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Sexuality and Psychological Well-Being in Breast Cancer Survivors: Insights from the Biopsychosocial Perspective

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Sexualidade e Bem-Estar Psicológico em Sobreviventes de Câncer de Mama: Percepções sob a Perspectiva Biopsicossocial

Sexualidad y Bienestar Psicológico en Supervivientes de Cáncer de Mama: Percepciones bajo la Perspectiva Biopsicosocial

Tania Angelita Iora Guesser[1]; Victor Hugo Guesser Pinheiro[2]; Cristine Lima Alberton[3]; Stephanie Santana Pinto[4]

ABSTRACT

Introduction: Breast cancer survivors face psychological, social, and cultural challenges, often related to anxiety, depression, and sexuality issues. These experiences are influenced by physical and emotional changes resulting from oncological treatment, as well as sociocultural taboos. **Objective:** To highlight the importance of the biopsychosocial model in managing the psychological and social impacts on women who have survived breast cancer and participated in the WaterMama study, emphasizing the essential role of health education groups in promoting the emotional and sexual well-being of these patients and providing practical insights for healthcare professionals seeking to adopt a more integrative and humanized approach. **Method:** Descriptive study with a qualitative approach, based on the biopsychosocial model. The investigation focused on analyzing the interactions and mutual support established among these women in health education groups, with an emphasis on the psychological and social dynamics experienced by the participants. **Results:** Group interactions and peer support emerged as key factors in reducing psychological and social impacts, promoting greater social connection, resilience, and quality of life. The adoption of the biopsychosocial model enabled a comprehensive approach to the needs of these women, highlighting the relevance of sexuality as an integral part of mental health and well-being. **Conclusion:** Integrative strategies, such as support and health education groups, are essential components in the care of this population, with significant benefits for their physical, psychological, and social health.

Keywords: Mental Health/education; Sexuality/psychology; Breast Neoplasms/psychology; Women's Health; Qualitative Research.

RESUMO

Introdução: Sobreviventes de câncer de mama enfrentam desafios psicológicos, sociais e culturais, frequentemente relacionados à ansiedade, depressão e a questões de sexualidade. Essas experiências são influenciadas por mudanças físicas e emocionais decorrentes do tratamento oncológico, além de tabus socioculturais. **Objetivo:** Destacar a importância do modelo biopsicossocial no manejo dos impactos psicológicos e sociais em mulheres sobreviventes de câncer de mama que participaram do estudo *WaterMama*, enfatizando o papel essencial dos grupos de educação em saúde na promoção do bem-estar emocional e sexual dessas pacientes, e oferecer *insights* práticos para profissionais de saúde que buscam adotar uma abordagem mais integrativa e humanizada. **Método:** Estudo descritivo, de abordagem qualitativa, fundamentado no modelo biopsicossocial. A investigação centrou-se na análise das interações e do suporte mútuo estabelecido entre essas mulheres em grupos de educação em saúde, com ênfase nas dinâmicas psicológicas e sociais vivenciadas pelas participantes. **Resultados:** As interações grupais e o suporte entre pares emergiram como fatores-chave para a redução de impactos psicológicos e sociais, promovendo maior conexão social, resiliência e qualidade de vida. A adoção do modelo biopsicossocial possibilitou uma abordagem abrangente das necessidades dessas mulheres, destacando a relevância da sexualidade como parte integral da saúde mental e bem-estar. **Conclusão:** Estratégias integrativas, como grupos de apoio e educação em saúde, constituem componentes essenciais no cuidado dessa população, com benefícios significativos para sua saúde física, psicológica e social.

Palavras-chave: Saúde Mental/educação; Sexualidade/psicologia; Neoplasias da Mama/psicologia; Saúde da Mulher; Pesquisa Qualitativa.

RESUMEN

Introducción: Las sobrevivientes de cáncer de mama enfrentan desafíos psicológicos, sociales y culturales, que suelen ser relacionados con la ansiedad, la depresión y las cuestiones de sexualidad. Estas experiencias están influenciadas por cambios físicos y emocionales derivados del tratamiento oncológico, además de tabúes socioculturales. **Objetivo:** Resaltar la importancia del modelo biopsicosocial en el manejo de los impactos psicológicos y sociales en mujeres sobrevivientes del cáncer de mama que han participado del estudio *WaterMama*, con énfasis en el rol esencial de los grupos de educación en salud en la promoción del bienestar emocional y sexual de estas pacientes, y ofrecer perspectivas prácticas para los profesionales de la salud interesados en un enfoque más integrador y humanizado. **Método:** Estudio descriptivo, con un enfoque cualitativo, basado en el modelo biopsicosocial. La investigación se centró en el análisis de las interacciones y el apoyo mutuo de estas mujeres en grupos de educación en salud, con énfasis en las dinámicas psicológicas y sociales vividas por las participantes. **Resultados:** Las interacciones grupales y el apoyo entre pares fueron clave para reducir los impactos psicológicos y sociales, promoviendo mayor conexión social, resiliencia y calidad de vida. La adopción del modelo biopsicosocial permitió un enfoque integral de las necesidades de estas mujeres, destacando la importancia de la sexualidad como parte integral de la salud mental y el bienestar. **Conclusión:** Las estrategias integradoras, como los grupos de apoyo y educación en salud, son fundamentales en el cuidado de esta población, con beneficios significativos para su salud física, psicológica y social.

Palabras clave: Salud Mental/educación; Sexualidad/educación; Neoplasias de la Mama/psicología; Salud de la Mujer; InvestigaciónCualitativa.

[1-4] Universidade Federal de Pelotas (UFPel), Escola Superior de Educação Física e Fisioterapia (ESEF), Pelotas (RS), Brasil.
[1] E-mail: tania.guesser@ufpel.edu.br.Orcid iD: https://orcid.org/0000-0001-7509-6121
[2] E-mail: victor.pinheiro@ufpel.edu.br. Orcid ID: https://orcid.org/0000-0003-4462-6665
[3] E-mail: cristine.alberton@ufpel.edu.br. Orcid ID: https://orcid.org/0000-0002-5258-9406
[4] E-mail: stephanie.santana@ufpel.edu.br. Orcid ID: https://orcid.org/0000-0003-4555-2717
Corresponding author: Tania Angelita Iora Guesser. Rua Luís de Camões, 625 – Três Vendas. Pelotas (RS), Brasil. CEP 96055-630. E-mail: tania.guesser@ufpel.edu.br

INTRODUCTION

Breast cancer remains one of the leading causes of mortality among women, profoundly affecting their quality of life and overall well-being[1]. In 2020, over 2.3 million new cases and 665,000 deaths were reported globally, solidifying its status as the most prevalent and lethal cancer among women[1]. In Brazil, projections for 2025 estimate approximately 73,600 new cases, corresponding to an incidence rate of 43.3 cases per 100,000 women[2]. Advances in oncological treatment, particularly in targeted and minimally invasive therapies, have increased survival rates. However, these improvements introduce new challenges, as the impact of breast cancer extends beyond the biological dimension, profoundly affecting the psychological, emotional, and social aspects of patients' lives[3,4].

The experience of receiving a breast cancer diagnosis, undergoing treatment, and adapting to post-treatment life involves a complex interplay of emotions, including fear, anxiety, and distress[5,6]. Beyond the physical effects, survivors often struggle with changes in self-image, sexuality, and intimate relationships, which can be further intensified by social stigmas and taboos surrounding the disease[7]. Studies indicate that nearly half of women diagnosed with breast cancer experience significant psychological distress, with high rates of anxiety and depression persisting even after remission[7-9].

Given these multidimensional challenges, comprehensive and integrative approaches that transcend the traditional biomedical model are essential for improving the well-being of breast cancer survivors[10]. While conventional medical care primarily focuses on disease management and survival outcomes, there is growing recognition that psychosocial interventions are crucial in enhancing quality of life[11,12].

Among these interventions, health education groups have proven to be particularly effective in providing emotional support and fostering resilience[13,14]. These groups create a safe and welcoming environment where women can share experiences, voice concerns, and develop coping strategies to navigate the emotional and social repercussions of the disease[15,16]. Research suggests that participation in structured support programs contributes to a stronger sense of belonging, improved emotional regulation, and enhanced social reintegration, mitigating the psychological burden associated with cancer survivorship[17,18].

Another fundamental aspect of the post-treatment phase is the impact of breast cancer on sexuality and intimate relationships. Beyond the visible physical changes, such as surgical scars or altered body symmetry, many women experience reduced libido, discomfort, or insecurity, which may lead to relationship difficulties and diminished self-esteem[19,20]. Despite its relevance, sexuality remains an overlooked dimension in oncological care, often neglected due to persistent taboos and the discomfort of discussing these issues in clinical settings[19]. The incorporation of open discussions about sexuality and emotional health in support groups is, therefore, fundamental for reducing stigma and promoting a more comprehensive approach to recovery[21,22].

To address these complex demands, the biopsychosocial model offers an essential framework for understanding the interactions between biological, psychological, and social factors in health and disease. Developed by George Engel[23] in the 1970s, this model marked a paradigmatic shift in medical sciences by challenging the reductionist biomedical perspective[24]. Instead of viewing disease as an isolated biological event, the biopsychosocial model recognizes that health outcomes are shaped by multiple interdependent dimensions, requiring multidisciplinary approaches that consider the physical, emotional, and social needs of patients[25,26].

The concept of holistic care varies depending on the theoretical framework adopted. In Public Health, it is often associated with broader healthcare approaches, incorporating social determinants and interdisciplinary practices[27,28]. In biomedical and psychosocial contexts, it generally refers to strategies that consider the individual as a whole, addressing physical, emotional, and social dimensions[29]. In this study, the Engel's biopsychosocial model was adopted as a foundation for holistic care, recognizing the interdependence of biological, psychological, and social factors in the illness experience[23]. From this perspective, health education plays a key role in fostering patient empowerment and psychosocial adaptation to the new reality imposed by the disease.

In the oncological context, applying the biopsychosocial model allows a more integrative and humanized approach to patient care[30,31]. By recognizing that cancer survivorship extends beyond medical treatment, this model highlights the importance of psychosocial support mechanisms, such as peer groups, mental health counseling, and integrative health strategies, which contribute to long-term well-being[24,27,28].

From this perspective, the present study aims to highlight the importance of the biopsychosocial model in the context of health education groups, emphasizing the essential role these groups play in promoting the emotional and sexual well-being of women who have survived breast cancer. By exploring the psychological and social demands faced by these patients, the study also offers practical insights for healthcare professionals aiming to adopt a more integrative and humanized approach in their care for these women.

METHOD

The WaterMama study[32] is a randomized controlled trial (RCT) with a parallel design involving three intervention groups: water-based exercise (WG), land-based exercise (LG), and active control (CG). Over a 12-week period, breast cancer survivors participated in weekly health education sessions. In the intervention groups (WG and LG), participants engaged in tailored aerobic exercise sessions designed to meet their individual health conditions.

Compared to other RCTs, a key feature of the WaterMama study is that all three intervention groups participated in a health education program designed to promote participants' physical, emotional, and social well-being, aiming to provide holistic care. The educational approach of the program sought to provide practical information and foster a supportive environment that encouraged emotional interaction among participants. Initially designed exclusively for the control group (CG), the health education program was later extended to the other two intervention groups (WG and LG). This adjustment refined the study design, ensuring all participants had access to structured health education. By opting for usual care groups rather than passive control groups, the study ensured that no participant was excluded from the potential benefits of group interaction and health education.

This choice reflects a commitment to integrative care, which combines different approaches, often focusing on psychosocial interventions, recognizing that even without physical exercise, participating in a supportive environment can significantly contribute to overall well-being and quality of life. Participants in both intervention groups — water and land-based exercise programs (WG and LG) — followed a detailed, periodized protocol described in the WaterMama study's protocol article[32]. This protocol incorporates interval training strategies and ensures a controlled progression of exercise load, with intensity tailored to individual needs using the Borg Rating of Perceived Exertion Scale (6-20)[33]. The water-based training sessions were conducted in a heated pool to minimize joint impact and promote analgesia provided by immersion, a critical consideration for individuals with physical limitations from cancer treatments. In addition to reducing joint strain, the buoyancy of the water helps facilitate movement and provides a sense of well-being, making exercise more accessible and enjoyable for participants. The land-based training consisted of outdoor activities, such as walking and light jogging, designed to enhance endurance and aerobic capacity.

As a licensed psychologist, one of the authors facilitated two sessions: one on anxiety and depression (week 9) and another on sexuality (week 11). These sessions required specialized mediation to ensure participants could share challenges safely while receiving professional guidance. Discussions highlighted mental and sexual health challenges due to breast cancer and its treatments and explored strategies to promote self-compassion, resilience, and social support. The author's expertise was critical in fostering an environment where participants felt comfortable engaging in meaningful dialogue.

The WaterMama study was conducted in four waves, involving 49 breast cancer survivors distributed among the three intervention groups. The author facilitated 24 health education sessions throughout the study, ensuring participants received practical health information and addressed psychological and social aspects of their recovery journey.

The WaterMama study sample consists of 49 women diagnosed with stage I to III breast cancer who completed primary treatment — including surgery, chemotherapy, and/or radiotherapy — within the 24 months preceding the intervention's start. All participants were 18 years or older and were randomly assigned to one of three groups (WG, LG, or CG), with stratified randomization based on hormonal treatment type to ensure balanced group distribution. Participants needed to express willingness to engage in the intervention groups and demonstrate the absence of conditions limiting exercise participation, such as severe cardiovascular diseases (excluding controlled hypertension), uncontrolled chronic illnesses, or significant physical or psychiatric impairments. Women who engaged in regular physical activity for more than 75 minutes per week in the last three months were excluded. For illiterate participants, limitations in self-reported mental health assessments were acknowledged due to literacy requirements. Recruitment was conducted with support from the Oncology Service at "*Hospital Escola/UFPel*" and the Radiotherapy and Oncology Center (CERON) of *"Santa Casa de Misericórdia de Pelotas"*. Service users' telephone numbers were compiled from corresponding medical records departments. Social media campaigns enhanced recruitment efforts and achieved a diverse sample.

This descriptive study with a qualitative approach reflects on the importance of health education intervention groups, particularly on topics such as anxiety, depression, and sexuality among breast cancer survivors. The study explores how the biopsychosocial model can promote well-being, self-care, and resilience by examining participants' perceptions and experiences. The analysis focuses on the impact of psychoeducational approaches and group support on emotional and sexual health. Data were analyzed through participant observation and session records, which were documented in field diaries, capturing interactions related to anxiety, depression, and women's sexuality.

The methodology aims to understand how integrating the biopsychosocial model into interventions enhances perceptions of social support, quality of life, and reintegration into social and family contexts, essential for holistic recovery. It also discusses how psychological support environments and the exchange of experiences foster societal reintegration. This study contributes to understanding how health education groups and psychoeducational practices are crucial in breast cancer care, offering a perspective beyond physical treatment aspects.

The data analysis followed a qualitative approach, grounded on the primary reflections of one of the authors, derived from participants' interactions and narratives during health education sessions. Observations are drawn from direct interactions and discussions on topics such as anxiety, depression, and sexuality. The analysis uses an interpretative framework based on the biopsychosocial model, integrating biological, psychological, and social dimensions of health. Observations focus on mutual support and psychoeducational practices' influence on emotional and sexual well-being, aiming to identify patterns of behavior, emotional responses, and perception changes throughout the sessions.

The health education sessions aimed to provide relevant information and facilitate discussions on essential health topics for breast cancer survivors. Weekly sessions, lasting approximately 45 minutes, covered 12 themes, including: body image; symptoms in the arm and breast, and vasomotor symptoms; quality of life; dietary habits; cancer-related fatigue; complementary integrative practices; cognitive function; sleep quality; depressive and anxiety symptoms; pain and arthralgia; sexuality; and physical activity.

Each session followed a structured format, guided by an educational booklet developed by doctoral students from the Postgraduate Program in Physical Education at ESEF/UFPel in partnership with the author. While one of the authors facilitated sessions 9 and 11, another author conducted the remaining sessions. The booklet not only summarized the session topics but also served as an informative guide and a reference tool for the participants.

The sessions followed an interactive methodology, utilizing group dynamics and moments for individual reflection. Each session incorporated an educational booklet to enhance comprehension and support the integration of presented information. The psychoeducational approach provided a foundation for participants to develop coping strategies and self-care practices. While no formal evaluation was conducted, the methodology was designed to help participants engage actively in the process of developing these strategies.

Observations made during the sessions, documented in the field diary, showed that participants demonstrated increased engagement in discussions about their emotional well-being and coping strategies. This methodology appeared to strengthen participants' perceptions of social support, as they expressed a greater sense of connection and mutual support during group interactions.

Additionally, these observations indicated that the sessions contributed to their overall emotional well-being. The exchange of experiences and mutual support helped participants develop strategies for reintegration into social and family life, which proved essential for holistic recovery and the reconstruction of a renewed sense of identity and belonging.

In sessions on anxiety and depression, the aim was to explore the emotions commonly associated with the post-treatment experience of cancer, including feelings of anxiety, sadness, and depressive symptoms, often intensified by the physical and emotional toll of treatment. Efforts were made to foster a welcoming and safe environment where participants could share personal experiences and, through emotional awareness activities, identify and reflect on strategies for effectively managing these emotions during recovery.

The intervention emphasized psychoeducational strategies to strengthen emotional resilience and encourage healthy coping mechanisms critical for positive adaptation. The sessions dedicated to sexuality sought to demystify and address sensitive topics related to sexual health in the context of post-breast cancer recovery, an area often neglected in the treatment of survivors. The discussions covered a range of issues, including changes in sexual function, body image, post-treatment challenges, lubrication, pain during intercourse, and the role of self-touch as a means of reconnecting with one's body.

The importance of open dialogue and strategies to regain intimacy in relationships was also emphasized. Participants were encouraged to reflect on their evolving perceptions of sexuality, exploring how these changes influenced both their self-esteem and interpersonal relationships. This safe and supportive space allowed participants to share personal experiences, recognize common challenges, and exchange coping strategies. By fostering mutual support and understanding, the sessions were instrumental in helping participants reframe their narratives around sexuality, enhance self-care practices, and promote emotional well-being.

The study was approved by the Research Ethics Committee of "*Escola de Educação Física e Fisioterapia*" of "*Universidade Federal de Pelotas*" (ESEF/UFPel) (CAAE (submission for ethical review): 55791222.0.0000.5313) and registered on ClinicalTrials.gov (NCT05520515) on August 26, 2022, in compliance with Directive 466[34], December 12, 2012 of the National Health Council (CNS).

RESULTS AND DISCUSSION

The experience of health education sessions within the WaterMama study underscored the importance of group support and the application of the biopsychosocial model in the holistic recovery of breast cancer survivors. These sessions, rooted in the creation of a safe and welcoming environment, fostered the exchange of experiences that proved crucial to emotional empowerment and the redefinition of participants' identities. These themes are widely discussed in post-oncological recovery literature[35-37].

The biopsychosocial model offers an integrative approach to breast cancer care, addressing the biological, psychological, and social dimensions necessary to meet patients' specific needs. Proposed by Engel[23], highlights the significant impact of psychological and social factors on the etiology and management of diseases. It advocates for a holistic and personalized approach to care, emphasizing the interconnectedness of emotional well-being, interpersonal relationships, and cultural context in shaping health outcomes[23,38].

Several studies have already demonstrated the effectiveness of interventions based on the biopsychosocial model in oncology. For example, Blickle et al.[39] highlighted that the introduction of early psychosocial assessments in breast cancer patients significantly reduced anxiety and fatigue levels, promoting greater treatment adherence. Similarly, Faller et al.[40] showed that structured psychosocial approaches improved oncology patients' quality of life and emotional resilience, reducing depressive symptoms. Moreover, systematic reviews indicate that targeted psychological support significantly enhances not only mental well-being but also adherence to cancer treatment, reinforcing the need to integrate these strategies into survivorship care[41,42]. These findings reinforce the importance of strategies that go beyond the biological control of the disease, emphasizing the need for holistic approaches, such as health education groups, to provide emotional and social support to women undergoing cancer treatment.

In the context of the WaterMama study, applying this multidimensional perspective allowed for a balance between addressing mental health challenges and exploring sensitive topics like sexuality, reinforcing the comprehensive scope of care provided. Sessions addressing sensitive topics like anxiety and depression revealed profound feelings of fear and insecurity among participants, particularly regarding disease recurrence and physical limitations following treatment. These sessions provided a platform for sharing coping strategies and recognizing emotional resilience as an essential tool for rebuilding life after breast cancer[5].

Guided by the Stress Adjustment Model[43], which describes how cognitive adaptations help individuals face threatening situations through positive perceptions, self-efficacy, and social support, the sessions encouraged participants to view their emotions as natural responses within a challenging health context. This approach emphasized the importance of mental health as a foundational aspect of recovery, equipping participants with tools to navigate psychological distress and fostering a sense of autonomy and control over their health journey.

When integrated with the biopsychosocial model, this approach fostered the exchange of experiences and highlighted the positive impact of psychoeducation. It facilitated deeper emotional understanding and strengthened participants' coping mechanisms, reinforcing their ability to navigate the complexities of recovery.

Another fundamental yet often overlooked aspect of survivorship is the impact of breast cancer on sexuality. Beyond the visible physical changes, such as surgical scars or altered body symmetry, many women experience reduced libido, discomfort, or insecurity, leading to relationship difficulties and diminished self-esteem[44]. Studies show that sexuality is a neglected topic in oncological care, often due to persistent taboos and healthcare professionals' discomfort in addressing it[45]. This underscores the importance of creating judgment-free environments where women feel safe discussing these issues[46].

Sexuality emerged as a pivotal yet frequently neglected topic in oncological practice[21,22]. Studies indicate that breast cancer survivors often experience significant changes in sexual function and fear of intimacy, an issue that remains insufficiently addressed by healthcare systems and family support networks[47,48]. In discussions about sexuality, creating a judgment-free environment proved essential in helping participants confront emotional and cultural barriers. This approach fostered a more open exploration of sexual function and self-image, both critical components of overall well-being and quality of life.

Such discussions validated the women's experiences, deconstructed stigmas, and promoted self-compassion, enabling a positive reconnection with their sexual identities. Beyond the immediate benefits of addressing sexual health, these discussions also contributed to broader aspects of psychosocial recovery. According to Vegunta et al.[45] findings, restoring sexual health plays a critical role in reshaping personal identity and strengthening relationships after a cancer diagnosis.

By fostering an environment of mutual understanding, participants felt empowered to share their vulnerabilities and challenges, thereby enhancing their sense of social support. This process not only cultivated a more positive self-perception but also enabled women to redefine their relationships, rebuild intimacy, and reclaim agency over their sexual and emotional well-being.

Moreover, these interactions highlighted the necessity of incorporating discussions about sexuality into survivorship care plans, emphasizing its pivotal role in the holistic recovery of breast cancer survivors. The findings further underscore the importance of healthcare professionals adopting empathetic and culturally sensitive approaches to address the multifaceted impacts of cancer on survivors' lives. When paired with strategies to address mental health challenges, the sessions demonstrated how an integrative approach could promote resilience, self-esteem, and a stronger sense of agency among participants.

As a psychologist and facilitator, one of the authors was essential in creating and maintaining a welcoming, nonjudgmental environment characterized by acceptance, active listening, and empathy. This approach provided crucial emotional support while allowing participants to explore coping strategies tailored to their experiences. This dynamic aligns closely with the Self-Determination Theory[49,50], which posits that intrinsic motivation flourishes when basic psychological needs for autonomy, competence, and social connectedness are met.

In the context of the WaterMama study, sessions addressing sexuality applying the Self-Determination Theory were pivotal. The facilitator played a central role in fostering participant autonomy and strengthening social bonds, both critical for building self-esteem and developing coping strategies. Moreover, this role extended to addressing mental health concerns, ensuring that participants felt supported and equipped to manage the multifaceted challenges of survivorship.

By valuing individual experiences, the sessions not only encouraged the acceptance of personal limitations but also facilitated mutual support exchanges, enhancing self-confidence and contributing to the creation of a social support network. This theory complements the biopsychosocial model, as both frameworks recognize the interplay of biological, psychological, and social factors in health. While the biopsychosocial model integrates these dimensions, the Self-Determination Theory highlights how psychological and social support can be key to overcoming adversity and fostering well-being. Together, these approaches emphasize the importance of comprehensive care strategies that address emotional and social dimensions.

The integration of psychoeducation and emotional support throughout the sessions appears to have significantly enhanced the psychosocial recovery of WaterMama participants. While the qualitative approach does not seek to provide precise measurements, observations made during the process suggested improvements in participants' sense of self-worth and resilience. These observations highlight the potential of health education programs rooted in the biopsychosocial model to not only address the physical challenges of cancer but also foster emotional and social well-being as key elements of recovery.

As a facilitator, one of the authors emphasizes the importance of creating a safe, supportive, and nonjudgmental space, sharing experiences, and building genuine connections to establishing a strong foundation for navigating post-treatment challenges. By facilitating open discussions on mental health and sexuality, the sessions adopted a holistic and inclusive approach, ensuring participants felt supported in every critical aspect of their recovery.

Finally, this study's findings underscore the critical role of integrated interventions grounded in the biopsychosocial model for achieving comprehensive and sustainable recovery in breast cancer survivors. Healthcare professionals should be encouraged to adopt psychoeducation groups as a standard component of survivorship care. Evidence suggests that such groups offer vital emotional support and reduce the stigma associated with the disease, facilitating more effective social reintegration for patients[51,52].

Future interventions could benefit from a more structured focus on specific themes, such as sexuality and self-image, given their profound influence on quality of life. Equipping healthcare professionals with training in psychoeducational and biopsychosocial approaches may enhance their ability to address patients' multifaceted emotional and social needs throughout their recovery journey[53,54].

These insights suggest that biopsychosocial group interventions provide a holistic response to the complex challenges faced by breast cancer survivors. By fostering resilience and self-compassion, these approaches support survivors in adapting to their post-treatment reality. Future researches should focus on evaluating the long-term efficacy of such interventions and identifying best practices further to improve survivors' mental health and social well-being.

CONCLUSION

The health education sessions, grounded in the biopsychosocial model, underscored the essential role of group support and psychoeducational interventions in the recovery of women who have survived breast cancer. Although the final results of the WaterMama study are not yet available, participants consistently reported improvements during the sessions, encompassing physical aspects, such as joint mobility, and emotional, social, and overall well-being. Psychoeducational interventions equipped participants with self-care tools, bolstered emotional resilience, and cultivated a strong sense of community and belonging.

By addressing sensitive topics such as anxiety, depression, and sexuality, the sessions provided a safe and judgment-free environment for sharing experiences and challenging stigmas surrounding sexual function and body image. This integrative approach intertwined the physical, emotional, and social dimensions of health, core principles of the biopsychosocial model, offering a comprehensive perspective on post-breast cancer recovery. The psychologist's role as a facilitator of group interventions was significant, emphasizing the importance of empathetic, ethical, and culturally sensitive care.

The relevance of these findings is notable in Brazil, where breast cancer is a leading cause of morbidity and mortality among women. In a country marked by social and regional disparities, interventions like WaterMama hold potential to promote recovery that respects patients' cultural and emotional needs. Such a model could integrate into clinical practice, positioning psychological support and health education as foundational components of care tailored to women's diverse life contexts.

Lastly, this study opens opportunities for further research on health education programs for cancer survivors. By integrating psychoeducation and social support to enhance emotional and sexual well-being, these interventions can strengthen clinical practices and influence public health policies in Brazil. Continued research is essential to consolidating these practices, paving the way for a more holistic and human-centered rehabilitation framework for women affected by breast cancer.

CONTRIBUTIONS

All the authors contributed substantially to the study design, acquisition, analysis and interpretation of the data, wording and critical review. They approved the final version to be published.

DECLARATION OF CONFLICT OF INTERESTS

There is no conflict of interests to declare.

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Associate-editor: Mario Jorge Sobreira da Silva. Orcid iD: https://orcid.org/0000-0002-0477-8595
Scientific-editor: Anke Bergmann. Orcid iD: https://orcid.org/0000-0002-1972-8777