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Opinion

Sexual Health in Breast Cancer Survivors: An Overlooked Component of Long-term Care

Jiani Ma[1#], Xinxin Yao[2#], Wei Li[3], Hao Li[3], Dongao Chen[3], Hui Wang[3], Mingjun Zhang[3*] and Senbang Yao[3*]

[1]The Second Clinical Medical College of Anhui Medical University, Hefei, Anhui, China; [2]Hefei Cancer Hospital, Chinese Academy of Sciences, Hefei, Anhui, China; [3]Department of Oncology, Holistic Integrative Oncology and Rehabilitation Center, The Second Affiliated Hospital of Anhui Medical University, Hefei, Anhui, China

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Breast cancer (BC) represents a significant global health burden, with over 2.3 million new cases diagnosed annually.[1] With survival rates improving, long-term quality of life issues have come to the forefront, among which sexual health remains a frequently neglected core area.[2] The diagnosis and treatment of BC can profoundly and persistently impact a patient's sexual function, body image, and intimate relationships.[3] Therefore, we advocate for its integration into multidisciplinary survivorship care.[4] The following areas warrant greater attention in future research and clinical practice.

All current primary treatment modalities may lead to significant sexual dysfunction. The most common problems include dyspareunia due to vaginal dryness and genital changes, decreased libido, and difficulties with arousal and orgasm.[5] Treatment-induced premature ovarian insufficiency is a major risk factor, defined as the loss of ovarian function before the age of 40, with the use of alkylating agents and higher-dose chemotherapy further exacerbating this risk in BC.[6] Despite advances in oncological therapies, the mitigation of treatment-related sexual dysfunction remains unrealized. Additionally, treatment-associated infertility poses a substantial psychological challenge for younger patients.[7] In fact, the main cause of sexual dysfunction is the impairment of the patient's body image and sexual satisfaction.

Breast surgery, especially mastectomy, can profoundly affect a woman's body image, self-identity, and sense of femininity. This harmful effect can persist for years. Negative body image, loss of sexual attractiveness, and altered self-consciousness can lead to profound internal psychological distress.[8] Many women become more confused about their sexual identity following treatment. Research indicates that patients are often reluctant to initiate discussions about sexual health concerns and may avoid the topic even when questioned by healthcare providers, leading to unmet needs. How to assess and intervene in this phenomenon has aroused great interest among physicians involved in breast cancer diagnosis and treatment.

The use of validated assessment tools is crucial. Instruments such as the Sexual Function and Satisfaction measure and the SEXSAT-Q questionnaire, designed for BC patients, can be employed to systematically evaluate changes in sexual function and to assess the effectiveness of interventions.[9] Interventions require multimodal, individualized strategies (Table 1):

1. *Management of local symptoms:* For genitourinary syndrome of menopause caused by estrogen deficiency, lubricants and moisturizers serve as first-line management. Intravaginal dehydroepiandrosterone and oral ospemifene are approved treatments; ASCO and other guidelines have evaluated relevant studies,[10] but their safety profile in post-mastectomy patients requires careful evaluation. Because the estrogenic effect of dehydroepiandrosterone may stimulate the occurrence and development of malignant tumors, its use is also limited by hormone expression. Emerging approaches like vaginal laser therapy need more robust evidence-based support.[11]
2. *Physical and behavioral therapies:* Vaginal dilators can help reduce sexual anxiety, manage pain, and address body image issues through gradual, progressive use. Behavioral therapies such as Sensate Focus training can assist couples in rebuilding emotional and physical connection by focusing on sensory awareness rather than sexual performance.[12] These methods need to be carried out under the guidance of a professional rehabilitation specialist or a psychologist; otherwise, symptoms may worsen.
3. *Psychosocial and partner support:* Psychosocial interventions are effective in alleviating anxiety and improving attitudes toward sexuality. A care model based on a biopsychosocial framework should be adopted, integrating partners into the support system.[13] Counseling based on the PLISSIT model, dyadic skills training (e.g., communication, problem-solving), and group psychosocial interventions have proven effective in improving coping skills and quality of life for both patients and their partners.[14] These interventions may be more accessible in economically developed countries and are still difficult to access for patients with average economic means.
4. *Multidisciplinary collaborative care:* Establishing multidisciplinary clinic models involving oncology, gynecology, endocrinology, psychology, and specialist nurses can optimize assessment, coordinate care, and standardize the implementation of evidence-based practices, providing comprehensive support for patients.[15]

[*]**Correspondence to:** Senbang Yao and Mingjun Zhang, Department of Oncology, Holistic Integrative Oncology and Rehabilitation Center, The Second Affiliated Hospital of Anhui Medical University, Hefei, Anhui 230000, China. ORCID: https://orcid.org/0000-0003-4769-4970 (SY); https://orcid.org/0000-0003-2337-1560 (MZ). Tel: +86-18326903225 (SY); +86-13865952007 (MZ), E-mail: Yaosenbang@126.com (SY); zhangmjayd@126.com (MZ)

[#]These authors contributed equally to this article.

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Table 1. Interventions for sexual dysfunction in breast cancer survivors

Management of local symptoms	Physical and behavioral therapies
Lubricants and moisturizers	Vaginal dilators
Dehydroepiandrosterone (DHEA) and oral ospemifene	Behavioral therapies
Vaginal laser therapy	

Psychosocial and partner support	Multidisciplinary collaborative care
Counseling based on the PLISSIT model	Evidence-based practices
Group psychosocial interventions	

This is the same philosophy as the current concept of integrative medicine, where patients may achieve comprehensive recovery with the cooperation of multidimensional specialists.

Sexual health is a crucial aspect of overall well-being and quality of life for BC survivors.[16] There is still an unmet need for sexual health support within survivorship programs. We should prioritize clinical practice implications over broad psychosocial discussions. Current clinical practice continues to encounter challenges, including insufficient assessment, conflicting information, and inadequate support.[17] This opinion article has several limitations, and the progress of concepts in sexual medicine and oncology also needs to be taken into account. Going forward, coordinated efforts among oncologists, psychologists, policymakers, and healthcare providers are essential to advance the routine incorporation of systematic sexual health assessments and personalized intervention strategies into breast cancer survivorship care programs.[18] Only through early, proactive, multidisciplinary, and partner-inclusive support can this long-term challenge be effectively addressed, achieving genuine holistic rehabilitation of BC survivors.

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Conflict of interest

The authors declare that they have no conflicts of interest.

Author contributions

Writing of this article (JM, XY, WL), conceptualization of ideas (SY, MZ), and proofreading of the article (HL, DC, HW). All authors have read and agreed to the published version of the manuscript.

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