Social network support practices for women with breast cancer undergoing chemotherapy

Práticas de apoio da rede social à mulher com câncer de mama em tratamento quimioterápico

ABSTRACT

Objective: To describe which health education actions on social network support practices provided by the social network to women with breast cancer undergoing chemotherapy treatment, based on the characteristics of this support.

Method: Integrative literature review conducted across six databases, using cross-referencing of DECS and MESH descriptors for open-access studies. The Rayyan application was employed in the analysis process, with a synthesis framework grounded in Sanicola’s Social Network theoretical reference.

Results: The search process identified 727 publications, which, after analysis stages, resulted in nine studies for review synthesis. It was evident that the social network support practices manifest in informational, in-person, instrumental, emotional, and self-support contexts, directly impacting how women respond to treatment and overcome difficulties experienced during chemotherapy.

Conclusion: Strengthening social network support practices allows for closer bonds and the potential for a more positive experience during chemotherapy treatment. The exchange of support measures should be mediated by healthcare professionals to make care comprehensive and applied beyond procedural aspects.

Descriptors: Social Network; Social Support; Breast Neoplasms; Women's Health; Drug Therapy.

RESUMO

Objetivo: identificar as práticas de apoio fornecidas pela rede social às mulheres com câncer de mama em tratamento quimioterápico, com base nas características desse apoio. Método: revisão integrativa da literatura realizada em seis bases de dados, por meio de cruzamentos de descritores disponíveis no DECS e MESH para rastreamento de estudos de livre acesso. No procedimento de análise, utilizou-se o aplicativo Rayyan e um corpo de síntese alineado pelo referencial teórico da Rede Social de Sanicola. Resultados: o processo de busca identificou 727 publicações, que, após as etapas de análise, culminaram em nove estudos para síntese da revisão. Evidenciou-se que as práticas de apoio da rede social se apresentam nas conjunturas informativa, presencial, instrumental, emocional e de autoapoio, e que estas impactam diretamente na forma como a mulher responde ao tratamento e supera as dificuldades vivenciadas ao longo da quimioterapia.

Conclusão: o fortalecimento das práticas de apoio da rede social permite o estreitamento dos laços e a possibilidade de uma vivência mais positiva do tratamento quimioterápico. As medidas de apoio a serem intercambiadas devem ser mediadas por profissionais de saúde como forma de tornar o cuidado transversal e aplicado além do procedimental.

Descritores: Rede Social; Apoio Social; Neoplasias da Mama; Saúde da Mulher; Tratamento Farmacológico.
INTRODUCTION

Breast cancer is the most commonly diagnosed type of neoplasia worldwide, causing a spectrum of disability due to treatments and the unfavorable prognosis associated with late detection of the disease.¹ It presents high mortality rates in countries in Oceania, Northern Europe and Western Europe.²⁻³ In Brazil, it is estimated that, each year of the 2023-2025 period, there will be 73,610 new cases, corresponding to an estimated risk of 66.54 new cases per 100 thousand women.¹

In Central and Latin American countries, the increase in the number of new cases is linked to the dissemination of policies and actions aimed at screening and early detection.²⁻³ However, health promotion and breast cancer prevention actions in Brazil still face challenges regarding the dissemination of prevention policies and the knowledge of the female population about risk factors and body changes indicative of the disease.⁴ This gap exposes women to greater vulnerability in identifying the disease and early entry into lines of care, making the cancer experience more challenging due to the treatments used.⁴⁻⁵

Chemotherapy (CT), one of the main therapeutic approaches, contrasts with oncological surgery and radiotherapy, acting systemically through the use of antineoplastic agents alone or in combination to treat malignant tumors. This intervention causes undesirable toxic effects that are extremely feared by those who need this treatment.⁶ Among the most common adverse effects, physical and psychological ones stand out, as well as interference with quality of life and social relationships.⁷

A person's social relationships are shaped by the structure of their social network (primary and secondary). This network is defined as the set of interpersonal relationships from which a person builds their social identity, receiving emotional support, material help, services and information, allowing the development of other social relationships.⁸ Support from the social network reveals itself as a protective factor for women during chemotherapy, influencing overcoming difficult moments, supporting health care, coping with vulnerable situations and encouraging them to deal with the different phases of the disease, making coping with stressors more positive.⁷,⁸

The support offered by the social network can be manifested through emotional support (empathy, affection, concern and appreciation of the woman at the moment she is going through), instrumental support (direct practical help), informative support (advice, information and guidance on treatment and life changes), face-to-face support (company, availability to spend time and participate in group social activities) and self-support (motivation and positive thinking about the treatment and the disease).⁸
The identification of support practices offered by the social network, aimed at supporting women with breast cancer undergoing chemotherapy treatment, provides a broader understanding of the adjustments necessary to face adversities, guidance in the care process by health professionals and opportunities to educate on health, strengthening autonomy, self-care and improving quality of life when living with the disease.

**OBJECTIVE**

To identify the support practices provided by the social network to women with breast cancer undergoing chemotherapy treatment, based on the characteristics of this support.

**METHOD**

This study constitutes an integrative literature review, a research method used in Evidence-Based Practice (EBP), allowing the integration of evidence into clinical practice. For methodological purposes, items from the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) protocol were adopted, incorporating aspects relevant to this type of study. The methodological steps carried out were as follows: 1) Preparation of the guiding question; 2) Literature search and sampling; 3) Data collection; 4) Critical analysis of included studies; 5) Discussion of results; 6) Presentation of the integrative review.

The research question was designed based on the PICO strategy (P – women with breast cancer; I – chemotherapy treatment; C – social network support; O – Social network support practices): “What support practices are provided by the social network for women with breast cancer undergoing chemotherapy treatment, based on the characteristics of this support?”. For this research, the virtual environments of the following databases were considered as search locations: Scopus, Web of Science, MEDLINE, LILACS, CINAHL and BDENF.

In the subsequent stage, eligibility criteria were established for the search for studies, including complete articles available in the databases, in Portuguese, English and Spanish, related to the research theme. Integrative review articles, narratives, gray literature, editorials, bulletins and newsletters on the topic were excluded. A specific time period was not established to allow a comprehensive approach to support practices and the extraction of operational and constitutive definitions of the topic.

The search in the aforementioned databases involved crossing Health Sciences Descriptors (DECS) and Medical Subject Headings (MESH), according to the search...
configuration of each database. The intersections used were: 1) Social network AND Social support AND breast neoplasms AND Antineoplastic Combined Chemotherapy Protocols OR Pharmacological treatment, 2) Social support AND Breast neoplasms AND Drug Therapy, 3) Red Social AND Social Support AND Breast Neoplasms AND Combined Chemotherapy Protocols OR Chemotherapy.

To select eligible articles and carry out a critical reading of the studies, the Rayyan Qatar Computing Research Institute (Rayyan QCRI) review program was used.\textsuperscript{10-11}

The search in the databases took place between April and May 2021, resulting in 727 publications (MEDLINE: 544, BDENF: 03, LILACS: 07, Web of Science: 04, SCOPUS: 105 and CINAHL: 64). Of these, 139 were eliminated due to duplication in the databases and prior elimination by the review tool. The remaining 588 articles underwent an initial screening based on title and abstract, resulting in the exclusion of 556 studies. The full texts were read on 32 articles, of which 23 were excluded because they did not suit the objectives and guiding question of the review, resulting in the synthesis of nine articles (Figure 1).

**Figure 1** – Diagram of the selection of review articles. Recife, PE, Brazil, 2021.

After selecting and identifying the sample articles, the title, abstract and full text reading steps were carried out. In each of these stages, articles that were not aligned with
the study theme and the review's guiding question were excluded. The final sample (n=9) underwent a critical analysis, from which the elements that supported the synthesis of the review were extracted. To extract data from the selected studies, the instrument The Joanna Briggs Institute Critical Appraisal tools for use in JBI Systematic Reviews was used.13

During the critical analysis, the articles were classified according to the hierarchy of evidence for intervention studies: Level I – systematic review or meta-analysis, Level II – controlled and randomized studies, Level III – controlled studies without randomization, Level IV – case-control or cohort studies, Level V – systematic review of qualitative or descriptive studies, Level VI – qualitative or descriptive studies, Level VII – opinions or consensus.14

The synthesis process of the selected articles and the discussion of the results were based on the Theory of Social Networks.8

RESULTS

The articles selected for the review were published in English (N=8)15-21 and in Portuguese (N=1),22 all available in the MEDLINE database and covering the publication period from 1996 to 2018.

The main sources of support for women facing chemotherapy for breast cancer are concentrated in the primary network, especially husbands, children, friends, co-workers and neighbors.16,18 However, it was observed that support from the secondary social network, especially face-to-face and informative support was compromised in some studies.17,22

By synthesizing the characteristics of each type of social network support aimed at women with breast cancer during chemotherapy, it is possible to highlight the support practices as proposed by the Social Network Theory.8 These aspects can be further detailed in Chart 1 to provide a more comprehensive view of identified support practices.
<table>
<thead>
<tr>
<th>AUTHOR/YEAR/DATABASE</th>
<th>GOAL</th>
<th>STUDY DESIGN AND LEVEL OF EVIDENCE</th>
<th>CHARACTERISTICS OF SOCIAL NETWORK SUPPORT</th>
</tr>
</thead>
</table>
| Landeiro, Gagliato, Fêde, Fraile, Lopez, Fonseca, Petry, Testa, Hoff and Mano, 2018. MEDLINE | To define return to work (RT) rates after breast cancer diagnosis and identify factors associated with RT in this population. | Prospective cohort study. Level of evidence: III | • Welcoming women during their work routine, offering flexible hours and providing time for exams and therapies.  
• Guide co-workers on the specificities of chemotherapy treatment and the bodily changes resulting from this process, in order to minimize prejudice.  
• Include family members in the process of readjusting women to work. |
| Suwankhong and Liamputpong, 2018. MEDLINE | To describe chemotherapy treatment experiences among Thai women with breast cancer. | Qualitative study. Level of evidence: VI | • Inform the woman about how to manage adverse reactions to treatment.  
• Offer financial support to women who, due to treatment and health status, have withdrawn from work activities.  
• Help women improve their self-esteem in the face of body changes resulting from chemotherapy. |
<table>
<thead>
<tr>
<th>Authors</th>
<th>Study Objectives</th>
<th>Study Design</th>
<th>Level of Evidence</th>
<th>Interventions</th>
<th>Additional Observations</th>
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<tbody>
<tr>
<td>Mourão, Fernandes, Moreira and Martins, 2017.</td>
<td>To evaluate the effects of motivational interviewing on changing the social support behavior of caregivers of breast cancer patients undergoing chemotherapy.</td>
<td>Quasi-experimental study with a single group. Level of evidence: III</td>
<td>- Mobilize support from the woman's primary network through motivational interviews. &lt;br&gt; - Guide the woman and her primary network about the specificities of treatment and support needs during this period. &lt;br&gt; - Offer guidance on taking care of your own health, financial support, practical day-to-day activities, care in situations of need, for conversations or venting about the disease, information to improve your knowledge and understanding about breast cancer, social reintegration, improvement mood and encouragement to carry out physical or leisure activities.</td>
<td>Mobilize support from the woman's primary network through motivational interviews. Guide the woman and her primary network about the specificities of treatment and support needs during this period. Offer guidance on taking care of your own health, financial support, practical day-to-day activities, care in situations of need, for conversations or venting about the disease, information to improve your knowledge and understanding about breast cancer, social reintegration, improvement mood and encouragement to carry out physical or leisure activities.</td>
<td></td>
</tr>
<tr>
<td>Komatsu, Yagasaki and Yamauchi, 2016.</td>
<td>To explore the experiences of breast cancer patients who received chemotherapy to understand how they perceived the impact of treatment on their daily lives.</td>
<td>Qualitative study grounded by data-based theory. Level of evidence: VI</td>
<td>- Support women, through their primary network, in managing emotions, increasing confidence and comfort in balancing life with the disease. &lt;br&gt; - Enable the creation of a personal safety net to cope with treatment, involving physical, emotional and social aspects, aiming to reduce suffering.</td>
<td>Support women, through their primary network, in managing emotions, increasing confidence and comfort in balancing life with the disease. Enable the creation of a personal safety net to cope with treatment, involving physical, emotional and social aspects, aiming to reduce suffering.</td>
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<tr>
<td>Shelton, Hillyer, Hershman, Leoce, Bovbjerg,</td>
<td>To elucidate factors that may potentially differ between groups of women with breast cancer and contribute</td>
<td>Cohort study Level of evidence: III</td>
<td>- Support women in making decisions about treatment and care. &lt;br&gt; - Participate in medical consultations to better understand the clinical situation and offer support in decision-making.</td>
<td>Support women in making decisions about treatment and care. Participate in medical consultations to better understand the clinical situation and offer support in decision-making.</td>
<td></td>
</tr>
<tr>
<td>Authors</td>
<td>Study Design</td>
<td>Level of Evidence</td>
<td>Recommendations</td>
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| Mandelblatt, Kushi, Lamerat, Nathanson, Ambrosone, and Neugut, 2013. MEDLINE | To examine the role of family support in the development of anticipatory nausea severity, both direct and mediated by patient anxiety. | Prospective cohort study. Level of evidence: III | • Support women in coping with adverse reactions to treatment.  
• Being present when signs and symptoms of reactions occur to reduce fear and anxiety.  
• Promote a supportive family environment to contribute to well-being in the face of adverse reactions. |
| Kim, Morrow, 2007. MEDLINE | Present a case study of a woman with breast cancer and her partner to provide a first-hand account of an innovative telephone-based intervention. | Qualitative study based on a case study. Level of evidence: VI | • Help women strengthen their self-esteem and assimilate body changes.  
• Strengthen family relationships to offer greater mobilization of support in coping with chemotherapy.  
• Advise women through health education measures on managing the adverse effects of chemotherapy, stressors and psychological factors.  
• Help the woman with domestic activities, such as cooking, and delegate such activities to family members. |
<table>
<thead>
<tr>
<th>Study Details</th>
<th>Study Objectives</th>
<th>Study Methods</th>
<th>Findings</th>
</tr>
</thead>
</table>
| Lee, Chung, Park and Chun, 2004. MEDLINE | To identify how mood disturbance and social support were related to symptoms experienced by Korean women with breast cancer | Cross-sectional, quantitative. Level of evidence: VI | - Encourage women to be more compassionate towards themselves and to motivate themselves for treatment.  
- Advise women about strengthening relationships with their children.  
- Encourage your husband/partner to show affection.  
- Increase women's interaction with members of their primary network (friends, neighbors and family). |
| Lekander, Fürst, Rotstein, Blomgren and Fredrikson, 1996. MEDLINE | To evaluate the association of social support and immunological status in women treated with adjuvant chemotherapy for breast cancer | Prospective Cohort Study Level of evidence: III | - Offer support and guidance to women about adverse reactions, especially those related to mood changes.  
- Encourage support from primary network members (spouse, parents, siblings, children or other family member) to increase self-confidence and overcome adverse reactions.  
- Encourage social interaction with network members to exchange greater support and promote immune improvement. |
The characteristics of the support exchanged within the social network can be classified based on the types of support provided. Regarding women undergoing chemotherapy for breast cancer, support measures are highlighted according to each conceptual basis of support (Chart 2).

**Chart 2**– Practices of support from the social network of women with breast cancer undergoing chemotherapy. Recife, PE, Brazil, 2021.

<table>
<thead>
<tr>
<th>AUTHOR/YEAR</th>
<th>TYPES OF SUPPORT</th>
<th>SOCIAL MEDIA SUPPORT PRACTICES</th>
</tr>
</thead>
</table>
| Suwanhong; Liamputong (2018); Mourão, et. al (2017); Shelton et. al (2013); Kim; Morrow (2007); Badger, et. al, (2004); Lee, et. al (2004); Lekander, et. al (1996). | **INFORMATIVE** | • Provide information about chemotherapy (drug administration process) and overcoming adverse reactions;  
• Promote advice on self-care measures to manage adverse reactions;  
• Discuss the woman’s relationship with members of the primary network;  
• Establish health education strategies to guide women before and after chemotherapy;  
• Include members of the primary social network (husband, children, mother and grandparents) in health information and education actions to enhance emotional and instrumental support. |
| Suwanhong; Liamputong (2018); Mourão, et. al (2017); Komatsu, et. al, (2016); Kim; Morrow (2007); Badger, et. al, (2004); Lekander, et. al (1996). | **EMOTIONAL** | • Provide comfort and affection in the process of adapting to body changes;  
• Provide opportunities for women to talk and vent about the treatment/illness with their family members;  
• Encourage women to return to work activities, according to their physical capacity and availability;  
• Demonstrate affection and value for women during the breast cancer treatment process;  
• Encourage women to undergo chemotherapy sessions. |
| Landeiro, et. al (2018); Mourão, et. al (2017); Shelton et. al (2013); Badger, et. al, (2004). | **INSTRUMENTAL** | • Welcome and help women during the development of their work activities;  
• Support women financially in cases of interruption of their working life;  
• Offer help in carrying out domestic and home maintenance activities;  
• Help women travel to places for health consultations and treatments. |
| Suwanhong; Liamputong (2018); Shelton et. al (2013); Badger, et. al, (2004); Lekander, et. al (1996). | **IN PERSON** | • Accompany the woman during chemotherapy sessions;  
• Make time available to take care of your wife and keep her company;  
• Have contact with health professionals for information on the treatment and management of adverse reactions;  
• Offer listening to reduce doubts, anxieties and concerns about health status and treatment;  
• Encourage participation in group activities, when possible;  
• Promote social contact and leisure and fun activities. |
| Suwanhong; Liamputong (2018); Komatsu, et. al, (2016); Badger, et. al, (2004). | **SELF-SUPPORT** | • Provide moments of counseling for encouragement and a feeling of positivity towards oneself;  
• Maintain interaction with women in order to identify situations that improve their mood and motivation;  
• Encourage women to think about their treatment and health situation in a positive way;  
• Motivate women to take care of their body and appearance;  
• Encourage religious practices. |
DISCUSSION

Experiencing chemotherapy necessitates leveraging various stimuli to bolster a woman's coping abilities throughout its stages. The diagnosis of the tumor and the initiation of treatment, laden with stereotypes, diminish an individual's capacity to overcome and jeopardize well-being and quality of life.⁷

Support from the social network, facilitated through support practices, emerge as a potential protective alternative in breast cancer therapy. Identifying the specifics of each support type during chemotherapy can fortify network mobilization, reinforce connections, and yield health benefits for women. The primary support network was pivotal for the woman to acknowledge her vulnerability and seek help in managing her health.

A woman's expectations, optimism, and emotional coping styles may correlate with her perception of the family environment and the level of anxiety she experiences regarding chemotherapy. The family environment influences adaptation to health situations, specifically adverse reactions associated with chemotherapy.⁸,²³

Support from those closest to us—husbands, children, mothers, and friends—diminished during drug infusion cycles and adverse reactions.¹⁹ This evidence showcases deficiencies in emotional support (negative responses involving how the woman feels) and face-to-face support (opportunities for conversation and social integration), which in turn affect self-support (a sense of devaluation by the woman).²²

This lack of support results in high rates of social isolation, anxiety, depression, anguish, difficulties in feeling confident, and maintaining daily life, thereby hindering the woman's positive perception of her health situation.²⁴

Counseling practices facilitate reflection for women and their families on the need for support during chemotherapy sessions, fostering increased interaction in daily life, enhanced financial support, health care, recognizing moments requiring care, and engaging in leisure activities, thereby improving mood and self-esteem. When coupled with health education, these sessions enable women to better comprehend changes related to treatment and self-care practices.¹⁶,¹⁹

Brief motivational interviewing (BMI) as counseling offers an avenue to reinforce support for women undergoing chemotherapy. The mobilization and guidance of social support from significant individuals in combatting cancer are crucial. Providing counseling, either in person or over the phone, along with health education on treatment, could improve adverse effects and the quality of life for women and their partners experiencing chemotherapy.¹⁹,²²
BMI's primary goal is to alter behaviors, especially for those who are ambivalent or resistant to change or guidelines. This informational support measure enhances the emotional and instrumental support offered by the primary network, facilitating caregiving during treatment, enhancing acceptance, coping with drug infusion sessions, and promoting emotional well-being.

For families, counseling allows reflection on establishing suitable relationships with the woman, offering support regarding self-care, displaying affection, and strengthening relationships with children.

These moments of health counseling and education help women re-establish connections and fortify relationships within their social networks. Couple counseling, as a supportive practice, demonstrates substantial progress in managing anxiety and improving relationships with others and their children. Family members' support practices play a fundamental role in understanding the diagnosis and treatment of breast cancer.

The experiences of undergoing chemotherapy and the received emotional support to maintain a woman's normal life were recurring themes, especially concerning work and family roles and support in managing and overcoming adverse reactions. Returning to work during and after breast cancer treatments symbolizes resilience against cancer-induced incapacity and holds considerable social value for women.

Employers' understanding of the health status, treatment phase, and a woman's chemotherapy experience highlighted the emotional support provided. Work serves as an opportunity to build friendships, fostering closeness and affection even when physically distant, sharing joys and sorrows, maintaining trust and loyalty, offering appropriate advice, and more.

A work routine promotes improved quality of life, alleviating pain symptoms and recovering from adverse reactions within six months of returning to normal activities. Conversely, prejudice, disability stigma, and reduced productivity are observed, hampering adaptation to the routine and the new health conditions.

Prejudice stems from bodily changes resulting from cancer treatment. Mastectomy alters normal body shapes, and chemotherapy-induced adverse effects, particularly alopecia and skin changes, lead to a new perception of women's appearance. These assumptions hinder social interactions and reduce motivation to resume normal life due to embarrassment stemming from these changes. Hair loss impedes treatment continuation and a woman's return to her normal social life, as the collective perception of bodily changes frames women primarily as a disease rather than individuals with emotions, needs, and social contributions.
Secondary social network members (especially nurses and doctors) support women in addressing their needs during chemotherapy. However, the informational support provided by these individuals proved insufficient in managing the experienced reactions, evident in the scarcity of information on post-chemotherapy self-care. Additionally, there was minimal interactivity and less involvement of health professionals in decision-making regarding women's treatment (face-to-face support).17

The absence of informational support results in the inability to overcome adverse reactions and immune maintenance (indicated by low lymphocyte and monocyte counts). Depending on the level of support received, mood disturbances can significantly impact the symptoms experienced by women undergoing breast cancer chemotherapy.20-21

During treatment, family members, especially spouses and children, provide support to overcome reactions. Family relationship characteristics and the family system influence a woman's psychological and physical adjustments, either reducing or exacerbating these reactions. The lack of support from the primary network is associated with higher anxiety levels, anticipatory and post-chemotherapy nausea. Conversely, a supportive family environment is linked to lower anticipatory nausea severity, mediated by reduced anxiety levels and post-treatment nausea severity.28

A study involving Israeli women after a year of chemotherapy revealed that support, affection, and assistance from husbands, children, and friends in performing self-care, household tasks, and health-related activities (such as attending appointments and managing chemotherapy) were vital in motivation and minimizing adverse reactions.26

The limitation of this study lies in the superficial analysis of publications, hindering in-depth discussions on theoretical references related to social network support. This limitation impedes the comprehension of offered support across various dimensions as a caregiving mechanism. Mobilizing support from the social network is an action that intersects with caregiving practices, and the lack of knowledge obstructs progress concerning the physical, emotional, affective, informational, and immune aspects for women with breast cancer undergoing chemotherapy.

CONCLUSION

Support practices offered by the social network are characterized by actions aimed at enhancing knowledge about chemotherapy and self-care measures (informational support), promoting adherence and presence during treatment-related moments (face-to-face support), providing affection, care, and a secure environment (emotional support), supporting women in employment relationships and during financial difficulties.
(instrumental support), and fostering a trustworthy environment, enhancing self-image, and attitude (self-support).

Integrating measures to reinforce such actions, through counseling from members of women's primary and secondary networks, will strengthen emotional connections and contribute to a more positive chemotherapy experience. Healthcare professionals need to reflect on their practices and consider factors beyond technique and biological aspects to improve the efficacy of care provided.

Therefore, including support from the social network as part of healthcare for women with breast cancer promotes actions beyond procedural interventions and leverages resources for more comprehensive outcomes.

Incorporating measures to evaluate support exchanged through the social network becomes imperative in clinical care practices for administering chemotherapy drugs. This assessment will guide counseling to address individual gaps and fortify bonds, fostering treatment adherence, reducing complications, improving quality of life, and enhancing survival in the battle against breast cancer.

CONTRIBUTIONS

All the authors contributed equally to designing the research project, searching for, analyzing, interpreting, and discussing the data, as well as writing and critically reviewing the content with their intellectual contribution and approving the final version of the scientific paper.

CONFLICTS OF INTERESTS

The authors declare no conflict of interest.

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