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Sexual life and breast cancer: perceptions and experiences of women

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ABSTRACT

Objectives: to understand the perception of women with breast cancer regarding sexual life. **Methods:** a descriptive and exploratory study with a qualitative approach, conducted with 11 women aged 18 years or older who had been undergoing breast cancer treatment for more than one year. Participants were recruited from a rehabilitation service affiliated with a public higher education nursing institution in Ribeirão Preto, São Paulo, Brazil. After approval by the Ethics Committee, the discourses obtained from recorded and transcribed interviews were processed using IraMuteq® software, and sociodemographic data were analyzed in Epi Info™. **Results:** most participants were married or living in a stable union, with a mean age of 59 years. Among them, six had undergone mastectomy and five quadrantectomy, all with complementary treatment. Four thematic classes emerged: (1) Sexual life during breast cancer rehabilitation; (2) Challenges during sexual penetration and coping strategies; (3) Vaginal changes and the impact of breast absence; (4) Reduced sexual desire after chemotherapy. **Conclusion:** women with breast cancer experience significant challenges in sexual life, including loss of sexual desire, difficulties during penetration, and concerns regarding body image and function.

Descriptors: Breast Neoplasms; Sexuality; Drug Therapy; Women's Health; Nursing.

INTRODUCTION

Breast cancer is the neoplasm that most affects women worldwide(1). In Brazil, excluding nonmelanoma skin tumors, breast cancer is the most incident, representing the leading cause of cancer death among the female population in all Brazilian regions, with an estimated 73,610 new cases per year during the 2023-2025 triennium(2).

Experiencing cancer results in exhausting experiences. Beyond coping with the diagnosis confirmation, which brings changes across multiple life spheres, problems and difficulties arising from treatments emerge, such as side effects, causing suffering and potentially influencing Quality of Life (QL)(3).

According to the World Health Organization (WHO), QL encompasses physical and psychological health issues, independence, and social interactions; when associated with diseases and health interventions, it is termed Health-Related Quality of Life (HRQL)(3).

The European Organization for Research and Treatment of Cancer (EORTC) defines HRQL as a multidimensional construct that includes disease, treatment symptoms, physical, psychological, and social functioning(4). In women with breast cancer, HRQL can be compromised across various dimensions due to emotional, physical, social, and familial problems(5).

Therapy for breast cancer is individualized based on disease extension and clinical characteristics of the woman, potentially including surgery, radiotherapy, chemotherapy, hormone therapy, or targeted therapy(6).

The surgical process, whether conservative (segmental breast removal) or non-conservative (mastectomy, total breast removal), significantly impacts women's lives, particularly their sexuality(7).

The loss or mutilation of the breast, an organ bearing great feminine symbolism, negatively affects self-esteem and body image, possibly generating difficulties in body exposure to partners and in the couple's sexual practice(8). In this sense, especially in younger women, unilateral or bilateral mastectomy without breast reconstruction causes severe detriments to sexuality(9).

These changes also influence femininity and body aesthetic perception, generating insecurity and difficulties related to body image and sexual desire, even after breast reconstruction. Hence, it becomes essential to consider the concept and consequences of disease and treatments on women's body image and self-esteem(8).

In turn, estrogen blockade treatments usually cause not only iatrogenic menopause and infertility in younger women, but also physical symptoms such as genital dryness, inflammation, dysuria, pain during sexual intercourse, and recurrent urinary infections; these symptoms impair women's quality of life, directly limiting sexuality and daily activities(10).

Chemotherapy is particularly harmful to sexual health, mainly among younger women(9). In addition to well-known adverse effects such as alopecia, vomiting, and nausea, ovarian failure may occur, reducing estrogen and progesterone production and inducing premature menopause(8). This leads to decreased vaginal lubrication and libido, dyspareunia, and anorgasmia, contributing to discomfort during sexual intercourse.

Radiotherapy, on the other hand, may cause fatigue, diarrhea, nausea, vomiting, and skin damage due to radiodermatitis at the site, which results in pain and prevents touch(11).

Therefore, the sexual health of breast cancer survivors can be considerably compromised, with the main sexual problems including reduced sexual desire, lack of lubrication, difficulties in arousal, and pain during penetration(9), causing discomfort during sexual practice and leading to sexual dysfunction(8).

Sexual dysfunctions are problems occurring in the phases of the sexual response cycle and are recognized by the WHO as public health issues(12). Thus, addressing sexuality in mastectomized women who have already experienced difficult and traumatic moments is crucial(13).

A study on sexual practice among young women with breast cancer identified that this dimension of life is affected by diagnosis and treatments, and that social and emotional support are essential for its resumption, making it necessary to address sexual practice in health care to reduce anguish and doubts in these women(8).

However, there is a lack of discussion among health professionals about sexuality with women and their partners after treatment, highlighting the need for greater understanding of the topic to enable comprehensive care for women's health(7). Moreover, few studies address how women with breast cancer perceive their sexual life, making it essential to understand their experiences to offer better support and interventions, improving their QL(14). Listening to their voices and understanding their needs allows for a more humanized and effective care approach.

In this context, the results of this research can help health professionals more comprehensively identify physical, emotional, social, and psychological changes in women's lives after breast cancer diagnosis, in the context of sexual expression, thereby providing integral and personalized care focused on treatment and necessary support to face challenges arising from the disease in this life dimension.

Furthermore, the research can support the development of specific interventions such as psychosocial support programs, support groups, and reception services aimed at sexuality throughout the treatment and recovery process for these women. These interventions may improve quality of life, strengthen emotional and psychological support, and promote better adaptation to changes resulting from the disease.

For women with breast cancer to receive adequate professional support to experience their sexuality healthily and preserve their quality of life, it is fundamental to consider their own experiences and challenges throughout this journey.

Thus, this study aimed to understand the perception of women with breast cancer regarding sexual life during treatment.

METHODS

This qualitative study, according to Dealandes et al.(15):

> "addresses very particular questions. It [Qualitative research] in the social sciences concerns a level of reality that cannot or should not be quantified. In other words, it involves the universe of meanings, motives, aspirations, beliefs, values, and attitudes. This set of human phenomena is understood here as part of social reality, since human beings are distinguished not only by acting, but also by thinking about what they do and by interpreting their actions within and based on lived reality, « shared with their peers»(15)."

Preparation of this article followed guidelines established by the Consolidated Criteria for Reporting Qualitative Research (COREQ)(16).

The study took place from November 2023 to April 2024 in a rehabilitation service at a Public Higher Education Nursing Institution in the countryside of São Paulo, Brazil, which provides comprehensive care for women with breast cancer and their family members, promoting active social reintegration.

The target population comprised women registered in the aforementioned rehabilitation service for mastectomized women. Inclusion criteria were age 18 years or older and more than one year of breast cancer treatment. Exclusion criteria were mental disorders and/or intercurrent events during their stay for care that prevented them from answering the interview.

Women were invited to participate during support group meetings held on days when the rehabilitation service operated (Mondays, Wednesdays, and Fridays). The invitation was carried out by one of the authors, a nurse experienced in qualitative research and familiar with care for women with breast cancer at that service, which enabled prior relationships with participants before study development.

Individual interviews were scheduled in the morning, according to participants' availability, in reserved rooms that ensured privacy and an appropriate environment. Scheduling was planned to guarantee accessibility, respect participants' and service routines, and foster genuine expression of women's experiences and perceptions. Participants were free to reschedule or interrupt the interview at any time without prejudice to the study.

For data collection, a structured interview guide was applied, including questions on sociodemographic data, breast cancer treatments, and health history. Subsequently, a semistructured interview of approximately 30 minutes was conducted, guided by the central question: What do you think could improve your sexual life during this period of breast cancer rehabilitation?

New questions were added to clarify and deepen the experience based on participants' statements. A voice recorder on a tablet was used, positioned in clear view after the interviewee's agreement. The device remained under the researcher's custody to ensure confidentiality and security of audio files.

There is no predefined a priori saturation point for data, and the number of field approaches can never be a merely bureaucratic and formal numerical parameter(17). Thus, data collection ended when information began to recur, considering the search for the internal logic of the study object in all its connections and interconnections, as recommended in the literature(17).

All participants were informed about the study objectives and consented by signing the Informed Consent. Anonymity and confidentiality of content were preserved through coding of audio-recorded statements, using the letter "W" (for woman) and a sequential Arabic numeral corresponding to each interview.

Data related to sociodemographic and health profiles of participants were organized in a Microsoft Excel® spreadsheet (version 2021, Microsoft Corporation, United States) and analyzed in Epi Info™ (version 7.2.5.0, 2020, Centers for Disease Control and Prevention – CDC, United States). Absolute and relative frequency analyses were performed for categorical variables, and mean and standard deviation for numerical variables.

All audio-recorded statements were organized in a Google Docs® document (online version, 2024, Google LLC, United States) and transferred to LibreOffice® (version 7.5, The Document Foundation, Germany) for analysis in IraMuteq® software – Interface de *R pour lês Analyses Multidimensionnelles de Textes et de Questionnaires* (version 0.7 Alpha 2.3.3.1, 2009, Pierre Ratinaud, France)(18). This free program, based on R software, enables multivariate text processing and analysis(19).

Descending hierarchical classification analysis using the Reinert method (Hierarchical Classification) was performed, resulting in a dendrogram of classes representing relations among information processed in each scientific document analyzed, with details of interconnections determined by their associations. In addition, percentage analyses, χ^2 (chi-square), and *p*-value were generated within IraMuteq® for each class, indicating the strength and significance of associations between interview forms and classes.

The study complied with ethical principles in accordance with Resolution nº 466/12 of the Brazilian National Health Council(20) and received approval from a Research Ethics Committee under the Certificate of Ethical Appraisal Presentation (Portuguese acronym: Certificado de Apresentação de Apreciação Ética – CAAE) nº 70239823.8.0000.5393.

RESULTS

A total of 11 women participated, 6 (54.5%) being married or in stable unions, with a mean age of 59 (± 10.4) years. Most had completed high school (72.7%), identified as Catholic (63.6%), and had a mean family income of R$ 3,567.63. Additionally, 45.4% were retired; 36.4% worked as domestic workers; 36.4% lived with up to four people in the same residence, and 27.3% with up to three people.

In relation to health history and breast cancer treatment, four (36.4%) had dyslipidemia; three (27.3%) had diabetes; and three (27.3%) had hypertensions. Six (54.5%) underwent mastectomy, five (45.4%) underwent quadrantectomy; ten (90.1%) had axillary clearance; five (45.4%) received neoadjuvant chemotherapy, five (45.4%) adjuvant chemotherapy; nine (81.8%) underwent radiotherapy; and nine (81.8%) received hormone therapy.

The textual *corpus* comprised 86 text segments and 2,917 occurrences (words, forms, or lexemes), of which 60.5% were used for analysis. Four content classes emerged after descending hierarchical classification. The representation of these divisions and class formation is shown in the following dendrogram (Figure 1).

Class 1 – Sexual life during breast cancer rehabilitation

This word class constituted 25.5% of the textual corpus and was represented by significant words such as "rehabilitation", "period", "cancer", "life", and "sexual". The class illustrates changes experienced during breast cancer treatment when women faced a significant impact on their sexual life, especially after starting the rehabilitation process. Some excerpts illustrate this class content:

> *I think that after cancer, I cooled down. I lost my breast, hair, menstruation, lost desire [for sexual relations]. (W4)*

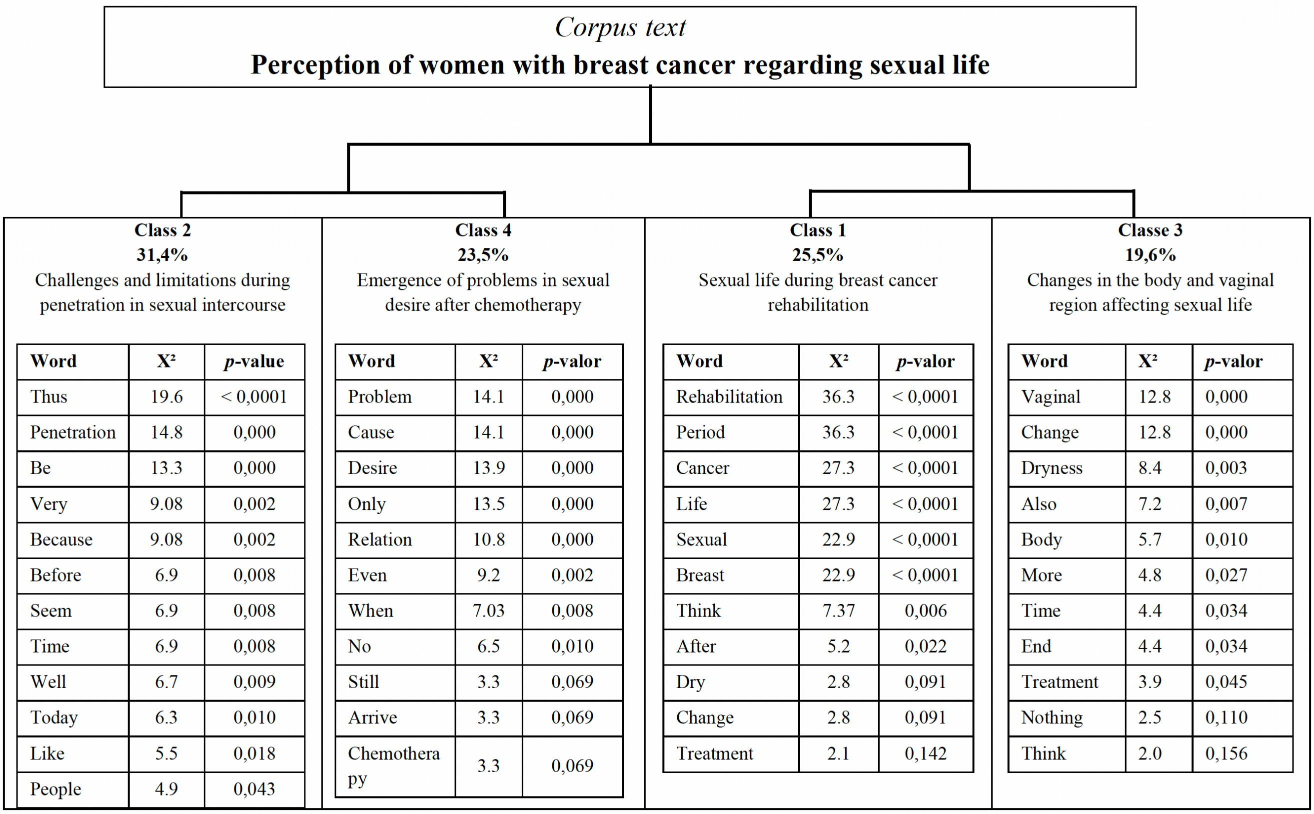
> *After cancer, I did feel some changes; my husband and I no longer have sexual relations. (W7)*

> *My sexual life is totally different from what it was before. I no longer have desire for sexual intercourse. (W3)*

Class 2 – Challenges during sexual penetration and coping strategies

This word class comprised 31.4% of the *corpus* and represents challenges and limitations women face during vaginal penetration

Figure 1 - Dendrogram of words extracted from statements by women with breast cancer (n = 11) according to descending hierarchical classification (DHC), Ribeirão Preto, São Paulo, Brazil, 2024



Class 2
31,4%
Challenges and limitations during penetration in sexual intercourse

Word	X²	*p*-value
Thus	19.6	< 0,0001
Penetration	14.8	0,000
Be	13.3	0,000
Very	9.08	0,002
Because	9.08	0,002
Before	6.9	0,008
Seem	6.9	0,008
Time	6.9	0,008
Well	6.7	0,009
Today	6.3	0,010
Like	5.5	0,018
People	4.9	0,043

Class 4
23,5%
Emergence of problems in sexual desire after chemotherapy

Word	X²	*p*-valor
Problem	14.1	0,000
Cause	14.1	0,000
Desire	13.9	0,000
Only	13.5	0,000
Relation	10.8	0,000
Even	9.2	0,002
When	7.03	0,008
No	6.5	0,010
Still	3.3	0,069
Arrive	3.3	0,069
Chemotherapy	3.3	0,069

Class 1
25,5%
Sexual life during breast cancer rehabilitation

Word	X²	*p*-valor
Rehabilitation	36.3	< 0,0001
Period	36.3	< 0,0001
Cancer	27.3	< 0,0001
Life	27.3	< 0,0001
Sexual	22.9	< 0,0001
Breast	22.9	< 0,0001
Think	7.37	0,006
After	5.2	0,022
Dry	2.8	0,091
Change	2.8	0,091
Treatment	2.1	0,142

Classe 3
19,6%
Changes in the body and vaginal region affecting sexual life

Word	X²	*p*-valor
Vaginal	12.8	0,000
Change	12.8	0,000
Dryness	8.4	0,003
Also	7.2	0,007
Body	5.7	0,010
More	4.8	0,027
Time	4.4	0,034
End	4.4	0,034
Treatment	3.9	0,045
Nothing	2.5	0,110
Think	2.0	0,156

in sexual intercourse. Keywords such as “penetration” and “very”, statistically significant (*p* < 0.0001), suggest focus on expressions of discomfort or dissatisfaction during penetration, and possible associations with pain and physical or emotional difficulties. Participants’ statements illustrate content of this class:

> *We have our frolics, but there is no way, at penetration time, there is no way, the pain is unbearable, there is no way, nothing to be done. (W3)*

> *Sometimes there are caresses, but we get used to it. During sex itself, it hurts a lot, I used to scream from the pain, so he found his own way. (W4)*

> *So it shows up that there is more pain, a lot of pain during penetration. It is very difficult because we feel pain but do not want to be without it. (W8)*

> *Because of chemotherapy, I started feeling a lot of pain. It is complicated. I use a cream [lubricant], but during sexual intercourse, it still hurts. (W10)*

Despite these challenges and limitations related to penetration during sex, some women report trying to mitigate the problem, as shown in the following statements:

> *I tried some measures. I had laser therapy, I talked to my gynecologist who gave me some creams. He gave me a moisturizing cream and lubricants, but it does not help. (W3)*

> *I visited my gynecologist who gave me a cream. But I did not see much result. I can only use water-based lubricant, right? So it dries very quickly; I have not found anything that really works. (W8)*

Class 3 – Vaginal changes and impact of breast absence

This class, representing 19.6% of content, addresses body and vaginal region changes and their effects on sexual life. The body undergoes several changes during breast cancer treatment, many influencing sexual health and emotional well-being. Keywords such as “vaginal”, “dryness”, “also”, and “body”, all statistically significant (*p* < 0.0001), indicate emphasis on vaginal health issues like dryness and how these changes impact sexual life and emotional well-being. The following statements illustrate this:

> *Today I fear my husband touching me; I do not feel comfortable, I am even thinking about getting a breast prosthesis to see if it improves this issue. (W5)*

> *I think vaginal dryness is a worrying issue because, since it is hormone-positive, there is not much to be done. Before cancer, it was great. (W8)*

> *At first, I could not take off my bra or be naked in front of my husband. I was very ashamed. I still am somewhat, but I have even slept with a bra because I did not want him to see me with only one breast. I did not feel good about that. (W11)*

> *I just know that I think I became a dry woman with all this treatment. (W3)*

Class 4 – Reduced sexual desire after chemotherapy

This class accounted for 25.5% of content and represents women's experiences facing problems related to sexual desire after chemotherapy sessions. Keywords such as "problem", "cause", "desire" and "relation", all statistically significant ($p < 0.0001$), indicate difficulties faced by women trying to maintain or recover sexual desire post-chemotherapy. The following excerpts illustrate this:

> *After treatment, libido greatly decreased, and sexual desire is much less. (W11)*

> *I am not going to have sex just because of my husband's desire. I don't have sexual desire. This will not solve my problem. (W3)*

Despite challenges related to reduced sexual desire and thus sexual activity, some women reported receiving understanding and emotional support from their partners during this difficult life phase, according to their statements:

> *My husband and I talk a lot. I have always been very open with him. He always knew about my health condition and has always been very respectful with me. (W3)*

> *My husband is now very settled and calm. He understands that we do not have sex every day anymore. (W11)*

DISCUSSION

Considering sexual health as an integral part of quality of life implies addressing sexuality in the provision of health care to women with breast cancer.

Exploring the experiences of sexuality among women with breast cancer undergoing rehabilitation allows for a deeper understanding of the impacts of different treatments on female sexuality, unveiling aspects still little discussed, such as the unique ways in which these women reinterpret their bodies, femininity, and intimacy. The narratives show that beyond physiological changes, alterations in sexual desire are deeply related to how female identity is perceived and reconstructed in the process of illness and oncological treatment. This finding reinforces the need to recognize the physical and psychological implications of this cancer, with increased awareness and ongoing education of health professionals to address these issues with patients.

Although an initial question about what could improve their sexual life during breast cancer rehabilitation was posed to the study participants, their statements concentrated on current experiences and some attempts at coping strategies, suggesting that the focus remains in the present, not yet addressed, expressed, or discussed.

Understanding their experiences from individual perceptions is fundamental to developing support strategies, preventing couple distancing, and reducing the anguish and doubts these women face(8). This is important because studies reveal that breast neoplasia can influence marital relationships, with women who had stable and harmonious relationships with their partners before the illness tending to maintain them despite the disease(21), whereas those with relationship problems tend to separate or experience worsening relations(22).

The absence or deformity of the breast has a profound impact on female sexuality. Women who have undergone total or partial mastectomy have their self-image and self-esteem altered by the negative influence of this treatment modality, suffering from the loss of a body part. Likewise, the sense of mutilation promotes reductions in satisfaction and frequency of sexual relations(8,23,24). Equally, adopting an empathetic and sensitive approach is crucial to supporting women who face the emotional and physical challenges of mastectomy, aiming to recognize and attend to their specific needs.

The present study's results highlight the challenges and limitations encountered during sexual penetration, which significantly impact the quality of life of these women, affecting physical, emotional, and psychological aspects, corroborating studies conducted in Spain and Brazil demonstrating that most of this population experiences sexual dysfunction, especially after breast cancer treatment, including pain during penetration, lack of vaginal lubrication, reduced sexual desire, low arousal, and difficulty achieving orgasm(25,26).

Addressing these aspects comprehensively and sensitively and listening to women during and after breast cancer treatment enables professionals to develop care plans that extend beyond disease management.

It is noteworthy that the lack of communication about sexual issues during medical or nursing consultations may contribute to underreporting these problems and consequently to inadequate intervention by health professionals. Breast cancer patients frequently face dyspareunia and sexual dysfunction; however, these concerns often remain unaddressed during consultations(27). Such communication gaps between patients and health professionals may result in further deterioration of quality of life for women after breast cancer treatment.

Participants in this study demonstrate that during breast cancer treatment, bodily and vaginal transformations occur, which also corroborate findings from other investigations revealing that sexual desire and vaginal lubrication are among the most affected aspects due to bodily and intimate modifications(28). In analyzed reports, statements concerning pain during sexual penetration draw attention, evidencing the physical and emotional suffering experienced, reinforcing the urgent need for therapeutic approaches comprehensively considering the treatment's impact on sexual health.

Body changes in women with breast cancer, frequently associated with systemic treatment, can lead to reduced sexual desire and vaginal lubrication, directly interfering with the quality of sexual activity(29).

In relation to this, during care, addressing potential strategies to minimize discomfort during sexual intercourse is essential. Among these are the use of water-based intimate lubricants and adoption of alternative practices, such as wearing clothing that boosts self-esteem and stimulates sexuality or dimming lighting, especially in cases of breast absence(3,30,31). Simultaneously, evaluating acceptance and outcomes of such strategies is imperative, and continuous efforts should pursue effective interventions tailored to each case.

The taboo around discussing sexuality in health care persists, causing many women to feel "asexual" in face of breast cancer and its treatments. The absence of guidance and information from health professionals may intensify difficulties and suffering encountered by these women during this period(8).

Moreover, women face difficulties in maintaining or recovering sexual desire after chemotherapy treatment. Despite challenges related to reduced sexual desire and consequently sexual activity, some reported receiving understanding and emotional support from their partners during this difficult life phase. In many instances, partners play key roles in overcoming sexual distancing experienced by the couple, as they understand the need to support their companions in overcoming sexual difficulties presented by treatments. They accompany them to consultations and treatment sessions, seek to clarify doubts, thus enhancing couple communication about the situation experienced and marking the return to sexual practice(8).

Research conducted at the Women's Comprehensive Health Care Center of the State University of Campinas (UNICAMP)(32) and at the Mastology Outpatient Clinic of a public hospital in the Federal District(33) reveals that partner support is crucial for women with breast cancer, as those with partners showed improvement in emotions and interpersonal relationships compared to women without stable partnerships. Additionally, women without partners appeared more vulnerable to lifestyle changes, especially in affectionate relationships(32,33). These findings underscore the importance of emotional and social support in recovery processes and quality of life during and after breast cancer treatment.

Given the above, it is inferred that nursing, as well as all members of the multiprofessional team caring for women with breast cancer in rehabilitation, plays a fundamental role in assistance, including regarding sexual health.

Continuous training of health professionals, especially nursing staff, is essential for them to competently and sensitively approach physical and emotional changes impacting patients' sexual lives.

By promoting open and welcoming communication, the multiprofessional team will be able to provide comprehensive support that encompasses not only clinical care but also women's emotional and psychological needs. Thus, all can decisively contribute to improving these patients' quality of life by integrating sexual health into global breast cancer treatment.

Highlighted as demands for future research are development of pharmacological and non-pharmacological therapies to promote vaginal lubrication; design and testing of sensual clothing adapted for women with breast conformation alterations; creation and testing of cognitive-behavioral therapies that contribute to increasing female libido at this stage; as well as development and testing of couple therapies representing alternative acceptable forms of exercising sexuality for those involved.

Sexual life of women with breast cancer is a sensitive and socially stigmatized topic. Therefore, some participants may have felt reluctant or embarrassed to openly share their experiences, resulting in possible omissions or underrepresentation in data. This factor may have limited the depth of information collected.

CONCLUSION

The experiences shared by participants highlighted significant changes in sexual life during and after treatment, including loss of sexual desire, especially following chemotherapy, difficulties during penetration, and concerns about physical changes such as alterations in breast configuration and marked reduction in vaginal lubrication.

The search for therapies to specifically minimize vaginal changes represents a coping strategy, as does emotional support from partners during this difficult period. These results offer valuable insights into the needs of this population group and underscore the importance of sensitive and holistic approaches to promote satisfying sexual life and enhance well-being among women with breast cancer.

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MSD: conceptualization; data curation; formal analysis; funding acquisition; investigation; methodology; project administration; resources; software; visualization; writing – original draft and writing – review & editing.

GRSP: validation; visualization; writing – original draft and writing – review & editing.

CCF: visualization; writing – original draft and writing – review & editing.

NLML: visualization; writing – original draft and writing – review & editing.

APAR: validation; visualization; writing – original draft and writing – review & editing.

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Conflict of interest

None.