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Analysis of Family Centered Care Needs in Treatment of Breast Cancer Patients Post Mastectomy

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ABSTRACT

Background: Breast cancer is the most common type of cancer among women in Indonesia. The impact of treatment and mastectomy is felt not only by the patients but also by their families as caregivers. **Objectives:** This study aims to identify the needs for Family Centered Care (FCC) among post-mastectomy patients after returning home. **Methods:** It was a mixed-method design with a sequential explanatory strategy that was used, involving members of a cancer support community. The quantitative phase involved 62 respondents who completed the FCC questionnaire. **Results:** The results showed that the highest needs were in the social and affection dimensions (mean = 18.65, SD = 1.839). To gain a deeper understanding of the reasons behind these findings and the contextual experiences of patients, a qualitative phase was conducted using narrative analysis with 11 participants. The qualitative phase yielded five main themes: (1) emotional experiences after mastectomy, (2) unmet basic needs, (3) the most helpful forms of family support, (4) challenges encountered during home-based care, and (5) expectations for improving health services. **Conclusion:** These findings highlight the importance of social and emotional support in the recovery process, alongside other essential needs. The study concludes that social and affection needs are the highest priority for breast cancer patients after mastectomy during home care; therefore, the implementation of comprehensive Family Centered Care oriented toward collaboration among nurses, patients, and families is essential to support optimal recovery.

Keywords*: *Breast Cancer; Caregiver; Family Centered Care; Mastectomy

INTRODUCTION

Breast cancer is one of the major global health problems and is the most frequently diagnosed cancer among women. This disease occurs as a result of abnormal cell growth in breast tissue, which can spread to other parts of the body if not detected and treated early. The burden of breast cancer continues to increase in line with population growth, lifestyle changes, and limited access to early detection and treatment services in many countries.

According to data from the Global Cancer Observatory (GLOBOCAN), breast cancer accounts for the largest proportion of all cancer cases among women worldwide. In 2020, more than 2.2 million new cases of breast cancer were reported globally, making it the cancer with the highest incidence compared to other types of cancer (International Agency for Research on Cancer, 2022a). In addition to its high incidence rate, breast cancer is also one of the leading causes of cancer-related mortality among women, particularly in low- and middle-income countries.

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Data from Indonesia indicate that breast cancer is also a significant national health problem, especially among women. Based on Globocan (2022), approximately 66,271 new cases of breast cancer were reported in Indonesia, making it the most common cancer among women in the country, with more than 22,500 deaths recorded in the same year. Furthermore, the prevalence of breast cancer in Indonesia is estimated at around 42 per 100,000 people, which is higher than that of other cancer types (International Agency for Research on Cancer, 2022b). The number of cases is projected to continue increasing over the coming decades, necessitating improved early detection efforts and more effective management within the national healthcare system.

In response to the high incidence of breast cancer, mastectomy remains one of the primary treatment options, particularly in advanced-stage cases or when conservative therapy is not feasible. Mastectomy is a surgical procedure involving the removal of part or all of the breast tissue, aimed at controlling cancer cell growth, preventing further spread, and improving patient survival. Although medically beneficial, mastectomy often has a substantial impact on patients' physical and psychological well-being. Changes in body image due to the loss of the breast as a symbol of femininity, as well as postoperative physical limitations, may trigger anxiety, depression, and body image disturbances (Sun *et al*., 2024). Therefore, a comprehensive care approach is required, one that not only focuses on surgical treatment but also emphasizes psychosocial support, patient education, and family empowerment throughout the recovery process.

Family members, as family caregivers, play a critical role and serve as an extension of professional healthcare providers in supporting cancer patients. Family caregivers voluntarily assist in maintaining the health and well-being of sick family members through physical, emotional, and social support. This concept emphasizes that the role of the family is not limited to emotional support but also includes practical caregiving responsibilities essential to patient recovery (Given *et al*., 2011). Caregivers may include spouses, children, parents, neighbors, or relatives who are committed to providing ongoing care. In breast cancer care, caregivers face significant challenges as they navigate three crisis trajectories: the initial breast cancer crisis, the phase of hope for recovery, and the transition out of the crisis period. Observations in practice show that caregivers often struggle with postoperative care and managing treatment-related issues, particularly when unexpected complications arise during home care.

Post-mastectomy care requires caregivers to manage physical changes, activity limitations, and the psychological impacts experienced by patients, such as anxiety, a sense of loss, and disturbances in body image. These conditions indicate that caregivers need not only technical skills but also support in understanding the emotional responses of patients and the dynamics within the family during the rehabilitation process. Therefore, a comprehensive approach is needed to bridge both the physical and psychological demands of recovery.

One model particularly suitable for caregivers of post-mastectomy breast cancer patients is Family Centered Care (FCC). FCC is a collaborative health-care model that promotes partnership among patients, families, and health professionals. This model views the patient and family as a single unit, enabling families to provide more appropriate and individualized care during the rehabilitation phase. For breast cancer patients recovering from mastectomy, these needs become especially important when transitioning from hospital care back to the home environment (Hayre-Kwan *et al*., 2021).

The use of Maslow's Needs Theory in this study is based on its relevance in understanding the layered needs that emerge among post-mastectomy breast cancer patients. Maslow's hierarchy offers a systematic framework to identify these needs, enabling nurses to design more holistic and targeted Family Centered Care interventions. Recent studies also support the applicability of Maslow's human-needs model as an effective conceptual approach in modern health care settings (Jimenez, 2025).

Based on this background, the researcher is interested in identifying the needs of post-mastectomy patients during home care and analyzing the types of family support required as a foundation for developing an effective and applicable Family Centered Care model for breast cancer patients following surgery.

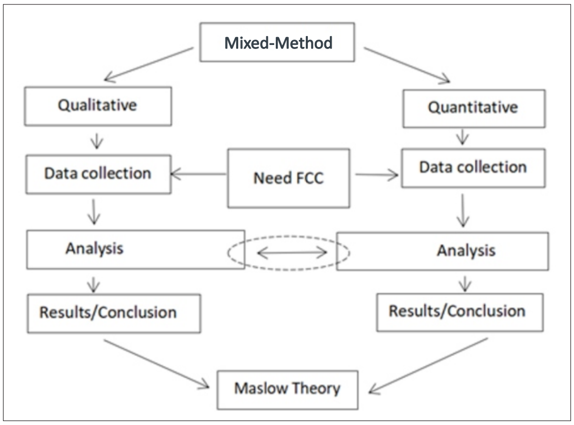

Figure 1: Conceptual Framework Diagram

METHODOLOGY

Study Design and Samples

This study employed a mixed-methods design using an explanatory sequential strategy, in which quantitative analysis was conducted first, followed by qualitative analysis. The mixed-methods approach, which integrates quantitative and qualitative research components, was applied to expand and strengthen the study conclusions (Schoonenboom & Johnson, 2017). Woldring *et al*. (2025) employed this method to examine family perceptions regarding family involvement in patient care during hospitalization.

Sampling was conducted using purposive sampling, involving a total of 62 respondents. The sampling process began with the identification of community members obtained from the community coordinator. Participants were then screened based on the inclusion criteria: post-mastectomy breast cancer patients living with a caregiver, willingness to participate, age over 18 years, and having received home care for more than one month after the mastectomy. This timeframe was selected to ensure that participants had passed the acute postoperative phase and entered the early recovery phase, during which physical, psychological, and home care challenges become more stable and can be evaluated in greater depth.

Participants for the qualitative phase were selected from the quantitative sample using purposive sampling with a person-centered approach. A total of 11 participants were included in the qualitative interviews, at which point data saturation was achieved, as no new information emerged from subsequent interviews.

Instruments

The quantitative instrument was adapted from previous studies related to Family Centered Care and family nursing. The instrument was developed based on Maslow's Hierarchy of Needs theory and the FCC concept, both of which have been widely applied in family nursing research. The instrument had undergone validity and reliability testing in previous studies, demonstrating adequate validity and good internal reliability.

The qualitative research instrument was developed using a triangulation approach by first analyzing the quantitative data to identify the main patterns of patient needs. These findings then informed the development of the interview guide. The interview guide included open-ended questions addressing patients' experiences after undergoing a mastectomy, the types of support that were most helpful during the recovery process, challenges encountered during home care, the role of health care professionals, and expectations regarding health services related to caregiver support.

Data Collection

The study was conducted in one breast cancer community in West Sumatra, Indonesia. The questionnaire was distributed online using Google Forms. Respondents received the questionnaire individually and separately. All participants were provided with an information sheet explaining the research procedures and signed an informed consent form prior to data collection. The researcher waited until respondents completed the questionnaire in full while providing reminders to those who had not yet completed it. All data was collected over a one-week period.

The interview process lasted between 30 and 60 minutes per informant and was conducted online via WhatsApp calls. In-depth interviews were carried out using a semi-structured interview guide by the principal investigator, who has a nursing background and has received formal training in qualitative research methodology. Audio recording devices and interview guidelines were used to support the data collection process.

Data Analysis

Quantitative data was analyzed using descriptive statistics. This analysis aimed to describe respondent characteristics and the level of needs among post-mastectomy breast cancer patients during home care. Data obtained from the Family Centered Care questionnaire were processed by calculating the mean and standard deviation for each item. This approach was selected, as it is appropriate for identifying central tendencies and data variability in exploratory studies with relatively small sample sizes (Polit & Beck, 2021).

Qualitative data were analyzed using a narrative approach, which focuses on understanding participants' experiences through the in-depth stories they shared. The analysis process included verbatim transcription, repeated reading of the transcripts, meaning coding, identification of narrative structures and patterns, and the development of narrative themes (Fetters *et al*., 2013). The coding process was conducted by the principal investigator, who has prior experience in qualitative data analysis. To enhance rigor and credibility, the coding process and initial themes were reviewed by a second researcher who acted as an independent auditor.

Ethical Considerations

The research obtained ethical clearance from the Ethics Committee, Faculty of Medicine, Universitas Baiturrahmah, Indonesia, with Reference Number 147/ETIK-FKUNBRAH/03/11/2025 on 18th November, 2025.

RESULTS

Table 1: Frequency Distribution of Respondents (n=62)

Respondent Characteristics	Categories	Frequency	Percentage
Age	21-35 years	5	7.9%
	36-50 years	38	60.3 %
	51-65 years	19	30.2%
Marital Status	Married	57	90.5%
Education	Not married	5	7.9%
	Bachelor’s Degree	47	74.6%
	Senior High School	13	20.6%
	Junior high school	2	3.2%
Occupation	Employee	30	48.3%
	Housewife	32	51.7%
Caregiver	Patient’s husband	43	69.3%
	Patient’s child	12	19.4%
	Patient’s sibling	7	11.3%

Based on Table 1, the majority of respondents were aged 36–50 years, accounting for 60.3%. A total of 90.5% of respondents were married, and most had a bachelor's degree as their highest level of education (74.6%). In terms of occupation, the majority of respondents were housewives (51.7%). The primary caregiver for most respondents was their husband, accounting for 69.3%.

Table 2: Mean Values of Needs among Post-Mastectomy Patients

Dimension of Needs	Mean	Standard Deviation
Physiological Needs	17.85	2.422
Safety Needs	18.03	2.297
Social and Love Needs	18.65	1.839
Esteem Needs	18.05	2.123
Self-Actualization Needs	17.73	1.691

Table 2 shows that the highest mean score was found in social and love needs (M = 18.65, SD = 1.839), while the lowest mean score was observed in self-actualization needs (M = 17.73, SD = 1.691).

Table 3: Characteristics of Qualitative Research Participants

Participant	Age	Education	Occupation	Caregiver
1	52	Senior High School	Housewife	Patient’s husband
2	26	Bachelor’s Degree	Employee	Patient’s husband
3	37	Bachelor’s Degree	Employee	Patient’s husband
4	55	Senior High School	Housewife	Patient’s husband
5	53	Bachelor’s Degree	Employee	Patient’s husband
6	55	Bachelor’s Degree	Housewife	Patient’s husband
7	38	Bachelor’s Degree	Housewife	Patient’s husband
8	52	Senior High School	Employee	Patient’s husband
9	48	Bachelor’s Degree	Employee	Patient’s husband
10	36	Bachelor’s Degree	Housewife	Patient’s husband
11	45	Senior High School	Employee	Patient’s husband

Table 3 presents the characteristics of the eleven study participants. The participants' ages ranged from 26 to 55 years. In terms of occupation, the participants consisted of homemakers and employed individuals, with a relatively balanced proportion. Most participants had a bachelor's degree. All participants in this study received primary caregiving support from their husbands during post-mastectomy home care.

Table 4: Summary of Themes

Theme	Subtheme	Illustrative Quotations
Post-mastectomy emotional experiences	Anxiety and fear related to post-operative conditions	“At the beginning after returning home, I was afraid of making the wrong movements, so I felt very anxious.” (P4) “I kept thinking, why is my recovery taking so long?” (P2)
	Feelings of sadness and loss of self-image	“..It felt like something was missing.” (P2) “...I felt a lack of confidence; even choosing clothes became difficult because I had to adjust to my condition.” (P3) “...when I go out, it feels as though people’s eyes are focused on my physical shortcomings.” (P7)
Unmet primary needs	Inconsistent emotional support	“I would like to be asked about how I feel, what I am experiencing now, and I also want to know my husband’s feelings after the surgery and the changes in my physical appearance.” (P6) “I also want to be accompanied at every follow-up visit.” (P4)
	Knowledge related to wound care	“...my family did not know how to help.” (P1) “My husband was confused about how to care for the wound and manage the pain…” (P2) “My family wanted to help, but they were confused about what to do.” (P3)
Most helpful forms of family support	Emotional support	“My husband always accompanies me; he is always with me at every follow -up visit. I feel greatly supported.” (P5) “The attention I receive makes me feel that I am not alone.” (P4)
	Assistance with activities of daily living	“My husband helps me change the dressing and assists me with bathing. If he were not there, I would not know what to do.” (P4)
	Spiritual motivation	“I feel happy when my family encourages me to recover and provides support and hope through their prayers.” (P2)
Challenges experienced during home care	Limited access to health care services	“When I need to attend follow-up appointments, the distance requires me to allocate a lot of time for the visit.” (P7) “Seeking medical treatment is difficult because the facility is far away.” (P2) “Sometimes sudden complaints arise, and it is difficult to ask for advice quickly, so I end up waiting until the next follow-up visit.” (P5)
	Social and financial support	“Sometimes I feel lonely; not many neighbors or family members know what I really need.” (P3) “Follow-up visits are financially burdensome, especially since not all additional medications are covered.” (P4)
Expectations for the development of health care services	Structured education and guidance for families	“Everything has been good in my opinion, because for patients, what matters most is kindness and respectful attitudes, and providing comprehensive information to patients is better.” (P2) “…If there were clear guidance from nurses, we would probably feel more at ease.” (P6)
	Ongoing support and follow-up	“Providing opportunities for patients and specialist doctors to interact in a dedicated group to discuss illnesses or complaints.” (P5) “…Perhaps an application could be developed so that we can stay connected with healthcare professionals.” (P6)

Table 4 illustrates five main themes that emerged from participants' experiences of post-mastectomy home care. The theme of emotional experiences after mastectomy indicates that participants experienced anxiety and fear related to post-operative conditions, as well as feelings of sadness and loss of body image. The theme of unmet primary needs reveals inconsistent emotional support and limited family knowledge regarding wound care. In the theme of family support perceived as most helpful, participants emphasized the importance of emotional support, assistance with daily activities, and spiritual motivation from family members. Furthermore, the theme of challenges in home care reflects limited access to healthcare services and ongoing social and financial support barriers. Meanwhile, the theme of expectations for healthcare service development highlights the need for more structured education and guidance for families, as well as continuous accompaniment and follow-up by healthcare professionals to support optimal patient recovery.

DISCUSSION

Social and love needs emerged as the dimension with the highest mean score and a relatively small standard deviation. This finding is consistent with the study by Rutten *et al*. (2025), which reported that social support is a critical need for post-mastectomy patients and that family involvement within a relationship-centred care framework significantly enhances the quality of collaboration among patients, families, and caregivers in healthcare settings.

In this study, the low standard deviation indicates that respondents' answers tended to be homogeneous. The researchers assume the presence of social desirability bias, which refers to respondents' tendency to provide answers that are perceived as socially acceptable, potentially affecting data accuracy, particularly in studies involving family relationships and cultural norms of respect in caregiving contexts (Grimm, 2010; Azcárate-Cenoz *et al*., 2025). In this context, patients may assign high scores because they feel compelled to demonstrate that their families have provided optimal support or due to cultural norms emphasizing loyalty and the maintenance of family harmony. This bias may also arise because patients completed the questionnaire while still dependent on caregivers, making them reluctant to honestly express dissatisfaction.

To address this potential bias, the study was complemented by a qualitative phase, which provided participants with greater freedom to express their needs, challenges, and family relationship dynamics without the constraints of a Likert-scale structure. This approach aligns with the findings of Fetters *et al*. (2013), who emphasized that mixed-methods research offers a powerful set of tools for investigating complex processes and systems in health and healthcare.

The results further indicated most of the participants were cared for by their spouses, with husbands serving as the primary source of support during the recovery process and playing a crucial role in maintaining patients' emotional stability (Stapley *et al*., 2021). According to Role Theory, each individual within a family holds socially expected roles based on their status and relationships. In the context of breast cancer patients, husbands often assume the role of primary caregivers when their wives are ill, as they carry emotional and social responsibilities as life partners. This role includes providing emotional support, assisting with daily activities, participating in shared decision-making regarding care, and serving as a key source of psychological strength for the patient.

Social and affection needs, which emerged as the dimension with the highest mean score in the quantitative phase, were consistent with the findings from the qualitative phase. The theme of post-mastectomy emotional experiences revealed that participants experienced fear, anxiety, sadness, and loss of self-confidence due to changes in body image and physical limitations, thereby increasing their need for emotional support from family members (Mnisi *et al*., 2026).. This finding was further reinforced by the theme of the most helpful family support, in which participants emphasized the importance of family presence, attention, and empathy as primary sources of strength during home care.

In addition, the theme of unmet basic needs highlighted the strong need for emotional support and family involvement, particularly from spouses, following a mastectomy (Ke *et al*., 2024). Participants expressed a desire to be listened to and understood. One participant reported wishing that family members would ask about her current feelings and her partner's emotional response to the physical changes she experienced, reflecting a need for emotional validation and acceptance from significant others.

Participants' perspectives on the most helpful forms of family support were reflected in their statements emphasizing the importance of family presence and accompaniment, particularly that of their spouses, throughout the caregiving process. One participant expressed that the physical and emotional presence of a spouse provided a sense of security, support, and relief from the psychological burden experienced by the patient. Another participant highlighted the desire to receive attention, indicating that family care and affection helped patients cope with feelings of loneliness and uncertainty following a mastectomy. A study by Ibrahim *et al*. (2025) demonstrated a significant relationship between culturally sensitive family-centered approaches and reduced anxiety among breast cancer patients undergoing chemotherapy, underscoring the critical role of family accompaniment in oncology care.

These findings are consistent with Maslow's hierarchy of needs theory, which states that the need for love, belongingness, and affiliation is a fundamental human need that strongly influences psychological well-being, particularly in individuals living with chronic illness. Thus, the participants' statements reinforce the quantitative findings indicating that social and affection needs are a top priority for breast cancer patients after mastectomy during home care.

In addition, participants highlighted the limitations they experienced in home care, particularly when family members lacked sufficient knowledge and readiness to care for patients after a mastectomy. From their perspective, inadequate education and guidance from healthcare professionals may negatively affect the quality of support provided by caregivers. This finding aligns with family nursing theory, which emphasizes that families require professional support to enhance their capacity to perform caregiving roles effectively (Friedman *et al*., 2010). Participants viewed nurses as key figures in bridging patient and family needs through continuous education and guidance.

Participants' perspectives also reflect expectations for a more collaborative and responsive healthcare service model that addresses psychosocial needs. They expressed a desire for care approaches that not only focus on medical aspects but also provide structured education and guidance for families, along with supportive platforms and ongoing follow-up. Participants' expressions regarding the need for responsive health services in the form of digital applications may serve as a reference for service development. A study conducted by Rafiei *et al*. (2025) found that breast cancer patients have a strong preference for digital platform features that enhance social support and interaction with healthcare services, thereby supporting the role of technology in the implementation of Family Centered Care. Online FCC-based interventions have also shown potential in supporting the psychosocial needs of breast cancer patients and their caregivers (BMC Psychology, 2025), while telehealth reviews further emphasize the importance of remote support in oncology care (Longacre & Roche, 2024). Furthermore, health literacy and caregiving competence have been found to contribute significantly to family preparedness in patient care, highlighting key factors in the effective implementation of FCC (Zahedi *et al*., 2025).

This perspective is consistent with the holistic nursing approach, which emphasizes comprehensive care encompassing biological, psychological, social, and spiritual dimensions (Potter *et al*., 2021). Overall, participants' perspectives underscore that the implementation of comprehensive *Family Centered Care* is a crucial strategy for enhancing recovery quality and overall well-being among breast cancer patients following mastectomy during home care.

The role of the family as a partner of nurses is closely related to family health tasks, including the family's ability to recognize health problems, care for sick family members, make appropriate health decisions, modify the home environment, and utilize health care facilities when further management is required, such as services provided by primary health centers or hospitals (Kartika *et al*., 2015). This is consistent with the findings of Kertapati (2019), which demonstrated a significant positive relationship between family health tasks and the level of family independence. Family capability in performing family health functions is influenced by various factors, including age, marital status, employment status, educational level, knowledge of family functions, and access to health information (Herawati *et al*., 2020).

In addition to providing technical education, nurses need to offer psychosocial support to assist patients and families in coping with changes in body image, anxiety, and emotional distress resulting from cancer and its treatment. Therapeutic communication approaches and basic counseling can help families understand patients' emotional responses and enhance their ability to provide emotional support. Findings by Bechthold *et al*. (2023) indicate that psychosocial support delivered by health professionals can improve coping among post-mastectomy patients and reduce anxiety related to body image changes.

Nurses should also develop effective follow-up mechanisms, such as telehealth services, WhatsApp- or teleconference-based educational groups, and visual educational media (arm exercise videos and wound care guidelines), to ensure that families continue to feel supported after hospital discharge. This approach aligns with the study by Zhang *et al*. (2025), which reported that tele-education support improves family health literacy, reduces caregiver anxiety, and enhances patient adherence to post-cancer rehabilitation programs. Through a structured, collaborative, and continuous FCC approach, nurses can empower families as key partners in patient recovery, accelerate the rehabilitation process, and improve the quality of life of post-mastectomy patients.

The implications of this study for nursing education highlight the need to integrate FCC training, therapeutic communication, and caregiving management into both academic curricula and clinical training programs, ensuring that future nurses are well prepared to address the complex needs of cancer patients. From a policy perspective, these findings support the strengthening of continuity of care programs, nurse navigator roles, and the provision of standardized discharge education materials. The development of FCC-based policies not only enhances the quality of care but also ensures sustained support and empowerment of families as essential partners in the recovery of post mastectomy patients.

Limitation

The authors acknowledge several limitations in this study. First, the sample was drawn from a single cancer community, which limits the generalizability of the findings. In addition, all caregivers involved in this study were spouses (husbands); therefore, the results do not reflect the diversity of perspectives from other family members such as children, siblings, or parents. The authors also recognize that the data were self-reported, which may be subject to recall bias and social desirability bias, particularly given the family context that may encourage respondents to provide more favorable responses. Future studies should involve larger and more diverse samples, employ longitudinal designs, and apply methodological triangulation to generate more comprehensive and robust findings.

CONCLUSION

The research findings provide an in-depth understanding of the needs of post-mastectomy patients, emphasizing that family support, particularly in the form of social connection and affection, plays a crucial role in the recovery process, alongside other essential needs that must be fulfilled. The emerging themes from this study form a foundation for the development of a Family Centered Care model that extends beyond physical support. This model should also encompass educational, emotional, spiritual, and accessibility components, as well as strong collaboration between families and healthcare professionals, to ensure the successful and holistic recovery of post-mastectomy patients at home.

The significance of this study lies in its contribution to strengthening the implementation of FCC based on the actual needs of patients and families, particularly in the context of post-mastectomy home care. The findings may serve as a foundation for developing nursing interventions, improving the quality of healthcare services, and formulating more collaborative and responsive continuity-of-care policies.

Future research may include the development of longitudinal and interventional studies to evaluate the effectiveness of FCC models, including the use of digital technology and structured family education, as well as expanding the study population and research settings to enhance the generalizability of the findings.

Conflict of Interest

The authors declare that they have no conflict of interest related to the research, authorship, or publication of this article.

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