likely to lead to a decrease in patients' self-efficacy, which in turn increases mothers' frustration and significantly reduces their satisfaction with their role as mothers. Chien S et al ^[5]found that parenting concern in cancer patients were associated with increased psychological distress and decreased quality of life. Parents diagnosed with advanced cancer were more likely to delay or refuse advanced care planning and experience poorer quality of life at the end of life compared to patients who were not raising minor children^[6]. Thus this physical and psychological state not only has a serious negative impact on the patient's current quality of life, but also adds many obstacles to their subsequent treatment and recovery process. In addition, parenting concerns also have a negative impact on the intimate relationships of breast cancer patients^[7]. Spouses, as primary caregivers, have to take on the roles of coordinating medical decisions, reconstructing household chores, and substituting for child rearing, and the emotional exhaustion caused by this role overload significantly reduces the quality of intimate interactions^[8]. Parenting concern caused by uncertainty about the disease may change the communication patterns of couples, where one partner avoids discussing the disease to protect the other, leading to increased emotional detachment, resulting in tense relationships and reduced family cohesion, which may lead to family system crises^{[9][10]}. In addition, related studies have shown that after a cancer diagnosis, only 11% of parents report that they are sufficiently capable of meeting their children's needs^[11], while mothers with emotional problems and their children face more emotional and behavioral

problems^[12]. Therefore parenting concern, if not promptly attended to and alleviated, will reduce patients' outcomes and quality of life, and indirectly affect intimate relationships and children's mental health status. Attention to the psychological health of breast cancer patients is a crucial step in their treatment process. In summary, this study adopts qualitative research method to explore the real experience and supportive needs of breast cancer patients in young and middle-aged women, aiming to provide a reference basis for the clinical construction of breast cancer patients' parenting anxiety intervention program and clinical practice.

1 Objective of the study

This qualitative study, grounded in the Transactional Model of Stress and Coping, employed semi-structured interviews with young and middle-aged women with breast cancer to explore their parenting concerns, including the nature of these concerns, associated influencing factors, and supportive care needs. By adopting a theory-driven qualitative approach, this study aims to complement and extend the findings of quantitative research by capturing the depth and contextual richness of participants' lived experiences, thereby providing a more comprehensive evidence base to inform future intervention development and clinical practice.

2 Research Methodology

2.1 Theoretical model

The Transactional Model of Stress and Coping (TMSC), developed by Lazarus and Folkman, provides a dynamic framework for understanding how individuals perceive and respond to stressful events. The model conceptualizes stress as a dynamic transaction between the individual and their environment, rather than a static stimulus or response. When confronted with a stressor, individuals engage in a two-stage cognitive appraisal process. Primary appraisal involves evaluating the event's significance—whether it poses a threat, harm, or challenge to one's well-being. Secondary appraisal involves assessing available coping resources and the potential effectiveness of various coping strategies. Based on these appraisals, individuals select coping strategies, which can be broadly categorized as problem-focused coping or emotion-focused coping. The outcomes of these coping efforts subsequently inform reappraisal, shaping future stress responses and adaptation. The TMSC has been widely applied in healthcare settings to examine psychological adaptation across diverse patient populations. However, the specific parenting-related stress mechanisms among young and middle-aged women with breast cancer remain underexplored. This population faces a profound identity conflict between two roles: as patients undergoing traumatic treatments and as mothers who must continue fulfilling caregiving responsibilities. Treatment-related physical decline, fatigue, and side effects often disrupt participants' ability to perform their usual parenting roles, triggering threatening primary appraisals—such as perceiving the illness as a “crisis that undermines maternal role integrity.” These appraisals may generate distress-related cognitions, including fears of being unable to accompany children through developmental milestones or concerns about becoming a burden to the family, which collectively constitute the core psychological source of parenting-related distress. Crucially, parenting-related distress does not occur in isolation but emerges as a product of stress adaptation processes within the TMSC framework. Applying this theoretical lens enables a systematic exploration of how young and middle-aged women with breast cancer appraise parenting-related stressors, select and implement coping strategies, and experience reappraisal over the course of their illness trajectory.

2.2 Research Objects

The sample source used purposive sampling method, followed the principle of maximum differentiation, and selected breast cancer patients who attended the inpatient departments of two tertiary hospitals in Shanghai from December 2023 to September 2024 as the study subjects.

2.2.1 Inclusion criteria

- (1) Breast cancer patients clearly diagnosed by histopathology^[13];
- (2) Patients aged 18-59 years old who are raising at least one minor child aged <18 years old;
- (3) Clinical stage I-IV;
- (4) Knowledge of the disease and voluntary participation in the study;
- (5) The patients were conscious and had the ability to complete the interview independently;

2.2.2 Exclusion criteria

- (1) Patients with slurred speech or communication disorders;
- (2) Patients with mental disorder symptoms;

2.3 Sampling methods

Purposive sampling method was used to select breast cancer patients who were in the high parenting apprehension group: total PCQ score $\geq$ 66th percentile of the total sample, or in the low parenting apprehension group: total PCQ score $\leq$ 33rd percentile of the total sample; and who voluntarily participated in the qualitative study based on the data from the previous quantitative study as the study subjects.

2.4 Sample size determination

In this study, the sample size of the interviews was determined according to the principle of “data saturation”. “Data saturation” means that during the interview process, when the content of the interview is repetitive and there are no more new themes emerging, the interview data can be considered saturated by interviewing two more patients on this basis.

2.5 Research instruments

The interview guide was developed through a rigorous, multi-stage process grounded in the Transactional Model of Stress and Coping . First, an initial draft was constructed by operationalizing the model’s core constructs—primary appraisal, secondary appraisal, coping strategies, and reappraisal—into open-ended interview questions, informed by a comprehensive literature review and prior quantitative findings. Second, the draft was iteratively refined through team discussions to ensure logical coherence and contextual relevance. Third, the revised guide underwent expert content validation by a panel of specialists to assess content validity and cultural appropriateness. Finally, a pilot test was conducted with two eligible participants, leading to further refinements in question clarity and emotional sensitivity. The final semi-structured interview guide is presented in Table 1.

Table 1 Formal Interview Outline

Category	Ask a question
Cognitive Evaluation	1. can you tell us about your experience with your illness?
	2. Do you have parenting concern? What are the main aspects?
	3. In what ways have you been more worried about your child since becoming ill?
	4. How has the illness affected your parenting style?
	5. How do you perceive and evaluate these events/stresses?
	6. how has your child changed since learning of your illness? How do you perceive this change? Does your child know about your condition? What do you think they know about it? (If they do not know, why are you reluctant to disclose your condition to your child?)
Ways of coping	1. How do you alleviate your parenting concern? What specific steps have you taken? (Please describe in detail)
	2. What impact do you feel such measures taken have had on you?
Social support	1. What are the attitudes of your husband and family towards your parenting concerns?
	2. Have you received help from family, friends, patients and the community? (Please describe in detail)
	3. What impact do you feel the support of your family, partner, friends, patients, etc. has had on you?
	4. Have you received help with parenting concerns?
	5. Have you received guidance on parenting concerns from medical professionals?
	6. What other help do you currently need? What form of help would you like to receive?

2.6 Information collection

Semi-structured, face-to-face in-depth interviews were conducted with young and middle-aged women with breast cancer who reported parenting concerns. Interviews were scheduled at times when participants were not receiving medical procedures and were physically and emotionally well, avoiding periods of clinical examinations or treatment. All interviews took place in a private, quiet room within the ward to ensure privacy and minimize interruptions.

Prior to each interview, the researcher introduced herself, explained the study purpose and the expected duration, and clarified what participation entailed. Participants were informed of the confidentiality principles, their right to withdraw at any time, and the voluntary nature of their participation. Written informed consent was obtained from all participants before the interview commenced, with explicit permission sought for audio recording of the entire session. Each interview lasted approximately 15–30 minutes.

All interviews were audio-recorded and transcribed verbatim within 24 hours of completion. Transcripts were anonymized using participant codes to protect confidentiality.

2.7 Information organization and analysis

All interviews were audio-recorded and transcribed verbatim within 24 hours of completion. Transcripts were anonymized using participant codes to protect confidentiality. Data were analyzed following Braun and Clarke’s six-phase thematic analysis procedure: (1) familiarization with the data; (2) generating initial codes; (3) searching for themes; (4) reviewing themes; (5) defining and naming themes; and (6) producing the report. We adopted a hybrid deductive-inductive coding strategy. An a priori coding template was constructed by operationalizing the core constructs of the Transactional Model of Stress and Coping primary appraisal, secondary appraisal, coping strategies, and reappraisal—into a preliminary coding framework. This template was applied to structure the initial phase of coding. Concurrently, inductive open coding was employed to capture any data that transcended, enriched, or contradicted the theoretical model, allowing for the organic emergence of context-specific themes.

Coding was facilitated using NVivo 15.0 qualitative data analysis software. Throughout the analysis process, analytic memos were maintained to document coding decisions, emerging interpretations, and reflexive considerations. To enhance analytical rigour, two researchers independently coded 20% of the transcripts; discrepancies were resolved through consensus discussion. The final thematic structure was reviewed and agreed upon by all authors. Data saturation was determined when no new codes or themes emerged from consecutive interviews, and this was confirmed by the research team.

3 Findings of the study

3.1 Socio-demographic characteristics of interview participants

According to the principle of information saturation, the final number of interviewees in this study was 12, which were numbered with the letters N1 to N12 respectively. The specific information of the interview subjects is shown in Table

Table 2
Basic Information on Interview Participants (N = 12)

coding	Age (years)	degree of education	Residence	Type of insurance	Monthly per capita income of the family	Employment status	Family history	Main caregiver	Time of diagnosis	Surgery method	Stage of disease	Stage of disease Age minc child (year)
N1	48	Junior high school	rural	New Agricultural Cooperative	1000 ~ yuan	Non-working	no	spouse	<3 months	breast removal	stage II	16
N2	36	Junior high school	rural	New Agricultural Cooperative	1000 ~ yuan	Non-working	no	spouse	< 3 months	breast removal	stage II	6,15

Table 2
Basic Information on Interview Participants (N = 12)(Continued)

coding	Age (years)	degree of education	Residence	Type of insurance	Monthly per capita income of the family	Employment status	Family history	Main caregiver	Time of diagnosis	Surgery method	Stage of disease
N3	43	Bachelor's degree	city	urban residents' health insurance	≥ 5000yuan	working	yes	siblings	>6 months	breast removal	stage II
N4	38	Bachelor's degree	urban	employee health insurance	< 1000yuan	Non-working	no	spouse	3-6months	breast removal	stageⅡ
N5	46	High school	rural	Township residents' health insurance	3000¥yuan	Non-working	no	spouse	3-6months	Breast-conserving	stage II
N6	42	Master's degree	city	Employee's Health Insurance	≥ 5000yuan	working	yes	spouse	< 3 months	breast removal	stage II
N7	38	College	urban	Employee Health Insurance	3000¥yuan	Non-working	yes	spouse	>6 months	breast removal	stageⅡ
N8	43	Senior high school	rural	Employee Health Insurance	3000¥yuan	Non-working	yes	spouse	3-6months	breast removal	stage II
N9	30	Bachelor's degree	city	Employee Health Insurance	≥ 5000yuan	Non-working	no	spouse	3-6months	breast removal	stage II

Table 2 Basic Information on Interview Participants (N = 12)(Continued)

coding	Age (years)	degree of education	Residence	Type of insurance	Monthly per capita income of the family	Employment status	Family history	Main caregiver	Time of diagnosis	Surgery method	Stage of disease	3 months after diagnosis
N10	45	Junior high school	urban	Employee Health Insurance	3000¥yuan	Non-working	yes	spouse	< 3 months	breast removal	stagel	1
N11	40	Junior high school	rural	Employee Health Insurance	3000¥yuan	Non-working	no	spouse	3-6months	Breast-conserving	stagel	1
N12	33	Bachelor's degree	urban	Self-funded or other insurance	≥ 5000yuan	Non-working	yes	Parents	>6months	breast removal	stage II	3

3.2 Subject analysis

3.2.1 Themes of authentic experiences of parenting concern

Theme I. Concern from many sources

(1) Fear of adverse effects on the daily lives of minor children

Due to the objective needs of disease treatment, the role of the patient as a caregiver for the children in the family has been seriously weakened. The patient is unable to devote a stable and continuous amount of time as usual to provide round-the-clock care and all-around protection for the children.

N5: "In the past, I used to wash my children's clothes by hand, however, now I have to rely on the washing machine. During the months that I was sick, the skin on my children's hands appeared to be falling off, and the teeth that had fallen out failed to grow new ones for a long time. I think perhaps it is because I was not well enough to take care of my children during this time, resulting in a lack of calcium in their bodies and a greater impact on their nutritional status."

N9: "I used to bring up my baby by myself and I thought he was a very disciplined child, now he is not so disciplined. Now there are a lot of bad habits, coupled with more contact with other children at school, other people a learning a say he can do, and grandparents and can not guide, it is difficult to correct in time, although understand that this thing is not doing the right thing, but wait for us to go to Shanghai for chemotherapy, he has learned bad habits, it is also very difficult to correct him."

(2) Worrying about minor children's studies

In modern society, education level and academic performance are often regarded as important measures of personal ability and future success. Some patients worry that their children's poor grades will make it difficult for them to excel in future competition.

N2: "The child's grades are average. In our area of Shangrao, Jiangxi Province, it takes more than 740 points to get into a good high school, and this year's score line is 742 points. This is very stressful for the child because even with good scores, the competition is fierce. I'm worried that if my child can't go to a good high school, he may have to go to a vocational school, and the job prospects aren't good when he comes out of a vocational school. I also don't have enough financial means to pay for better educational opportunities for my child."

After a patient's illness, the attention of family members tends to focus more on the patient's treatment and rehabilitation, and this diversion may result in the child feeling less family support, which in turn may affect their academic performance to some extent. However, from the patient's point of view, this diversion is also unavoidable.

N4: "Learning all relies on the child's self-motivation as the main focus, but since I have been hospitalized, my physical and mental state has deteriorated so much that I really can't afford to give him enough attention and tutoring in his studies anymore."

N5: "Tutoring homework is easy to get angry and uncomfortable, I don't want to ask or can't ask now."

N6: "I used to be the one to catch up with her studies, suddenly I don't care anymore and her studies are completely set free."

N7: "In the learning process, we want her to act according to her ability, with health as the primary goal and learning the difference between going to a good school and a substandard school at most. Grades are always ranked after health"

(3) Worrying about the emotions of minor children

Minor children who witnessed their parents' tough battle with cancer are likely to be psychologically traumatized, which may have a profound impact on their character formation and development of interpersonal skills. Patients were worried that their children would thus become withdrawn, have low inner self-esteem, and lack self-confidence, making it difficult for them to build healthy and harmonious interpersonal relationships in their future lives^[14].

N4: "I am more worried about my children's mental health, I am worried that my children will develop low self-esteem when they see that other parents are healthy and their own mother is sick, I don't dare to tell them in detail about my illness, mainly to reduce their psychological burden."

N6: "Our family pampers her a lot, and even now she combs her hair in the morning. Sometimes I wonder if the child combs her hair at home, and if she is unhappy, will she keep it in her heart? She used to tell me when things happened at school, but now that I'm not around and my child is in her rebellious stage, I'm worried about her emotional stability and her ability to adapt to the changes. I haven't shed a tear during my illness and have been very strong, but whenever I think of my child, I can't help but feel sad and shed tears."

N7: "Our child is more optimistic, you can't see the sad side of her in her demeanor, but I'm not sure if there is a troubled side behind her back."

(4) Concerns about the health of the child

Breast cancer is associated with genetic factors. When a mother develops breast cancer herself, due to a lack of understanding of the mechanisms of the disease and concerns about the potential risks, she will inevitably think about whether the disease can be passed on to her children through heredity, with potentially negative impacts on the children's future health. This is not an unwarranted fear, but rather a natural expression of a mother's love for her child and her concern for her own health, as well as a natural expression of human emotion.

N7: "Breast cancer is hereditary, and our daughter is only 10 years old. The professor also warned that children need to be screened for this between the ages of 15 and 18."

Breast cancer patients are even more concerned about the health of their children if they already have other medical conditions. They worry that the child's already relatively fragile immune system will struggle to cope with the double whammy, leading to a host of health problems.

N9: "My child has suffered from allergic asthma before, and then pneumonia in the year when the epidemic was liberalized, so she has not been in good health. Now that she is in kindergarten, she has more contact with other children, and she gets sick more often. And the knowledge of the elderly about asthma is limited, although there are elderly people at home to help take care of the child, but I still can not rest assured that his health in the hospital."

(5) Worry about the future development of minor children

Breast cancer patients often worry about their children's future, including career planning, marriage choices and many other aspects. They are full of hope that their children will have a bright future, but at the same time they are worried that they cannot foresee their future due to their health problems.

N1: "I am worried about my children's future development, I just hope that they will grow up healthy and will not take a detour in their life path."

N7: "Sometimes when I am depressed, I wonder if I can look forward to my children going to college? Will I be fortunate enough to see my children get married and have children in my lifetime?"

Theme II. The Difficult Choice of Motherhood and Patient Role

Most young breast cancer patients are at the critical stage of giving birth to and raising children, and should be fully committed to child care and fulfillment of family responsibilities, taking on the important mission of ensuring the healthy growth of their children and maintaining the stability of the family. However, breast cancer treatment brings both physical and psychological pressure, making it difficult for patients to concentrate on fulfilling their family responsibilities, and they lack sufficient energy and motivation to play the role of a good parent.

N5: "In the past, I was able to work while taking care of my children. But now, the child can't be taken care of, and there is no time to take care of things at home, and work has to be put on hold. In the past, I used to take my child to and from school, but now that I've come to Shanghai for treatment, I can only ask my sister to help take care of her. During the previous period of chemotherapy, I couldn't even eat, so I really didn't have the energy to take care of my child."

N6: "Since I've been sick, I've had to let go of my children's affairs completely, and I've had to leave all the big and small matters at home to my husband and my father."

Theme III. Sense of family burden

Expensive medical expenses and reduced income during treatment brought heavy financial pressure to most breast cancer families, and breast cancer patients felt deeply guilty and worried about this, as it directly affected the quality of life of the whole family, including their children.

N1: "We frequently traveled between our hometown and Shanghai for treatment, and we needed to catch a train from our hometown to come to Shanghai, take the metro and then arrive at the hospital, which takes almost a day, arrive near the hospital a day in advance, make an appointment with the doctor, and arrange for hospitalization after the examination, but not necessarily on the same day, sometimes we even have to wait for a day or two, and it takes almost several days for a trip to come and go, and the calculation of the cost of one trip Now my husband can only work part-time jobs in order to stay with me, and the financial burden is still very heavy."

N2: "The oldest is 24 years old this year, and the youngest is already 16 years old, and they are all going to start a family in the next few years, which is plainly in front of me, and now this hand of mine has become a rich hand, which I can't accept at once, and the old people in my family are all in their 80's, and they need to be taken care of. Now that I have begun to receive treatment, compared with the medical level in my hometown, the medical technology in Shanghai is more advanced. In the future, I will also choose to go to Shanghai for chemotherapy. If chemotherapy is carried out once a week, then all the food and

accommodation will be spent here, a year and a half this is another expense, leaving the child for a long time in my sister's home is not a viable option, the reality is very cruel, these things I have to think about.”

N5: “The cycle of chemotherapy is 21 days a course, we came immediately after receiving the notice from the hospital. The bus fare for two people to and from the hospital was 1,000 yuan, but that didn't include the cost of lodging. A night's stay in a nearby hotel costs at least 160 yuan. As we have to stay for several days each time we come, coupled with the meal expenses of almost \$200 a day, the expenses are really not small. My husband is the main breadwinner of the family. Fortunately, we have employee insurance a little better.”

N7: “During chemotherapy, I spent a lot on daily nutrition to maintain my white blood cell count. My husband was with me all the time, and sometimes he had to go out and do some part-time work to earn some money to subsidize the nutritional costs. It wasn't easy for both of us to start from nothing, and I feel I owe him so much.”

N8: “For an ordinary family like ours, at our age, our parents are both farmers in their sixties with no pensions, and we have to support the elderly. Now because I am sick, the family has one less laborer, and with only my husband working alone and having to pay for our children's schooling, the pressure is just too much.”

N11: “Although the reimbursement from the employee health insurance is relatively better, my mother-in-law was diagnosed with pancreatic cancer again last month and had surgery, and I was diagnosed again this month, and there are still two children in the family who are going to school, and my father-in-law is already in his seventies, so the pressure my husband is under is just too heavy.”

Theme IV. Impaired working ability

The diagnosis and treatment process of breast cancer interferes with their daily work and life, and directly reduces their stamina and physical strength, making it difficult for them to perform high-intensity or long hours of work, which in turn reduces their motivation and concentration at work. Some patients may also experience prejudice and discrimination from society or the workplace, which may make them feel isolated and helpless in the workplace, thus further weakening their work ability and career prospects.

N2: “Lymphatic cleansing, doesn't it mean that I am crippled with this hand, which means that I can't do any heavy physical work, and this hand has become a rich hand, and I used to go for odd jobs and part-time jobs, but now it is just that I can't do all these jobs at least staying at home to wash clothes and cook.”

N6: “My daily life and work have been completely disrupted because I work in Xiamen and now I need to go elsewhere to see a doctor, my work has been forced to be suspended, and my family needs to be with me for this, everything has been disrupted.”

N9: “After the illness, the company gave me a termination letter straight away.”

N7: “Today, I am now in a state like an invalid who cannot work, neither can I do some simple household chores nor go to work, and for a long time I could not drive, nor pick up my children from school, nor do any work. Simply put, you get his father and daughter to come home for a ready meal, which they can't do for a short period of time now, and it's just too much of an impact on our average family.”

Theme V. Difficulty in communicating about the disease

Similar to the situation with Western mothers, most young and middle-aged women with breast cancer realize that there are significant differences in how children of different ages perceive and understand cancer. For young children, it is often difficult for them to fully understand the seriousness of cancer and the complexity of the treatment process, which may lead to unnecessary fears and misunderstandings. When communicating with children, breast cancer patients refer to words such as “cancer” or “breast cancer” less frequently and use expressions such as “sick” and “not feeling well” more often. More often, they use expressions such as “sick” and “not feeling well”. In addition, breast cancer patients' concern about the psychological impact on their children and their difficulty in coping with their children's problems constituted an insurmountable obstacle in communicating with their children about their illness.

N1: “I didn't talk too much about my condition with my children, I didn't want to worry them or affect their studies and life. Especially the younger child, he doesn't know much about it yet, while the older child knows some of it, but we don't spend much time together because of school and life, and talking about it only makes him scared every day and affects his learning and growth.”

N4: “Although the child was told the fact that I was sick, the specifics were not told in detail. The younger ones may not understand much, the older ones know some.”

N5: “I explained to the children that the hospitalization and surgery were only temporary, and that my main purpose was to calm them down and hope that they would not worry unduly. I didn't elaborate on the specifics, after all, I didn't want to interfere with their studies and lives.”

N7: “I never mentioned the word ‘cancer’ in front of my children, who only knew that I was sick and needed an operation; the specific name of the disease was not given. We video chat every day and my child would say ‘so poor’ when he saw me getting needles, like when I had needles buried in my chest for fluids, which my child didn't understand.”

N9: “The child doesn't quite understand this, as we spend less time with her, she only knows that her mom is not feeling well right now, and in her perception, she may think that her mom is just like having a cold and fever, and she doesn't have a deep understanding of the concept of ‘cancer’.”

N10: "I try to explain my condition to my children in a simple way to avoid burdening them. I believe that the family atmosphere should be relaxed and pleasant so that everyone can feel happy. As children grow up, they will gradually understand more"

Some breast cancer patients felt that communicating with their children was not very meaningful considering that their minor children were still young and had limited cognitive levels, and the patients believed that it was difficult for their children to truly understand the severity of their condition and the treatment process, and they were worried that informing them of their condition would negatively affect their children's mental health [121, 122].

N3: "As parents, we naturally don't want our child to be affected by fearful emotions and don't want her to be exposed to such things too early. I would tell her that her mother was sick and needed to be hospitalized for a while so that she could learn to take care of herself. I remember after my first operation, I was actually very optimistic inside, but I didn't want her to see the drainage tubes on her body, and I didn't want her to be exposed to these too early. However, I will talk to her about the reasons for being sick and hopefully she will try to avoid it and not go through what I went through."

N11: "I don't feel the need to tell my child about being sick. Children are young and don't quite understand what's going on, and there's no point in talking about it, so it's better not to talk about it."

3.2.2 Themes of Parenting Concern Influencing Factors

Theme I. Positive and Negative Cognitive Evaluations

Subtheme 1: Negative emotional distress

Breast cancer, as a malignant tumor with significant survival threats, and its uncertainty of course is more difficult for young patients to face the fact that they have been diagnosed with cancer, and they are more likely to have strong psychological reactions.

N3: "In the past two years, I have been adhering to endocrine therapy. This time, I found abnormal lymph nodes in my physical examination and had a puncture, and the result was very unpromising, and it had recurred, so my mental burden was particularly heavy, and I hugged and cried with my husband when I was depressed."

N7: "Initially when my physical ability failed, the fever symptoms lasted no less than a month and a half, I cried two or three times and said I gave up, didn't want to hold on, and planned to go back to find a cemetery in a suitable location. It felt like I couldn't see the end of it, and didn't I go back to prescribing sleeping pills, and every time I lay down at night, my mind was racing with thoughts, and I would fall into a state of anxiety at nightfall, and every day I waited torturously for dawn, and it was just an awful feeling."

Subtheme 2: Positive Change and Meaningful Survival

The diagnosis of breast cancer is often sudden, causing patients to re-examine the meaning and value of life, and in turn, to value each moment of their lives more.

N3: "Now that I'm thinking much more positively, I want to find a circle where I can fit in, cultivate my temperament, and be able to do what I can to benefit others."

N10: "Through this incident I realized one thing: only death is the biggest thing in life, all other pains are just grazes. When I went into the operating table, I was thinking that even though this was a calamity in life for me, it made my whole self grow up out of the blue."

They are now more inclined to build strong bonds and mutual support with their children on an emotional level than they were in the past, when they were simply pursuing academic achievement. They value the time they spend with their children more, hold a tolerant and understanding attitude towards their children's behaviors and performance, and attach importance to their children's physical and mental health and overall growth, while also recognizing the value of life and health.

N6: "University teachers will be more strict with their children. I am responsible for my child's studies, and I will know her weaknesses and strengths at each stage and in each course. But when you get sick, you lose energy and stamina and won't be able to teach your child in the same way as before. Maybe because of illness, you will also think that health is the most important thing for a person because only when you are sick, you will realize the importance of health. I used to think that my child is about to face primary school and I always hope that he will be promoted to a better school. But now, I probably wouldn't be as overly aggressive as I used to be, being physically and mentally healthy is enough."

N7: "Nowadays, when I think about it, grades should really come after health."

N8: "I used to be always busy with work and didn't spend much time with my child, but now that I quit my job, I have more time to spend with him. I feel that it's time to take care of my child, and despite being unwell, I'm still trying to spend more time with him, expecting to make up for the precious time I lost in the past. If I could recover better and live longer, I would be able to spend more time with my child."

N12: "Even though having cancer has been very painful for me, staying optimistic, I now spend more focused time with my children."

When children face the dilemma of having a parent with breast cancer, they may learn how to bravely face difficulties and challenges in life. This experience helps develop their mental toughness so that they will be better able to cope with setbacks in the future. Deepening understanding of life and health, and valuing life, the illness of a parent may give children a deeper understanding of the fragility and preciousness of life. They may value the time they spend with their family more, and a parent's illness may give children a deeper understanding of the importance of family and bonding.

N6: "Children have had to become more independent and more self-motivated in their studies, although sometimes they do relax. Although I don't want my child to grow up in this forced way due to family changes, I feel relieved that she is able to go ahead and grow up because of the fact that it has happened and is already there. I hope she can be a little bit stronger inside, more independent as a person, and healthier physically and mentally."

N7: "She is also indirectly like growing up a little bit, the poor child is an early starter, and now she can also take care of her mother, during the time I had a high fever, she happened to be on summer vacation, she accompanied me in the hospital and helped me take my temperature, she boiled water and washed fruits every morning, and she also indirectly grew up a little bit earlier."

N10: "I think it definitely helps in parenting style, through this incident, for children in the future I am using love, gentle tone, not deliberately to force, to pursue high scores, so that the child grows up naturally happy and healthy, health first happy first."

Subtheme 3: Feelings of uncertainty about the disease

For after lymph node dissection, patients are more likely to experience mood swings. These emotional issues may stem from concerns about the outcome of the procedure, fear of cancer recurrence, and uncertainty about the future of their lives.

N2: "If I don't have the clearance, I feel like the impact should be okay, but I had the lymph node clearance surgery it has an impact on my subsequent life a little bit, and with the clearance subsequently you definitely can't do a lot of work and I don't know if it will come back in the future, and all of that is unknown to me."

Theme II. Response Strategies for Differentiation

Sub-theme 1: Accepting the Disease with Helpless Compromise

When breast cancer patients were undergoing treatment, they had thoughts of avoiding treatment because they were worried about the impact on their lives, etc., but in the end they had to face the reality and accept the disease helplessly.

N2: "I have an 80-year-old father-in-law to take care of and two children at home. My younger son is still in high school and my older son has yet to start a family. Now that I am suffering from the disease, everything in the future needs to be thought about and faced, and you are not the only one who can survive, are you? You can't leave the whole family in the lurch, they still need to make ends meet and if I don't handle it properly, it could lead to the collapse of the whole family. We can only take one step at a time, reality is always cruel and has to be accepted."

Sub-theme 2: Facing the disease positively

Over time, patients gradually learn to accept their emotions, face their health problems more intuitively, and learn to face it with a more rational and positive attitude, actively participate in the treatment process, and face up to the existence of the disease.

N10: "The key to one's condition lies in whether one is in a good or bad mood. When you are in a good mood, your anti-cancer ability will be enhanced and your resistance will be strengthened so that cancer cells will not invade your body. So when you cry, when you feel helpless, you let it out, be open, take the bad things as good things, I need to adjust my mindset, I have to have that positive energy that is my own, that calmness of mind, and I think that's very important."

N8: "Today, medicine has made remarkable progress in the treatment of malignant tumors, so there is no need to be overly fearful."

N11: "The most important thing for me now is to be positive about my treatment and keep a good mindset."

Subtheme 3: Health awareness has increased

During the course of treatment, breast cancer patients are exposed to a great deal of information related to the disease, including its causes, symptoms, treatments, and prognosis. Such information can help patients have a deeper understanding of the disease and thus realize the importance of health. The experience of illness itself is a profound education. After patients have experienced the pain and distress caused by the disease, they usually value their own health more and are more proactive in implementing preventive measures to avoid reoccurrence and deterioration of the disease.

N10: "Most of the time the disease is put on hold, and I deeply regret that the transition from nodule to serious cancer would not have been possible if everyone's attention had been drawn to it and medical help had been sought in a timely manner. I am now deeply remorseful. We must pay attention to medical checkups and cancer science."

N11: "I initially did not take health checkups very seriously, and I remember when I first started, my doctor told me that I had a nodule, indicating that it was no big deal after regular checkups. I didn't expect the nodule to develop into what it is now Now I think that regular medical checkups are an important means of disease prevention and early detection, and should be done at least once a year so that health problems can be detected early and treated in a timely manner."

Theme III. Diversified support

Sub-theme 1: Family Support

Breast cancer treatment usually requires high costs, and the financial assistance provided by family members can effectively alleviate patients' financial pressure and ensure that they can obtain the necessary medical services. At the same time, the care, understanding and encouragement given by family members can bring great spiritual comfort to patients, help them better cope with the physical and psychological impact of the disease, and promote their mental health and overall recovery.

N6: "To be honest after getting sick and meeting all kinds of women with the disease, there are those who are happy in their families and those who have been abandoned after getting sick, you will realize that her mental state and economic state are totally different, so I think family support is very important because she will give a patient a very strong confidence, and curing the disease is sometimes a matter of mindset. "

N10: "My sister and I said sister, you have got this disease now and our whole family needs to be united to face this challenge."

N11: "My family members are very concerned about me and love me, my father-in-law in recent days because of the cost of the operation he was worried about the lack of money, in the account of the transfer of another 10,000 yuan, my husband has been busy to take care of me, and now for me the most important thing is to be active in the treatment, well nourished, and to maintain a good state of mind."

N12: "My family has given me all-round support. Both my husband and my parents have done everything they can to help me financially and in life, making me feel a strong backing force in the face of my illness."

Sub-theme 2: Spouse Support

Healthy partner support can build a solid psychological defense for patients through deep emotional understanding, daily attentive care, and continuous positive encouragement.

N3: "When my husband learned about this, he felt that I would have to endure a lot of aggravation and pain in the course of treatment, and he empathized with me. Therefore, he behaved very positively and proactively at every check-up, which made me feel that I had a more solid support, and that I thought God wouldn't give us a dead end to go through. He is now one of the closest people I can rely on and really talk to about my heart."

N8: "My husband has given me all-round support and has always been there for me. He even said that he would treat me even if he had to dump his family and sell his house."

Subtheme 3: Peer Support

Interaction and communication among patients builds a valuable knowledge and information exchange field. Through sharing their own experiences, patients can develop a more comprehensive and in-depth understanding of breast cancer as a complex disease and learn how to cope with the various problems and challenges encountered in the treatment process.

N8: "I was looking for patients to communicate with on Jitterbug, when I was diagnosed by puncture in Hangzhou and started to receive chemotherapy, and was confused about the direction of follow-up treatment, especially wanting to go to Shanghai for treatment, where I was told by my patient friends that hospitalization in Shanghai might require a longer wait, about 10 days to half a month."

N11: "We are currently in an active learning phase due to our limited knowledge of many medical policies. We are all asking other patients for advice and learning, such as whether we are eligible to apply for medical insurance for major illnesses and whether our illnesses can apply for chronic outpatient care."

N12: "I have learned a lot about breast cancer by interacting and chatting with my patients."

3.2.3 Supportive needs of young and middle-aged women with breast cancer

Theme I. Information support needs

Patients' lack of knowledge about breast cancer pathogenesis and treatment options (e.g., surgery, endocrine therapy, and selection of targeted drugs) can easily lead to hesitation or resistance to treatment. Effective doctor-patient communication is the core link for patients to obtain key information and enhance their confidence in treatment, and with the help of in-depth and fruitful exchanges with healthcare professionals, patients are able to break through the information barriers to gain comprehensive and in-depth insights into their own health status.

N3: "I expect experienced doctors and nurses to guide us through our daily lives after the disease, such as dietary considerations and the basics of rehabilitation exercises, so that we, the patients, can feel more at ease and trust us. Although there are currently a lot of patient circles where people recommend each other, sometimes I worry that their explanations may not be professional or one-sided enough. I expect to be able to get a more professional guidance, either through a small program or a WeChat public number that I can access. Every day, there are professionals, whether they are patients or doctors and nurses, who explain science and disease knowledge to our breast cancer patient group."

N7: "Based on the fear and lack of understanding of cancer, there have been many detours and delays. I have heard that there are traditional Chinese medicines in Guizhou that can treat cancer-related conditions,..... mostly from hearsay, and there is no one around me who really has personal experience and can make me actually feel the effect. The physical condition is deteriorating, inadvertently touched a lump under the arm, at that time we did not know that this is a manifestation of lymphatic metastasis, only to feel that the armpit suddenly grew a ball, which allows us to really begin to pay attention to it. It was only then that we came over here to see the doctor."

N10: "We were all eager to meet a young and energetic doctor. This doctor should not only maintain a strong passion for learning about medicine, but also care for his patients as if they were his own family members and be committed to prolonging their lives. I expect such a doctor to have high moral character, deep professional content and excellent medical skills. In the long years to come, such as 10, 20 or even 30 years, such a doctor will always be by our side and make us feel secure in our treatment."

N11: "I think there is a need to have more knowledge about breast cancer, especially about the parts where knowledge in this area is lacking. We would also like to have a closer look at what needs to be taken care of for subsequent recovery. I expect healthcare professionals to provide more useful information in this area in order to provide more convenient or comprehensive information to our patients so that it will be easier for us to handle things and the operation process will be more streamlined."

Theme II. Psychological Support Needs

When breast cancer patients are diagnosed for the first time, in view of the seriousness of the disease and its potential threat to life, a series of strong and complex psychological reactions are often triggered immediately, and negative emotions such as anxiety, fear, depression, and despair quickly envelop the patient's inner world like a haze. Psychoeducation for patients is urgent and crucial.

N10: "There is no doubt in my mind that psychological counseling is essential. Many patients feel a strong sense of fear when they are first told that they have cancer, mainly due to a lack of knowledge and fear. When their condition improves, they worry about whether there will be a recurrence of the disease and similar problems, thus giving rise to adverse psychological reactions such as anxiety and depression. Therefore, it is necessary for healthcare workers to provide psychological counseling to patients, which has a more positive impact on our recovery process."

N11: "When I was first diagnosed, I did go through a period filled with anxiety and stress. For patients who have just been diagnosed, they need counseling to help them get through the initial difficulties."

Theme III. Social support needs

While breast cancer patients are undergoing treatment, they may briefly lose certain social functions, such as the ability to work and participate in normal social activities, due to the combined effects of the disease and treatment. During this process, social support plays an indispensable role for patients to recover these functions and reintegrate into society.

N6: "After the disease, one may find that society still has certain prejudices against breast cancer. Especially when it comes to total mastectomy, compared to foreign countries, for Chinese people, their traditional concept is that women's features are gone, and they may feel that they are looked at differently, so society should be more tolerant. When a person is sick, it is not only the individual who is affected, but also her family, causing financial difficulties. In the system one is usually able to be relatively tolerant, in the private sector one can easily be fired. Does it mean that we don't have the right to live, to work, to survive? We are not an invalid. Therefore, I think the most crucial factor should be the inclusiveness of society. I have seen too many women with breast cancer being dismissed from their original workplaces after the disease, which is tantamount to being forced to isolate them from the society, or even to extinguish their glimmer of hope. I do think society helps more."

N9: "After I got sick, the company gave me a termination letter straight away. He didn't think it was necessary for me to come back to work when I was sick."

Theme IV. Medical policies and service needs

The healthcare policy provides the necessary treatment coverage for breast cancer patients to ensure that they have access to timely and effective treatment, thereby improving their survival rate and quality of life.

N1: "The reimbursement policy for medical expenses has improved, which has greatly reduced our financial pressure."

N2: "I hope the follow-up registration is easier and faster."

N6: "We are thankful for the current national healthcare system because its high reimbursement rate has alleviated a huge burden on our finances. However, we find that many originator drugs cannot be used, and from an objective point of view, as an originator drug, it certainly has its unique advantages. In the manufacturing process of a generic drug, its effect is by no means exactly the same as that of the original drug. Therefore, in certain specific contexts, if we can use higher quality originator drugs, I think it will help prolong the lifespan of everyone."

N7: "The best way to provide a richer source of numbers to see patients would be to be able to book direct appointments for major diagnoses, which would remove some of the unnecessary worry for us. It is certainly a waste of physical strength for a frail patient to always try to wait for a particular number. Then there is the time, the difficulty in registering, which constantly affects the progress of my treatment I would like the hospital to provide more numbers so that patients can make appointments with doctors more easily. In addition, I hope that during the treatment process, the hospital can take into account the patient's physical condition to avoid delaying the progress of treatment due to the process"

N8: "At present, our wards are basically full of patients who are traveling to other places for medical treatment, and the reimbursement rate of medical insurance in other places is lower than that of the place of insurance, and many medicines need to be paid for out-of-pocket. Treatment is a long-term process, during which patients have no other sources of income and are under greater financial pressure. Therefore, I hope the medical policy can be more flexible and diverse."

N9: "I prefer to use imported drugs, and I am still in the process of surgery for breast cancer, and I may consider using endocrine drugs for my future treatment. Given my personal experience that imported drugs have far fewer side effects and are more effective compared to domestically produced ones, I would still like to have imported drugs. Therefore, I would like to see more imported drugs available in breast cancer treatment as well."

N12: "In terms of healthcare policy, I would like to have more support. There are differences in the current reimbursement rates for medical insurance in different places, which makes the treatment cost relatively high and puts some pressure on the family's finances."

4 Discussion

4.1 Overview of Principal Findings

This qualitative study, grounded in the Transactional Model of Stress and Coping, explored the real-life parenting concerns, influencing factors, and supportive care needs of young and middle-aged women with breast cancer. Through in-depth interviews with 12 participants, we identified that parenting concerns in this population are multidimensional—encompassing children's daily care, education, health, and future development—and dynamically evolve through cognitive appraisal, coping strategy selection, and reappraisal. Our findings reveal three interconnected domains: (a) the nature of parenting concerns, characterized by parenting disruption under treatment impact, role imbalance between patient and mother identities, difficulties in illness communication, and perceived family burden; (b) influencing factors, encompassing positive and negative cognitive appraisals, support systems, and differentiated coping strategies; and (c) supportive care needs, spanning informational, psychological, social, and healthcare policy domains. These findings validate the applicability of the stress-coping framework in the cancer parenting context and extend it by highlighting the relational and other-oriented nature of threat appraisal—a dimension insufficiently addressed in the original model. Below, we discuss these findings in relation to existing literature and theoretical frameworks, organized around four core thematic areas.

4.2 Relational Threat Appraisal: The Primacy of Maternal Identity in Stress Evaluation

A central finding of this study is that participants' parenting concerns manifested across multiple domains—daily care, education, emotional adjustment, health, and future development—reflecting a profound disruption to their maternal identity during cancer treatment. This finding aligns with previous research by Huang et al. ^[15] and Wikman A et al. ^[16], who identified "concerns about children" as a core theme among cancer-affected mothers. However, our findings extend this literature by revealing the underlying cognitive mechanism: participants' primary appraisals were predominantly other-oriented rather than self-oriented. Within the classic stress-coping framework, primary appraisal involves evaluating a stressor's significance to one's own well-being. In contrast, our participants' appraisals were mediated by relational identity—the self was assessed not as an individual but as a mother whose existence is intrinsically tied to her children's welfare. This suggests that, in the context of parenting during cancer, the unit of threat appraisal should be reconceptualized from the individual to the relational dyad or family system—a theoretical extension that has received limited empirical attention in previous cancer parenting research.

Furthermore, participants described a persistent struggle to balance their dual identities as patients and mothers, with treatment demands directly competing with parenting responsibilities. This role conflict represents a secondary appraisal challenge: participants perceived insufficient resources to effectively manage both identities, leading to guilt, self-blame, and a sense of maternal inadequacy. Loiselle et al ^[17] similarly observed that parents with advanced cancer raising minor children experience significantly higher distress than those without children. Our findings extend this observation by explicitly linking role conflict to the stress-coping framework: when the maternal role is perceived as compromised, coping self-efficacy diminishes, which in turn undermines the ability to manage cancer-related stressors effectively. This relational and role-based appraisal mechanism constitutes the first theoretical contribution of our study.

4.3 Information Deficit as a Modifiable Precondition for Appraisal Distortion

Our findings revealed significant deficiencies in breast cancer-related knowledge among participants, encompassing treatment options, chemotherapy side-effect management, rehabilitation strategies, and genetic risk information. This knowledge deficit directly shaped both primary and secondary appraisal processes. In the absence of accurate information, participants tended to overestimate threats while simultaneously underestimating available coping resources. This distorted appraisal pattern, consistent with Wang et al.'s ^[18] findings on consultation delays among young breast cancer patients, led to maladaptive coping strategies, including reliance on unverified folk remedies and treatment postponement. Theoretically, our findings position information deficit as an appraisal precondition—a factor that influences the accuracy of threat and resource evaluations before coping strategies are even selected. This conceptualization extends the stress-coping framework by identifying a modifiable precursor to appraisal distortion that has not been explicitly theorized in the original model.

Conversely, participants who received clear, comprehensive information from healthcare providers demonstrated more adaptive coping, including proactive treatment engagement and reduced uncertainty-related anxiety. This underscores that information provision functions as a critical resource capable of recalibrating both threat appraisal and coping self-efficacy. Melchior et al.'s ^[19] development of a 40-page information booklet for cancer-affected families—covering emotional communication, age-specific child responses, and family adjustment to a "new normal"—represents a model intervention addressing the multidimensional needs we identified. However, our findings suggest that the effectiveness of such resources depends not only on content but also on their capacity to actively correct common cognitive biases, which may require integration with face-to-face counseling to address the emotional dimension of information processing. Beyond the immediate cognitive impact on mothers themselves, the intergenerational transmission of health behaviors also emerged as a salient concern among participants. For minor children's breast health, our findings suggest the importance of early health guidance, including self-examination education from puberty, as an intergenerational health promotion strategy.

4.4 The Synergistic Amplification of Psychological and Financial Distress

Participants in our study reported significant anxiety during the early diagnostic phase, driven by fear of disease progression, chemotherapy toxicity, and uncertainty about fulfilling parenting responsibilities. This dual-source anxiety reflects the interaction between cancer-related stressors and parenting-specific stressors—a compounding effect that is inadequately captured by generic distress measures. While Loiselle et al.^[17] documented heightened distress among parenting cancer patients, our qualitative data reveal an interactive amplification mechanism: cancer-related anxiety intensifies parenting-specific anxiety by reducing participants' perceived time horizon with their children, while parenting responsibilities reciprocally exacerbate disease-related anxiety by increasing the urgency of life goals. This compounding effect has significant implications for the stress-coping framework: the original model treats different stressor domains as relatively independent, yet our findings suggest that, in caregiving contexts, stressors interact and amplify their perceived severity beyond the sum of their individual effects.

Financial distress emerged as another critical factor constraining participants' secondary appraisals—their evaluation of available coping resources. Participants described high treatment costs, reduced household income, and forced career interruptions, corroborating Zhang et al.'s^[20] research on economic toxicity in breast cancer survivors. As Yuan et al.^[21] demonstrated, economic toxicity negatively correlates with quality of life, and multiple studies^[21–23] have confirmed that financial hardship reduces treatment adherence, exacerbates depressive symptoms, and increases symptom burden. Our findings extend this literature by revealing the specific pathway through which financial strain affects psychological adjustment: financial burden not only serves as an independent stressor but also constrains secondary appraisal by reducing perceived coping resources. When financial resources are depleted, participants' coping self-efficacy is compromised, and reliance on emotion-focused strategies such as worry and rumination intensifies. This resource-constraint mechanism—which the original stress-coping model tends to treat as a relatively static cognitive process—represents a second theoretical contribution of our study.

4.5 From Interpersonal Support to Systemic Constraints: The Structural Vulnerabilities

Family particularly spouses and extended family members—emerged as the most significant source of social support, providing economic assistance, emotional comfort, and practical caregiving. However, our findings also revealed a critical limitation: the adequacy of family support depends on the family's own resources and coping capacity, and support from the healthcare system and broader society is insufficient to compensate for family-level deficits. This structural limitation has received limited attention in previous social support research, which has typically focused on interpersonal rather than systemic dimensions.

Peer support represented another critical resource. Participants benefited from exchanging insights with breast cancer survivors, consistent with Li et al.'s^[24] demonstration that an 8-week peer support intervention significantly reduces anxiety and depression, and with Wang's^[25] findings on the value of peer support groups. Our data further suggest that the value of peer support extends beyond emotional comfort to the embodied transmission of experience—observing that "someone in a similar situation is thriving" itself serves as a recalibration of threat appraisal. The "Little Warrior Alliance" concept—where children of breast cancer survivors share coping strategies—represents an innovative extension warranting further development.

Participants also identified significant healthcare system barriers—prolonged wait times, complex treatment pathways, and appointment difficulties—that indirectly amplified parenting concerns by consuming time and energy otherwise directed toward child-rearing. These findings are consistent with Ma et al.'s^[26] documentation of patient burden in centralized healthcare systems. Markina et al.^[27] reported that 71.1% of cancer patients preferred provincial/municipal hospitals, reflecting high-quality resource concentration in major urban centers—a pattern that imposes substantial logistical burdens, particularly on mothers with dependent children. Our findings extend this literature by explicitly linking healthcare delivery inefficiencies to parenting-specific distress: when mothers spend entire days navigating complex hospital systems, they experience time scarcity that directly interferes with their ability to attend to their children's needs, intensifying guilt and worry. This represents a downstream effect of healthcare system constraints on parenting-specific appraisal processes—a phenomenon insufficiently addressed in health services research.

Furthermore, workplace discrimination and forced resignation, consistent with Dong et al.'s^[28] findings, reflect persistent stigma that functions as a societal-level resource constraint, limiting survivors' access to employment and social participation, thereby reducing available coping resources and prolonging psychological distress. This stigma, operating as a structural barrier, impedes post-treatment social reintegration and perpetuates the psychosocial trajectory of distress, aligning with the concept of "social death" in chronic illness literature.

5 Clinical Implications

Through a rigorous qualitative study, this research sheds light on the lived experiences of parenting concerns among young and middle-aged women with breast cancer in China, providing a critical foundation for developing targeted clinical interventions and advancing related practices. The findings not only confirm the prevalence of such psychological distress but also clarify its specific manifestations within the unique sociocultural and healthcare context of China. The results indicate that parenting concerns are multidimensional and widespread, representing a primary source of psychological burden for patients.

Furthermore, the study suggests that healthcare providers should actively assume roles in advocacy and support beyond direct clinical care. Healthcare professionals must shift from a reactive approach to one of proactive identification. It is recommended that the Parenting Concerns Questionnaire (PCQ) be incorporated into standard psychosocial screening protocols at key timepoints, such as diagnosis, post-surgery, during chemotherapy, and at recurrence. Supplementing standardized screening with open-ended inquiries will allow a deeper understanding of patients' specific worries within their family contexts. Additionally, clear pathways for information support should be established, designating dedicated time for nurses or social workers to address parenting-related questions, correct misconceptions, and provide guidance on communicating about the illness with children of different ages. Access to credible resource centers should also be made available to patients.

While this study primarily focuses on the parenting concerns of the patients themselves, real-world observations indicate that such concerns extend beyond the individual to involve the psychological dynamics of the entire family system. Thus, future research should further explore models of family-centered coping with parenting concerns and strengthen attention to, and intervention in, the psychological well-being of patients' minor children.

6 Limitations

Several limitations warrant consideration. First, our sample was drawn from a single geographic region, limiting the transferability of findings to other cultural and healthcare contexts. Second, we relied on self-reported experiences without triangulation with family members or healthcare providers, which may have missed dyadic dynamics. Third, our cross-sectional design captured participants' concerns at a single time point; longitudinal research is needed to examine how appraisal, coping, and reappraisal evolve across treatment phases. Fourth, we employed extreme-case sampling based on parenting concern levels, which provided rich comparative data but may not represent the experiences of participants with moderate concern levels.

7 Conclusion

In conclusion, this qualitative study, grounded in the Transactional Model of Stress and Coping, reveals that parenting concerns among young and middle-aged women with breast cancer are multidimensional, dynamically shaped by cognitive appraisals, coping strategies, and support systems. The findings extend the stress-coping framework by highlighting the relational nature of threat appraisal in caregiving contexts and identifying the compounding effects of cancer and parenting stressors. Clinical interventions must move beyond treating the patient as an isolated individual and instead address the family system's needs, ensuring mothers with cancer receive not only oncological care but also the practical, informational, psychological, and systemic support necessary to sustain their caregiving role—support essential not only for patients' psychological well-being and treatment outcomes but also for their children's healthy development and security.

Declarations

Ethics approval and consent to participate

Clinical trial numbers are not applicable. This study was approved by the Ethics Approval Committee of the Shanghai Medical College of Health Sciences (2023.yjskt.02), indicating that the study had no side effects on the participants of this study. And the consent was obtained from the head nurse of this ward before the survey, and the survey was conducted using one-on-one, face-to-face surveys. All the methods were carried out in accordance with the relevant guidelines and regulations.

Consent for publication

Not applicable.

Availability of data and materials

The datasets analysed in the current study are available from the corresponding author on reasonable request.

Competing Interests

The authors declare that there are no conflict of interests, we do not have any possible conflicts of interest.

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