**Journal Of Nursing Practice**
https://thejnp.org/ Vol. 10 No.1 October. Page 122-135
ISSN: 2614-3488 (print); 2614-3496 (online) https://doi.org/10.30994/jnp.v10i1.1233

# Pain Management in Breast Cancer Patients Based on Symptom Management Theory

**Feriana Ira Handian[1], Pertiwi Perwiraningtyas[1]*, Ninda Putri Ardila Kurnia[1], Wang Ellyana[2], Ririn Purwaningsih[2]**
[1] Faculty of Health Sciences, University of Tribhuwana Tunggadewi, Malang, Indonesia
[2] Palliative Care Unit, Baptis Hospital, Batu City, Indonesia
***Corresponding author:** perwiraningtyas@gmail.com*

ORCID: **Feriana Ira Handian**: https://orcid.org/0000-0002-1427-1632; ORCID: **Pertiwi Perwiraningtyas**: https://orcid.org/0009-0004-5544-7122;

## ABSTRACT

**Background:** Pain related to breast cancer and its treatment affects physical, psychological, and social well-being throughout the illness trajectory, yet patients' subjective experiences of pain, the strategies they use to manage it, and the outcomes they perceive remain insufficiently explored, particularly within Southeast Asian and Islamic cultural contexts.

**Purpose:** This study aimed to explore the lived experience of pain management and its perceived outcomes among breast cancer patients, guided by the Symptom Management Theory (SMT), and to describe how these relate to participants' clinical and sociocultural characteristics.

**Methods:** A qualitative phenomenological design was used with twenty breast cancer patients (stage I–IV) purposively recruited from a general hospital and a palliative care house in Batu City, East Java, Indonesia. Data from in-depth, semi-structured interviews, direct observation, and family-member triangulation were analyzed using Colaizzi's steps and thematic content analysis (initial and axial coding) with OpenCode 4.03; categories and themes were then mapped deductively onto the three SMT domains.

**Results:** Three themes corresponded to the SMT domains: symptom experience (perception, evaluation, and emotional response to pain); symptom management strategies (opioid and non-opioid analgesics alongside compresses, prayer, and family support); and symptom outcomes (self-reported pain reduction, improved physical function, comfort, and holistic well-being). Participants' age (41–76 years) and stage (65% early, 35% advanced) varied widely.

**Conclusion:** The findings support the SMT as a framework for nursing practice and highlight the need for holistic, culturally sensitive, and family-centered pain management for breast cancer patients.

**Keywords** : Breast Cancer; Nursing Care; Pain Management; Qualitative Study; Symptom Management Theory

The Journal of Nursing Practice, its website, and the articles published there in are licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

Received: August 29, 2026; Revised: October 20, 2026; Accepted: October 21, 2026; Available Online: October 24, 2026
Copyright © [2026] Author.

## BACKGROUND

Breast cancer is the most frequently diagnosed cancer and a leading cause of cancer-related death among women worldwide, and its incidence continues to rise in low- and middle-income countries, including Indonesia (Carmichael et al., 2025). As survival rates improve with advances in early detection and treatment, pain arising from the tumor itself, from surgical procedures, and from adjuvant therapies such as chemotherapy and radiotherapy has become one of the most prevalent and distressing symptoms experienced across the disease trajectory, affecting patients' physical function, emotional stability, and social participation (Carmichael et al., 2025; He et al., 2024).

A growing body of qualitative literature has examined how cancer patients experience and cope with pain. Studies from Iran, Sri Lanka, the United Kingdom, and Malaysia have shown that patients often normalize pain as an unavoidable part of the disease, adopt stoic attitudes to avoid burdening their families, and rely on a combination of pharmacological and spiritual strategies to manage their suffering (Harerimana et al., 2025; Liao et al., 2016; Edirisinghe et al., 2024; Armoogum et al., 2023).

However, most of this evidence originates from Western, Middle Eastern, or East Asian settings, and existing reviews (e.g., Snijders et al., 2023; Carmichael et al., 2025) consistently note that qualitative accounts of pain management are fragmented across populations and rarely examine how pain experience, management, and outcome interact as a single process. Location and population differences alone, however, do not establish novelty; what remains genuinely unresolved is how patients in Southeast Asian and predominantly Muslim communities — where religious practices such as prayer and dhikr, and strong extended-family involvement, are embedded in everyday coping — integrate pharmacological and non-pharmacological strategies across the full symptom-management process, and how this integration shapes the outcomes they perceive.

This study is guided by the Symptom Management Theory, a middle-range nursing theory that conceptualizes symptom management as an interrelated process comprising three dimensions: symptom experience, referring to the patient's perception, evaluation, and response to a symptom; symptom management strategies, referring to the interventions used to prevent, delay, or relieve the symptom experience; and symptom outcomes, referring to the functional, emotional, and quality-of-life consequences of those strategies (da Silva et al., 2021; Mathew et al., 2021).

Prior qualitative studies applying this theory to cancer symptoms have tended to use it either as a purely descriptive framework for organizing findings after the fact, or as a sensitizing lens applied from the outset of analysis, a distinction the theory's own analytic reviews identify as a recurring limitation, since studies rarely make explicit which of the two approaches they follow or justify why (Mathew et al., 2021; Bouchlaghem et al., 2025). The present study addresses this limitation directly: themes were first allowed to emerge inductively from the interview data through initial and axial coding, and only subsequently mapped deductively onto the theory's three domains, a combined inductive-deductive procedure that is made explicit in the Methods section below. Where cultural and religious context is claimed as part of this study's novelty, that claim is carried consistently through the literature cited above, the participant characteristics reported in the Results, the inclusion of family-member triangulation in the

Methods, and the interpretation of spiritual coping strategies in the Discussion, rather than being asserted only in this section.

Despite the theoretical relevance of the Symptom Management Theory, empirical studies applying this framework to explore breast cancer pain management from the patient's own perspective remain scarce in Indonesia. Clinically, nurses are frequently the first point of contact for cancer patients reporting pain, yet pain assessment and nursing intervention in many Indonesian oncology and palliative settings still rely predominantly on unidimensional numeric scales that capture intensity without capturing meaning, management behavior, or perceived benefit, limiting their usefulness for designing individualized, culturally responsive nursing care.

Batu City, the setting of this study, has an established general hospital oncology service and a dedicated palliative care house that together manage a substantial and growing caseload of breast cancer patients across disease stages, yet no published qualitative account of these patients' own pain-management experience from this specific setting previously existed to inform local nursing protocols.

This study therefore aimed to explore pain management and pain outcomes among breast cancer patients based on their lived experience, using the Symptom Management Theory as the guiding conceptual framework, to generate empirically grounded, culturally situated evidence to inform nursing practice and pain-management education.

## METHODS

### Design and Setting

This study used a qualitative research design with a phenomenological approach, considered appropriate for exploring participants lived experience of pain and pain management in depth. Data were analyzed following Colaizzi's steps of phenomenological analysis (Creswell, 2013) combined with thematic content analysis (initial and axial coding); themes generated inductively from the transcripts were subsequently mapped deductively onto the three domains of the Symptom Management Theory: symptom experience, symptom management strategies, and symptom outcomes, to structure the interpretation of participants' pain-management experience. This combined inductive-deductive procedure is described step-by-step under Data Analysis below.

The study was conducted at a general hospital and a palliative care house (Rumah Paliatif) in Batu City, East Java, Indonesia, from June to August 2026. Both sites were selected because they jointly serve breast cancer patients across the full range of disease stages and treatment phases within the same catchment area, allowing variation in clinical condition to be captured within a single, coherent setting.

### Participants and Sampling

Participants were recruited using a purposive sampling technique. Inclusion criteria were breast cancer patients within the catchment area of the two research sites, at any disease stage (I–IV) and under active treatment or palliative follow-up, able to communicate verbally, and willing to participate and sign an informed consent form. Criteria chosen specifically because they ensured variation in disease severity and treatment phase, both of which are directly relevant to how pain is experienced and managed. Patients with a complicating bone fracture or bone injury were excluded, since skeletal trauma introduces a confounding source of pain that is

mechanistically distinct from cancer- and treatment-related pain and would compromise the phenomenon under study.

A total of twenty participants were enrolled. Recruitment continued until data saturation was reached, operationally defined as the point at which three consecutive interviews yielded no new categories or codes beyond those already identified in the ongoing analysis; this point was reached at the eighteenth participant, and two further interviews were conducted to confirm no new codes emerged, consistent with the principle that sample size in phenomenological research is determined by the sufficiency and richness of the data rather than a predetermined number (Creswell, 2013).

Participants' age ranged from 41 to 76 years (mean approximately 57 years); 13 participants (65%) were at an early disease stage and 7 (35%) were at an advanced stage, as summarized in Table 1. Duration since diagnosis and specific treatment modality (chemotherapy, radiotherapy, or post-surgical status) were recorded narratively within each interview and informed the interview's line of questioning but were not captured as a separate structured variable in this study.

**Instruments and Data Collection**

Data was collected through in-depth, semi-structured interviews using a guide developed by the research team based on the three domains of the Symptom Management Theory and refined through two pilot interviews not included in the final analysis. All interviews were conducted face-to-face in Indonesian (with local Javanese expressions retained and translated during transcription) by the first author, a nurse researcher with prior clinical experience in oncology and palliative nursing who had no pre-existing treating relationship with any participant, which was intended to minimize power imbalance and reporting bias. Interviews took place in a private room at the hospital or palliative care house, at a time and location agreed with each participant, and lasted between 45 and 120 minutes. Each interview was audio-recorded with the participant's consent and transcribed verbatim in Indonesian; illustrative quotations were translated into English by the research team and cross-checked by a bilingual co-author for accuracy of meaning.

To strengthen the credibility of the data, the researchers also conducted direct observation of participants' physical condition (including wound or post-surgical status) during the interview visit and performed source triangulation by speaking with a consenting family member present at the time of interview regarding the pain-management strategies used at home. Both procedures were conducted only with the participant's prior verbal agreement and, for family-member input, a separate brief consent; information obtained was used solely to corroborate participants' own accounts and was recorded without identifying the family member in any transcript or quotation.

**Data Analysis**

Data was analyzed using thematic content analysis, comprising initial coding and axial coding, informed by the steps of Colaizzi's phenomenological analysis (Creswell, 2007). Coding was assisted by OpenCode 4.03 qualitative data analysis software (Umeå University, Sweden), used as follows: each verbatim transcript was imported and segmented line-by-line; significant statements relating to pain experience, management, or outcome were assigned initial (open) codes by the first and second authors independently; codes with convergent meaning were

grouped into categories through axial coding and a documented coding tree maintained in OpenCode 4.03 software from Umea University; and categories were then reviewed against the three domains of the Symptom Management Theory and organized into the three final themes reported in the Results. Coding discrepancies between the two coders were resolved through discussion and, where unresolved, adjudicated by a third senior author; the full code-to-category-to-theme audit trail is retained and available on request, and representative linkages are illustrated in Table 2.

**Trustworthiness**

Credibility was supported through data triangulation (interview, direct observation, and family-member corroboration) and member-checking, in which a summary of each participant's key statements was read back to them at the end of the interview for confirmation. Transferability was supported by providing thick description of participants' clinical stage, treatment context, and sociocultural setting, so that readers can judge the applicability of findings to comparable settings. Dependability was supported by maintaining a documented audit trail in Open Code linking raw transcript excerpts to codes, categories, and themes, available for independent review. Confirmability was supported through reflexive memoing by the first author throughout data collection and analysis, and through weekly peer-debriefing meetings among the research team to examine and challenge emerging interpretations before they were finalized.

**Ethical Considerations**

This study was conducted in accordance with the CIOMS-WHO 2016 International Ethical Guidelines for Health-related Research Involving Humans. Written informed consent was obtained from all participants prior to the interview, including an explanation of the study's purpose, the voluntary nature of participation, and the right to withdraw at any time without consequence to their care. Ethical approval was obtained from the Health Research Ethics Committee, Faculty of Nursing, Universitas Jember (approval number 314/UN.25.1.1.14/KEPK/2026).

Participant confidentiality was protected by de-identifying all transcripts at the point of transcription (participants are referred to only by the codes P1–P20 throughout this manuscript), storing audio recordings and transcripts on an encrypted, password-protected drive accessible only to the research team, and destroying audio files after transcription verification was complete. Family members who contributed corroborating information were informed that their input would remain anonymous and would not be attributed to them individually in any report or publication.

## RESULTS

A total of twenty breast cancer patients at various disease stages (I–IV), undergoing chemotherapy, radiotherapy, or post-surgical care, participated in this study. Participants' clinical and demographic characteristics based on participants reports are summarized in Table 1.

**Table 1.** Participant Characteristics (N = 20)

| Participant Code | Age (years) | Cancer Stage | Year of Initial Diagnosis | Chemotherapy Status |
|---|---|---|---|---|
| P1 | 58 | IV | 2024 | Completed |
| P2 | 48 | IV | 2013 (initial, benign); recurrence 2015 | Completed |

| Participant Code | Age (years) | Cancer Stage | Year of Initial Diagnosis | Chemotherapy Status |
|---|---|---|---|---|
| P3 | 75 | IIA/B | 2018 | Completed |
| P4 | 64 | IIA/B | 2017 | Completed |
| P5 | 58 | IIA/B | 2018 (first symptoms 2015) | Completed |
| P6 | 70 | IIA/B | 2019 | Completed |
| P7 | 51 | I-II | 2025 | Completed; oral therapy continuing |
| P8 | 60 | IV | N/A | Completed (now on monthly maintenance medication) |
| P9 | 67 | I-II | 2017 | Completed |
| P10 | 46 | I-II | 2023 | Completed |
| P11 | 41 | II-III | 2020 | Ongoing (further chemotherapy for bone metastases) |
| P12 | 76 | IIA | 2015 | Completed |
| P13 | 68 | I | 2019 | Completed |
| P14 | 61 | IV | 2014 | Ongoing (intravenous chemotherapy repeated) |
| P15 | 60 | IV | 2017 | Ongoing |
| P16 | 54 | I-II | 2020 | Completed |
| P17 | 49 | III | 2021–2022 | Completed; continuing tamoxifen |
| P18 | 41 | I-II | 2021 | Completed |
| P19 | 50 | I-II | 2021 | Completed |
| P20 | 56 | I-II | 2021 | Completed |

Age ranged from 41 to 76 years (mean approximately 57 years); 13 participants (65%) were at an early stage and 7 (35%) at an advanced stage. This spread of age and disease severity allowed the analysis to capture pain experiences across a clinically diverse group rather than a single stage or treatment phase.

Based on the thematic analysis of the interview transcripts, three major themes emerged. These themes were not predetermined categories imposed on the data: initial and axial coding were conducted first, directly on participants' own words, and the resulting codes and categories were only subsequently found to align with, and were then organized under, the three domains of the Symptom Management Theory, as described under Data Analysis above. Each theme comprises several categories, summarized in Table 2 together with representative participant quotations.

**Table 2.** Themes, Categories, and Illustrative Participant Quotations Based on the Symptom Management Theory.

| Theme | Category | Illustrative Participant Quotations* |
|---|---|---|
| Symptom Experience | Perception of pain characteristics | *"Kayak orang pegal gitu loh, kayak ditusuk-tusuk apa dipukul-pukul apa. — It feels like being sore all over, like being stabbed or beaten."* (P1) *"Kayak tusuk, kayak tusuk jarum beneran gitu. Padahal jarumnya udah enggak ada" (Like a real needle stabbing me, even though there's no needle there).* (P11) *"Rasane kaya digebuk'i wong sewu itu rasane bener... gak ada apa-apanya dibanding sakitnya orang melahirka". (It felt like being beaten by a thousand people... childbirth pain was nothing compared to it)* (P10) *"Kesemutan, badan kesemutan, kaki kesemutan... 2 hari nggak bisa tidur" (Tingling, my whole body and legs tingled... I couldn't sleep for two days)* (P17) |

| Theme | Category | Illustrative Participant Quotations* |
|---|---|---|
| | Meaning and impact of pain | *"Itu biasa, Bu, karena habis operasi, gitu"( That's normal, ma'am, because I just had surgery)* (P6) *"Intinya kan nggak boleh kecapean"( The main thing is I just can't get too tired (because of the pain).* (P2) |
| | Emotional and behavioral response | *"Ya Allah ya loro, cengkerem"( Oh God it hurts, I just clench my teeth and bear it)* (P2) *"Pancet... pancet jualan"( I keep going, I keep selling (despite the pain)* (P15) |
| Symptom Management Strategies | Pharmacological intervention | *"Setiap 1 minggu sekali saya dapet obat nyeri itu dari paliatif."( Once a week I get pain medicine from the palliative team)* (P10). *"Semuanya di seluruh dunia pakai morfin ini, ini aman untuk hati"(This morphine is used for cancer pain all over the world... it is safe for the liver)* (P1) |
| | Non-pharmacological intervention | *"Hangat, hangat... lega" Warm, warm... it feels relieved."* (P14) *"Ya cuma itu sih, zikir, salat"(That's really all, dhikr and prayer)* (P18) *"Legaa... enak, enak" (It feels relieved... nice, nice (after family massage/companionship)."* (P14) |
| Symptom Outcomes | Reduced pain intensity (self-reported) | *"Nyerinya langsung berkurang gitu? Iya. Langsung berkurang" (The pain went down right away? Yes. It went down right away)* (P20) |
| | Improved physical function | *"Bisa masak, bisa nyetrika yang ringan-ringannya", (I can cook, I can do light ironing)* (P11) *"Pancet... pancet jualan"( I keep selling)* (P15) |
| | Comfort and holistic well-being | *"Kita kalau nyebut-nyebut gitu kan adem nang hati ya?"(When we recite dhikr it feels cool/calm in the heart, right?)* (P2) *"We learn to... accept it sincerely. Thank God, I have accepted it."* (P17) *"Dukungan keluarga luar biasa. Bapak'e iku alhamdulillah, Bu, selama saya mulai periksa dari awal sampai akhir dia mendampingi terus. (My husband's support has been amazing; he accompanied me from the very start to the end)* (P2) |

**) Originally in Bahasa then translated in English for clarity.*
*Additional quotations and the full initial/axial coding tree are provided in the thematic analysis table submitted as supplementary material.*

### Theme 1: Symptom Experience

This theme describes participants' subjective experience of pain, comprising three categories: perception of pain characteristics, meaning and impact of pain, and emotional and behavioral response to pain. Participants described their pain using a wide range of sensory descriptors, from sharp and stabbing sensations to tingling (Table 2). Chemotherapy-related pain was frequently described as the most severe sensation ever experienced, even surpassing labor pain. Most participants perceived pain as a normal and unavoidable part of treatment, which shaped how they evaluated and tolerated it, while emotional responses ranged from crying to a stoic reluctance to complain, and occasionally to irritability or anger.

### Theme 2: Symptom Management Strategies

This theme describes the pharmacological and non-pharmacological strategies participants used to manage their pain. Pharmacologically, participants with severe pain reported receiving opioid analgesics such as morphine, which several participants described using on a self-regulated, as-needed basis rather than a fixed schedule; a pattern identified directly from participants' own accounts of their dosing behavior rather than from pharmacy or

medical records, alongside routinely administered palliative analgesics such as paracetamol and diclofenac sodium. Non-pharmacologically, participants relied on warm or cold compresses, prayer and dhikr, and family support such as massage and companionship.

**Theme 3: Symptom Outcomes**

This theme describes the outcomes participants perceived following the pain-management strategies used, comprising self-reported reduction in pain intensity, improved physical function, comfort, and holistic well-being. No formal pain-intensity instrument (e.g., a numeric rating or visual analogue scale) was administered as part of this study; references to pain 'decreasing' or being 'relieved' reflect participants' own subjective reports following analgesic use, compress, or prayer, and relief was frequently described as partial and temporary rather than complete. Participants also described being subsequently able to resume light household activities or, in some cases, continue working or selling goods. An association participant themselves drew between feeling less pain and resuming activity, which this phenomenological design can describe but cannot establish as a causal mechanism. Beyond physical relief, participants described a sense of comfort and inner peace following prayer, as well as psychological well-being rooted in acceptance of their condition. Family support was consistently described as a vital source of strength.

## DISCUSSION

The findings of this study show that pain management among breast cancer patients unfolds as a dynamic, interrelated process across the three domains of the Symptom Management Theory. Rather than simply confirming that these three domains exist, the findings below are discussed in relation to prior empirical evidence to identify where this study's observations converge with, extend, or diverge from previous work, and what that implies beyond the theory itself.

**Symptom Experience**

Within the symptom experience domain, participants described their pain using varied sensory descriptors, consistent with evidence that cancer pain is frequently characterized as sharp, stabbing, or shooting in nature (Carmichael et al., 2025). The tingling and numbness reported by participants receiving chemotherapy correspond to chemotherapy-induced peripheral neuropathy, a symptom experience that disrupts sensory function and daily activity among cancer survivors (Chan et al., 2018). This corroborates findings from Sri Lanka, where patients similarly described chemotherapy-related sensations as distinct from, and often worse than, tumor-related pain itself (Edirisinghe et al., 2024), suggesting this is not a setting-specific artifact but a broader pattern across Asian treatment contexts.

The tendency of participants to normalize pain as an inevitable part of treatment mirrors findings that many cancer patients regard pain as a normal, unavoidable part of the illness, which can in turn discourage accurate pain reporting to health professionals (Hassankhani et al., 2023). Likewise, the reluctance of several participants to openly complain reflects a pattern of pseudo-stoicism, in which emotional suppression and silent endurance of pain are common among cancer patients, particularly within collectivistic cultures (Harerimana et al., 2025), while episodes of

anger and emotional instability align with evidence linking anger regulation to pain-related disability in women treated for breast cancer (Sipilä et al., 2019).

Unlike studies conducted in more individualistic Western settings, where stoicism is often framed primarily as a barrier to be corrected through patient education (Armoogum et al., 2023), participants in this study frequently framed their endurance as an act of religious sincerity (ikhlas) rather than mere avoidance. A distinction with direct clinical implications, since it suggests that encouraging pain reporting in this population may require working with, rather than against, participants' religious framing of endurance, a nuance not captured in prior Western-centric accounts.

**Symptom Management Strategies**

Within the symptom management strategies domain, participants' use of morphine reflects the application of the analgesic ladder in cancer pain management, although patient acceptance of opioids is often accompanied by ambivalence stemming from fear of dependence and side effects (Ho et al., 2020). The self-regulated, as-needed pattern of analgesic use described by participants in their own accounts is consistent with documented behavioral adaptations among cancer patients who titrate their analgesic dose according to perceived pain intensity rather than a prescribed schedule (Liu et al., 2023).

Non-pharmacologically, the use of warm and cold compresses corresponds to widely reported non-pharmacological strategies for cancer pain management that enhance patients' sense of autonomy over their pain (Liu et al., 2023), while prayer and dhikr as spiritual coping strategies are consistent with evidence that psychosocial-spiritual interventions constitute an important coping resource for Muslim patients undergoing cancer treatment (Abu Khait & Lazenby, 2021). The family's role in providing massage and companionship further affirms family caregivers as active partners in home-based pain management (Zahedi et al., 2025), a role supported by evidence that massage therapy significantly reduces cancer pain intensity and improves quality of life (Win Myint et al., 2025).

Compared with Smith et al.'s (2023) qualitative account of persistent pain after breast cancer treatment in the United Kingdom, where non-pharmacological coping was largely individual (e.g., distraction, pacing), the present findings differ in that non-pharmacological strategies here were predominantly relational and spiritual; compress applied by family members, prayer performed collectively, dhikr recited with others present, pointing to family- and faith-embedded coping as a feature more specific to this cultural context than to cancer pain coping in general.

**Symptom Outcomes**

Within the symptom outcomes domain, the self-reported reduction in pain intensity represents the outcome dimension of the Symptom Management Theory (da Silva et al., 2021); however, this relief was often described as partial and temporary, consistent with evidence that persistent post-surgical pain continues to affect a substantial proportion of breast cancer patients even after adequate acute pain management (He et al., 2024; Filipponi et al., 2025).

The improvement in physical function that participants associated with reduced pain corresponds to evidence that structured pain education and rehabilitation support cancer patients in returning to daily activity despite residual pain (Eisen et al., 2021), although consistent with

the phenomenological design of this study, the present findings describe this as participants' own perceived association rather than a tested causal effect.

The comfort participants described after compress and prayer reflects the relief dimension of Kolcaba's Comfort Theory, in which a patient's specific physical, psychospiritual, and sociocultural needs are addressed to produce a state of ease (Lin et al., 2023); in this study, the psychospiritual component of that comfort was most clearly expressed through participants' accounts of prayer and dhikr, while the sociocultural component was expressed through family companionship, suggesting the three comfort dimensions were not experienced in isolation but as mutually reinforcing.

Finally, the acceptance and sincerity expressed by participants as a source of psychological well-being reflect a broader pattern of post-traumatic growth among breast cancer patients, characterized by self-reconstruction and strengthened spirituality following the cancer experience (Huang et al., 2025), while the strength participants drew from family support corresponds to evidence that family involvement mediates psychosocial well-being and reduces death-related anxiety in breast cancer patients through strengthened meaning in life (Gui et al., 2025). Read together with the management-strategies findings above, this suggests acceptance in this population was not a passive endpoint but was itself actively cultivated through the same spiritual and family practices used to manage pain, a link between management strategy and psychological outcome that is less often made explicit in prior Symptom Management Theory applications (Bouchlaghem et al., 2025).

**Integration and Empirical Contribution**

Taken together, these findings affirm the relevance of the Symptom Management Theory as a conceptual framework for understanding breast cancer pain as a biopsychosocial-spiritual experience shaped by culture, religious belief, and family context (Abu Khait & Lazenby, 2021; Carmichael et al., 2025). Beyond affirming the theory's three domains, this study's specific empirical contribution is in showing how, in this Southeast Asian Muslim setting, spiritual practice and family involvement function simultaneously as a management strategy and as a determinant of perceived outcome — a bidirectional relationship that is only partially captured when the theory's domains are treated as a strictly linear sequence.

This understanding is further reinforced by evidence from perioperative and pharmacological pain-management literature, which shows that multimodal strategies integrating pharmacological and non-pharmacological approaches, including molecular-level advances in understanding cancer pain mechanisms, most effectively support the transition from acute to better-controlled chronic cancer pain (Wang et al., 2025; Karcz et al., 2024). Nursing practice for breast cancer patients should therefore integrate pharmacological and non-pharmacological strategies, including spiritual and family-based approaches, into a holistic, culturally sensitive model of pain-management care.

**Limitations**

This study has several limitations. First, duration since diagnosis and specific treatment modality were not recorded as a separate structured variable for each participant, which limits this study's ability to statistically or systematically relate pain experience to treatment phase beyond the broad early/advanced staging reported in Table 1. Second, as a single-setting

qualitative study conducted at one hospital and one palliative care house in Batu City, findings reflect a specific sociocultural and religious context and may not be directly transferable to settings with different cultural or healthcare-system characteristics. Third, no formal, validated pain-intensity instrument was used; all reports of pain intensity and its change are participants' own subjective accounts, which, while appropriate for a phenomenological design, do not permit quantitative comparison across participants. Fourth, because recruitment and interviews occurred over a relatively short period (June–August 2026), the findings describe a cross-sectional account of participants' experience and do not capture how pain management may evolve over the course of treatment and survivorship.

### Implications For Nursing Practice

These findings suggest several practical implications for nursing care for breast cancer patients. Pain assessment should move beyond unidimensional intensity scales to routinely elicit patients' own descriptions of pain's meaning, their self-regulated use of analgesics, and the non-pharmacological and spiritual strategies they already use, so that nursing interventions build on rather than replace patients' existing coping repertoire. Nurses should proactively assess and, where appropriate, accommodate spiritual practices such as prayer and dhikr as legitimate components of a pain-management plan rather than incidental coping behavior, and should actively involve family members as care partners, including in non-pharmacological measures such as compress application and companionship, with attention to maintaining the patient's and family members' confidentiality and comfort in doing so. Nursing education and continuing professional development should incorporate culturally responsive, family-centered pain-management content, consistent with the gap this study identifies between widely available unidimensional pain-assessment training and the holistic, relational pain-management behavior reported by patients.

## CONCLUSION

In relation to the study's objective, this study found that pain management among breast cancer patients in this Indonesian setting unfolds as an interrelated process across the three domains of the Symptom Management Theory — pain experienced with personal and cultural meaning, managed through a combination of pharmacological treatment, self-care, spiritual practice, and family support, and evaluated by patients in terms of self-reported pain reduction, physical function, comfort, and holistic well-being. The key contribution of this study is evidence that, in this Southeast Asian Muslim context, spiritual and family-based strategies function as both a management approach and a determinant of perceived outcome, underscoring the need for nursing pain assessment and intervention that is holistic and culturally responsive rather than limited to pharmacological measures alone. Future research using larger, multi-site samples, mixed-methods or longitudinal designs, and structured measurement of treatment phase and pain intensity is recommended to test the transferability of this model and the effectiveness of nursing interventions developed from it.

## ACKNOWLEDGMENTS

The authors would like to thank the management and staff of the Baptis Hospital of Batu City and Palliative Volunteer, for facilitating data collection, and are especially grateful

to all participants who generously shared their personal experiences of living with breast cancer pain.

## AUTHOR CONTRIBUTIONS

All authors contributed to this study, FIH, PP contributed on data preparation, collection, data analysis and preparation manuscript. NPA, WE, RP contributed on data collection and research administration.

## FUNDING

This research was funded by the Internal Research Grant of University of Tribhuwana Tunggadewi, 2026.

## CONFLICTS OF INTEREST

The authors declare there is no conflict of interest in this study.

## DECLARATION OF AI USE

The author used the generate AI - Grammarly to check the clarity of manuscript writing without influencing the research results. All data analysis and synthesis processes are carried out independently by the researcher.

## REFERENCES

Abu Khait, A., & Lazenby, M. (2021). Psychosocial-spiritual interventions among Muslims undergoing treatment for cancer: An integrative review. *BMC Palliative Care*, *20*(1), 51. https://doi.org/10.1186/s12904-021-00746-x

Armoogum, J., Foster, C., Llewellyn, A., Harcourt, D., & McCabe, C. (2023). 'I think it affects every aspect of my life, really': Cancer survivors' experience of living with chronic pain after curative cancer treatment in England, UK. *PLOS ONE*, *18*(9), e0290967. https://doi.org/10.1371/journal.pone.0290967

Bouchlaghem, M. A., Juneau, L., & Dallaire, C. (2025). Symptom management theory: Disciplinary knowledge guiding nursing practice. *Recherche en Soins Infirmiers*, *161*(2), 30–35. https://doi.org/10.3917/rsi.161.0030

Carmichael, C., Van Tomme, S., Miller, J., Burns, D., Gousset, C., Kitchen, H., Makin, H., Aldhouse, N. V. J., & Cordero, P. (2025). Pain experience in oncology: A targeted literature review and development of a novel patient-centric conceptual model. *Cancers*, *17*(23), 3760. https://doi.org/10.3390/cancers17233760

Chan, C. W., Cheng, H., Au, S. K., Leung, K. T., Li, Y. C., Wong, K. H., & Molassiotis, A. (2018). Living with chemotherapy-induced peripheral neuropathy: Uncovering the symptom experience and self-management of neuropathic symptoms among cancer survivors. *European Journal of Oncology Nursing*, *36*, 135–141. https://doi.org/10.1016/j.ejon.2018.09.003

Creswell, J. W. (2007). *Qualitative inquiry and research design: Choosing among five traditions* (2nd ed.). Sage Publications.

Creswell, J. W. (2013). *Research design: Pendekatan kualitatif, kuantitatif dan mixed* (A. Fawaid, Ed.). Pustaka Pelajar.

da Silva, L. A. G. P., Lopes, V. J., & Das Mercês, N. N. A. (2021). Symptom management theory applied to nursing care: A scoping review. *Revista Brasileira de Enfermagem*, *74*(3), e20201004. https://doi.org/10.1590/0034-7167-2020-1004

Edirisinghe, N. P., Makuloluwa, P. T. R., Amarasekara, T., & Goonewardena, C. S. E. (2024). Coping with cancer pain: A qualitative study to explore pain perception and self-coping strategies of patients with cancer in Sri Lanka. *BMJ Open*, *14*(11), e085510. https://doi.org/10.1136/bmjopen-2024-085510

Eisen, T., Kooijstra, E. M., Groeneweg, R., Verseveld, M., & Hidding, J. (2021). The needs and experiences of patients on pain education and the clinical reasoning of physical therapists regarding cancer-related pain: A qualitative study. *Frontiers in Pain Research*, *2*, 675302. https://doi.org/10.3389/fpain.2021.675302

Filipponi, C., Masiero, M., Mazzoni, D., Chichua, M., Marceglia, S., Ferrucci, R., Fragale, E., Didier, F., & Pravettoni, G. (2025). The voices of breast cancer survivors with chronic pain: A qualitative thematic analysis of patients' challenges to pain management. *Journal of Psychosocial Oncology*, *43*(1), 34–58. https://doi.org/10.1080/07347332.2024.2348595

Gui, G., Yang, D., Liu, Y., Yao, Y., Xie, X., Liu, R., Liu, M., Liu, H., & Zhou, F. (2025). How family support alleviates death anxiety in breast cancer patients: The mediating role of meaning in life. *Frontiers in Public Health*, *13*, 1567485. https://doi.org/10.3389/fpubh.2025.1567485

Harerimana, A., Pillay, J. D., & Mchunu, G. (2025). The pitfalls of 'toughing it out': Mapping stoic attitudes in cancer patients. A scoping review. *Medicine, Health Care and Philosophy*, *28*(4), 775–790. https://doi.org/10.1007/s11019-025-10293-4

Hassankhani, H., Hajaghazadeh, M., & Orujlu, S. (2023). Patients' experiences of cancer pain: A descriptive qualitative study. *Journal of Palliative Care*, *38*(4), 465–472. https://doi.org/10.1177/08258597221149545

He, Y., Zhao, W., Duan, A., Xiao, H., Zhou, X., & Zhuo, Q. (2024). 'Only to reconcile with it': The coping experience amongst middle-aged and older cancer survivors: A qualitative study. *Health Expectations*, *27*(2), e14048. https://doi.org/10.1111/hex.14048

Ho, J. F. V., Yaakup, H., Low, G. S. H., Wong, S. L., Tho, L. M., & Tan, S. B. (2020). Morphine use for cancer pain: A strong analgesic used only at the end of life? A qualitative study on attitudes and perceptions of morphine in patients with advanced cancer and their caregivers. *Palliative Medicine*, *34*(5), 619–629. https://doi.org/10.1177/0269216320904905

Huang, S. N., Huang, M., Long, F., & Wang, F. (2025). Post-traumatic growth experience of breast cancer patients: A qualitative systematic review and meta-synthesis. *PLOS ONE*, *20*(1), e0316108. https://doi.org/10.1371/journal.pone.0316108

Karcz, M., Abd-Elsayed, A., Chakravarthy, K., Aman, M. M., Strand, N., Malinowski, M. N., Latif, U., Dickerson, D., Suvar, T., Lubenow, T., Peskin, E., D'Souza, R., Cornidez, E., Dudas, A., Lam, C., Farrell, M., Sim, G. Y., Sebai, M., Garcia, R., & Deer, T. (2024). Pathophysiology of pain and mechanisms of neuromodulation: A narrative review. *Journal of Pain Research*, *17*, 3757–3790. https://doi.org/10.2147/jpr.s475351

Liao, K., Henceroth, M., Lu, Q., & LeRoy, A. (2016). Cultural differences in pain experience among four ethnic groups: A qualitative pilot study. *Journal of Behavioral Health, 5*(2), 75–80. https://doi.org/10.5455/jbh.20160204094059

Lin, Y., Zhou, Y., & Chen, C. (2023). Interventions and practices using Comfort Theory of Kolcaba to promote adults' comfort: An evidence and gap map protocol of international effectiveness studies. *Systematic Reviews, 12*(1), 33. https://doi.org/10.1186/s13643-023-02202-8

Liu, M. T., Liang, S. Y., Chao, T. C., Tseng, L. M., & Rosenberg, J. (2023). The behavioral adaptations and barriers of patients employing non-pharmacological strategies for cancer pain management: A qualitative study. *Healthcare, 11*(22), 2911. https://doi.org/10.3390/healthcare11222911

Mathew, A., Doorenbos, A. Z., & Vincent, C. (2021). Symptom management theory: Analysis, evaluation, and implications for caring for adults with cancer. *Advances in Nursing Science, 44*(3), E93–E105. https://doi.org/10.1097/ans.0000000000000347

Sipilä, R., Hintsa, T., Lipsanen, J., Tasmuth, T., Estlander, A. M., & Kalso, E. (2019). The relationship between anger regulation, mood, pain, and pain-related disability in women treated for breast cancer. *Psycho-Oncology, 28*(10), 2002–2008. https://doi.org/10.1002/pon.5182

Smith, M. D., Manning, J., Nielsen, M., Hayes, S. C., Plinsinga, M. L., & Coppieters, M. W. (2023). Exploring women's experiences with persistent pain and pain management following breast cancer treatment: A qualitative study. *Frontiers in Pain Research, 4*, 1095377. https://doi.org/10.3389/fpain.2023.1095377

Snijders, R. A. H., Brom, L., Theunissen, M., & van den Beuken-van Everdingen, M. H. J. (2023). Update on prevalence of pain in patients with cancer 2022: A systematic literature review and meta-analysis. *Cancers, 15*(3), 591. https://doi.org/10.3390/cancers15030591

Wang, W. L., Hao, Y. H., Pang, X., & Tang, Y. L. (2025). Cancer pain: Molecular mechanisms and management. *Molecular Biomedicine, 6*(1), 45. https://doi.org/10.1186/s43556-025-00289-0

Win Myint, O., Yoong, S. Q., Toh, E., Lei, F., & Jiang, Y. (2025). Effectiveness of massage therapy for cancer pain, quality of life and anxiety levels: A systematic review and meta-analysis. *Journal of Clinical Nursing, 34*(1), 49–87. https://doi.org/10.1111/jocn.17547

Zahedi, H., Sahebihagh, M. H., Mirghafourvand, M., & Hosseinzadeh, M. (2025). A qualitative study of family caregivers' experiences in caring for breast cancer patients. *Scientific Reports, 15*(1), 24287. https://doi.org/10.1038/s41598-025-09198-2