

Nurses' Roles in Empowering Mothers of Low Birth Weight Infants: A Phenomenological Study

Iis Aisyah^{1*}, Dedah Ningrum¹, Akhmad Faozi¹, Dini Saraswati Handayani²

¹Faculty of Nursing, Universitas Pendidikan Indonesia, Kota Bandung, Jawa Barat 40154, Indonesia

²Department of Public Health, Faculty of Medicine, Universitas Padjadjaran, Kabupaten Sumedang, Jawa Barat 45363, Indonesia

*Corresponding Author's Email: iis.aisyah@epu.edu

ABSTRACT

Background: Low Birth Weight (LBW) infants are highly vulnerable to hypothermia, infection, and developmental complications, requiring comprehensive nursing care. However, the integration of maternal empowerment into neonatal care in hospital settings, particularly in Sumedang District, Indonesia, remains underexplored due to contextual and systemic challenges. **Objectives:** This study aimed to explore nurses' experiences, challenges, and strategies in assisting mothers of LBW infants. **Methods:** A qualitative phenomenological design was employed in a hospital-based neonatal setting. Participants were selected using purposive sampling, involving 15 participants (eight nurses, four head nurses, and three mothers for triangulation). Data were collected through in-depth interviews, observations, and document analysis and analyzed using thematic analysis. Credibility was ensured through triangulation and member checking, with ethical approval obtained prior to the study. **Results:** Five themes emerged: holistic accompaniment, psychological and cultural challenges, institutional supports and barriers, adaptive communication strategies, and impacts on maternal readiness. Nurses acted as educators and emotional supporters, although constrained by limited resources and lack of structured guidelines. **Conclusion:** Flexible, empathetic, and context-sensitive accompaniment enhances maternal confidence and readiness. The findings support the development of training programs, family-centered care, and institutional policies to strengthen neonatal care in resource-limited settings. This study also contributes to the achievement of the United Nations, particularly SDG 3 (Good Health and Well-Being) and SDG 10 (Reduced Inequalities) through improved and equitable maternal and neonatal healthcare services.

Keywords: Accompaniment; Low Birth Weight (LBW); Neonatal Nursing; Nurse Role; Phenomenology

INTRODUCTION

Low Birth Weight (LBW) infants remain a major challenge in global neonatal health. The World Health Organization estimates that 15–20% of births worldwide, or more than 20 million infants annually, fall into this category (WHO, 2025). In Southeast Asia, particularly in low- and middle-income countries, LBW continues to be a significant public health concern. In Indonesia, the prevalence remains around 10–12% of live births (Kemenkes Indonesia, 2023; Kemenkes Katalog Data, 2018), contributing to 40–60% of neonatal deaths in the early weeks of life (Murni *et al.*, 2020).

Despite improvements in clinical care, maternal empowerment in caring for LBW infants remains insufficiently addressed. Nursing practice often emphasizes clinical interventions, while educational support, practical guidance, and emotional assistance for mothers are not systematically integrated. As a result, many mothers experience anxiety, lack confidence, and are inadequately prepared to care for their infants after discharge (Ecija *et al.*, 2025). This situation increases the risk of complications such as hypothermia, infection, and developmental disorders, which may lead to rehospitalization and prolonged recovery (Kuint *et al.*, 2017).

Received: August 19, 2025 Received in revised form: April 6, 2026 Accepted: April 15, 2026

Given this context, there is a need to develop nursing care models that integrate clinical care with maternal empowerment. This requires an in-depth understanding of how nurses support mothers through communication, education, and psychosocial assistance in real clinical settings (Petty *et al.*, 2025). A phenomenological approach is therefore appropriate to capture nurses' lived experiences and identify best practices in accompaniment (Watson, 2025).

Previous qualitative studies have largely explored mothers' lived experiences in caring for LBW or preterm infants, highlighting emotional distress, role transition, and caregiving challenges (Bright *et al.*, 2020; Murdoch & Franck, 2012). However, these studies primarily focus on maternal perspectives and provide limited insight into how nurses actively construct and implement accompaniment practices. Consequently, the relational, cultural, and institutional dimensions of nurses' roles in maternal empowerment remain underexplored.

Existing research on LBW infants can be broadly categorized into two streams: clinical and technical care and maternal experience studies. However, these streams remain insufficiently integrated, with limited attention to nurses' experiential roles in real clinical contexts. To clarify this gap, a summary of selected studies is presented in Table 1.

Table 1: Summary of LBW Care Studies and Research Gaps

Author & Year	Objective	Method	Key Findings	Identified Gaps
Halawani <i>et al.</i> (2023)	To examine standards of care for LBW infants in perinatology units	Literature review / clinical review	Identifies clinical protocols	No focus on maternal empowerment or nurses' roles
Ricci (2024)	To describe medical procedures and monitoring in neonatal care	Conceptual / textbook-based approach	Emphasizes clinical monitoring	Lacks nurses' experiential perspective
Zubaidah <i>et al.</i> (2021)	To explore mothers' experiences in caring for LBW infants	Qualitative study (phenomenological/descriptive)	Highlights emotional challenges	No focus on nurses' role in empowerment
Ntwane-Lebang and Khoza (2010)	To investigate mothers' caregiving experiences for LBW infants	Qualitative study	Identifies psychological challenges	Limited nurse–mother interaction analysis
Yadav and Karna (2021)	To assess nurses' knowledge regarding LBW care	Quantitative survey	Shows knowledge variation	No communication or psychosocial focus

As shown in Table 1, prior studies emphasize clinical care, maternal experiences, or nurses' knowledge but rarely examine nurses' lived experiences as facilitators of maternal empowerment. This highlights a critical gap in understanding how accompaniment is enacted in practice.

Building on this gap, the present study offers a novel contribution by adopting a phenomenological approach to examine nurses' roles as active agents of maternal empowerment in LBW care. Unlike previous studies, this research integrates technical, educational, emotional, and strategic dimensions of nursing practice within a single framework, including communication strategies, resource management, and institutional coordination. This study provides a comprehensive perspective on accompaniment and contributes to the development of neonatal nursing models grounded in maternal empowerment, with implications for achieving the Sustainable Development Goals (Iheme *et al.*, 2017; Kundu *et al.*, 2023).

Objectives

Accordingly, this study aims to explore the role of nurses in empowering mothers of LBW infants, focusing on their practices, challenges, and adaptive strategies in hospital settings in Sumedang District, Indonesia. The research questions are as follows:

- How do nurses construct the meaning of their role in the process of accompanying and empowering

mothers caring for LBW infants in hospitals?

- What dimensions of challenges do nurses encounter in implementing accompaniment and empowerment practices for mothers of LBW infants within neonatal nursing care?
- What adaptive strategies are developed by nurses to overcome these challenges in order to enhance the effectiveness of maternal empowerment for LBW infant care in hospitals?

Theoretical Framework

Fundamental Concepts of Neonatal Nursing Care and Maternal Empowerment

LBW infants are defined by the World Health Organization as those born weighing less than 2,500 grams and are highly vulnerable to hypothermia, hypoglycemia, infections, respiratory complications, and developmental delays (Kuint *et al.*, 2017). Neonatal nursing care therefore extends beyond clinical stabilization and intensive monitoring to encompass a holistic approach integrating educational, psychological, and social dimensions (Amaliya *et al.*, 2023), where nurses act not only as clinical providers but also as facilitators of maternal involvement in caregiving (Zubaidah *et al.*, 2021; Ntswane-Lebang & Khoza, 2010). Within this framework, maternal empowerment becomes central, referring to a systematic process of enhancing mothers' knowledge, skills, and confidence in providing continued care at home, which contributes to reducing complications and improving infant outcomes (Maleki *et al.*, 2022). Evidence shows that mothers who receive education and accompaniment develop higher self-efficacy in caring for their infants (Tabrizi *et al.*, 2017), highlighting that empowerment is closely linked to nurses' roles in delivering continuous education, emotional support, and guidance. Consequently, maternal empowerment should be viewed not merely as a temporary intervention but as a long-term investment that supports the success of family-centered neonatal care programs (Petty *et al.*, 2022).

Theoretical Foundation and Nursing Model

The theoretical framework of this study is grounded in Family-Centered Care (FCC), which positions the family – particularly the mother – as the primary partner in caring for LBW infants, emphasizing collaboration, effective communication, and shared decision-making (Brødsgaard *et al.*, 2019; Lopez-Maestro *et al.*, 2020). Within this approach, nurses act as facilitators who bridge clinical care and family involvement, enabling mothers to become active participants in caregiving, which has been shown to improve care quality, reduce complications, and enhance family satisfaction (Jafari *et al.*, 2024; Maleki *et al.*, 2022). Complementing this, maternal empowerment is explained through self-efficacy theory, which highlights that mothers' confidence in caring for LBW infants can be strengthened through mastery experiences, vicarious learning, verbal persuasion, and emotional regulation (Vaughan-Johnston & Jacobson, 2020; Davis-Berman, 2019). In neonatal care, nurses play a key role in fostering this self-efficacy through education, emotional support, and adaptive communication. The integration of FCC and self-efficacy theory thus provides a strong conceptual foundation for maternal empowerment, positioning nurses as mediators who facilitate both maternal involvement and the development of caregiving competence, ultimately enhancing mothers' readiness to provide continued care at home (Lippke, 2020; Naef *et al.*, 2020).

Conceptual Framework of Nurses' Role in Strengthening Care

The synergy between neonatal nursing care and maternal empowerment forms a conceptual framework that positions nurses as agents of change, acting not only as clinical providers but also as learning facilitators, emotional counselors, and mediators between the healthcare system and families (Rafii *et al.*, 2020; Tabrizi *et al.*, 2017). Within this framework, nurses' roles – encompassing education, emotional support, communication, and adaptive strategies – contribute to the development of maternal empowerment, which enhances mothers' self-efficacy, confidence, and readiness to care for LBW infants at home, ultimately reducing complications and improving neonatal care outcomes (Kundu *et al.*, 2023; Naef *et al.*, 2020). This integrated framework, as illustrated in Figure 1, provides a structured basis for interpreting the findings and highlights nurses' roles as a central mechanism in strengthening maternal participation and continuity of care beyond hospital settings.

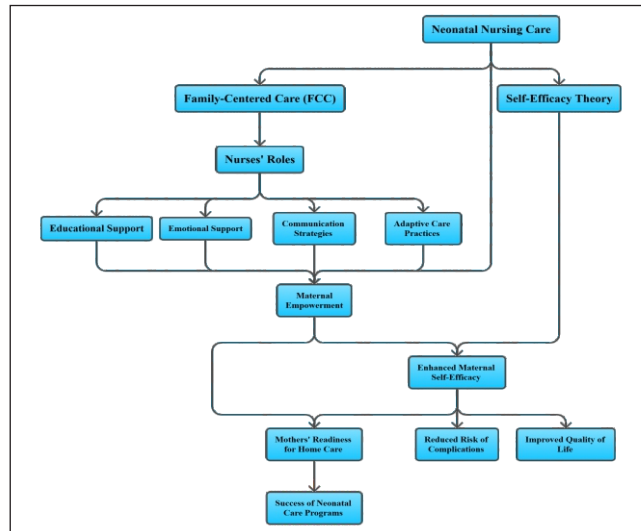


Figure 1: Conceptual Framework of Nurses' Role in Strengthening Neonatal Care

Figure 1 illustrates the conceptual framework of this study, showing the dynamic relationship between neonatal nursing care, Family-Centered Care (FCC), and self-efficacy theory as the foundations of maternal empowerment. In this framework, nurses act as central mediators through educational support, emotional support, communication strategies, and adaptive care practices that enhance mothers' self-efficacy, confidence, and readiness to care for LBW infants at home. Strengthened maternal empowerment contributes to reduced complications and improved quality of life, supporting the success of neonatal care programs. This framework highlights the integration of clinical care, psychosocial support, and family involvement and serves as the basis for understanding nurses' roles, challenges, and strategies in real clinical settings.

METHODOLOGY

Research Design and Procedure

This study employed a qualitative phenomenological design to explore nurses' lived experiences in accompanying mothers of LBW infants in hospital settings (Creswell & Creswell, 2017; Merriam & Tisdell, 2015). A phenomenology-informed thematic analysis approach was used to capture experiential meanings while systematically identifying patterns in the data (Braun & Clarke, 2006). The research followed standard qualitative procedures, including the development and validation of semi-structured interview guidelines, followed by data collection through in-depth interviews, participant observation, and document analysis. All interviews were audio-recorded and transcribed verbatim. Data were analyzed inductively through stages of familiarization, coding, theme development, review, and reporting, with collaborative discussions among researchers to ensure consistency. Credibility was strengthened through member checking and triangulation of data sources and methods. The overall research procedure is illustrated in Figure 2.

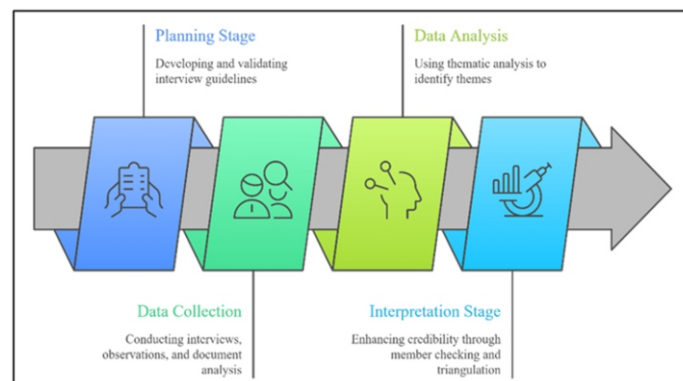


Figure 2: Qualitative Research Procedure

Participants

Participants were selected using purposive sampling to include individuals with relevant experience in neonatal care and maternal accompaniment. The study involved 13 participants, consisting of eight nurses, two head nurses, and three mothers of LBW infants for triangulation. All participants were recruited through coordination with the neonatal unit and provided informed consent prior to data collection. Inclusion criteria for nurses included a minimum of two years of experience and active involvement in maternal support. In line with phenomenological principles, the sample prioritized depth over quantity, with data saturation achieved at the eighth nurse participant, while additional participants were included to strengthen triangulation (Starks & Brown, 2007).

Data Collection Techniques

Data were collected from 15 participants, comprising eight nurses as primary participants, supported by four head nurses and three mothers of LBW infants for triangulation. Three complementary techniques were used to ensure methodological triangulation. First, semi-structured in-depth interviews (N = 8) were conducted with nurses, each lasting 45–60 minutes, using an expert-validated interview guide; all interviews were audio-recorded and transcribed verbatim. Additional insights from head nurses and mothers were obtained through interviews and observations. Second, participant observations were conducted over three weeks in neonatal care units to capture real-time interactions, supported by systematic field notes. Third, document analysis of nursing records, Standard Operating Procedures (SOPs), and hospital policies was undertaken to enrich the data. All data were managed and analyzed using NVivo 14 to facilitate coding and thematic organization.

Data Analysis

Data were analyzed using thematic analysis within a phenomenology-informed approach, following Braun and Clarke (2006), including familiarization, coding, theme development, review, and reporting. The analysis was conducted inductively to capture meanings from participants' lived experiences. Coding was performed collaboratively by the research team, supported by NVivo 14 to facilitate data organization and theme identification. Discrepancies were resolved through consensus to ensure analytical consistency and credibility, enabling the integration of interpretative depth with methodological rigor.

Trustworthiness of Data

Trustworthiness was ensured through source triangulation (nurses, head nurses, and documents) and method triangulation (interviews, observations, and document analysis), supported by member checking to validate data interpretation. An audit trail and expert discussions enhanced dependability and confirmability. Reflexivity was maintained through researchers' awareness of potential bias, with reflective discussions and peer debriefing conducted to ensure that findings remained grounded in participants' lived experiences.

Ethical Clearance

The research obtained ethical clearance from the ethics committee of Universitas Pendidikan Indonesia, Bandung, Indonesia with reference number 1426/UN40.C2/PT.01.03/2025 on 1st March, 2025.

RESULTS

A total of 579 statements were collected from participant interviews, resulting in five main themes reflecting nurses' experiences in accompanying mothers of LBW infants in Sumedang District: (1) Holistic accompaniment, (2) Psychological and cultural challenges, (3) Institutional supports and barriers, (4) Adaptive communication strategies, and (5) Impacts and expectations toward the healthcare system. Figure 3 illustrates the interconnections among these themes through a thematic network, depicting how nurses' roles relate to maternal empowerment, with subthemes derived from interviews, observations, and document analysis.

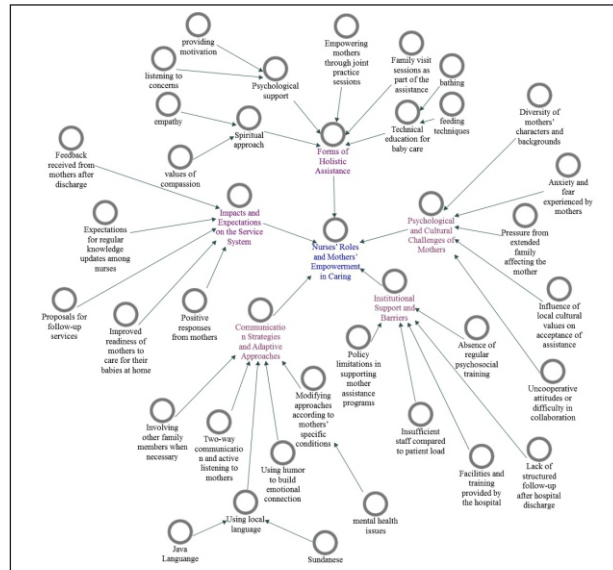


Figure 3: Main Themes and Subthemes of Accompaniment

Figure 3 visualizes the five main themes identified in this study. To provide a deeper understanding, the following sections elaborate on each theme along with the sub-aspects that emerged from nurses' experiences in holistically and contextually accompanying mothers of LBW infants.

Theme 1: Forms of Holistic Accompaniment

Nurses implemented a holistic accompaniment approach that integrated educational guidance, emotional support, and practical skill-building to strengthen mothers' confidence in caring for LBW infants. This approach positioned mothers as active participants in the caregiving process rather than passive recipients of information. This holistic approach is reflected in nurses' accounts, as illustrated in the following statements:

“By explaining how to care for the baby and demonstrating how to bathe the baby, mothers become more confident” (N1).

“We engage in two-way conversations, listen to their concerns, and provide motivation” (N3).

“We explain using simple language and concrete examples so that mothers understand” (N4).

“Education is given when family members come, and we practice together” (N5).

These findings indicate that accompaniment extends beyond procedural instruction toward empowerment-oriented practice, where nurses foster experiential learning, dialogical communication, and family involvement to enhance maternal self-efficacy. Supportive and empathetic interactions help build trust and emotional comfort, preparing mothers for post-discharge care. However, psychological and socio-cultural challenges continue to influence how accompaniment is experienced, as discussed in the following theme.

Theme 2: Mothers' Psychological and Cultural Challenges

Mothers of LBW infants experienced significant psychological distress, including anxiety, fear, and self-doubt, which influenced their ability to engage in caregiving practices. These emotional responses were not uniform but varied across individuals and were often shaped by situational and contextual factors. These challenges are reflected in nurses' accounts, as illustrated in the following statements:

“The mother is deeply anxious and wants her baby to go home quickly” (N2).

“The mother was not cooperative and difficult to work with” (N4).

“Different mothers react differently in facing their baby's condition” (N6).

“The family is anxious too, and it confuses the mother” (N7).

These findings indicate that maternal challenges are shaped by both individual and socio-cultural factors, with emotional vulnerability often intensified by family dynamics. Nurses must address psychological conditions alongside family influences, highlighting the need for culturally sensitive and adaptive care. These challenges also interact with broader institutional factors, as discussed in the following theme.

Theme 3: Institutional Supports and Barriers

Institutional conditions significantly influenced the implementation of accompaniment practices, including facilities, staffing, training, and coordination systems. While available resources supported effective care, structural limitations often hindered continuity and comprehensive support, particularly for follow-up and psychosocial needs. These conditions are reflected in head nurses' accounts, as illustrated in the following statements:

“We provide facilities, space, and regular training for nurses” (H1).

“The number of staff is not proportional to the patient load” (H2).

“Continuity of accompaniment after discharge is not yet structured” (H3).

“There is no routine training on psychosocial aspects” (H4).

These findings indicate that accompaniment is shaped not only by nurses' competencies but also by organizational capacity, including staffing, training, and continuity-of-care systems. While institutional support enhances practice, limitations in human resources and follow-up systems may hinder sustainability, highlighting the need for stronger coordination. These conditions also influence how nurses adapt their communication and caregiving approaches, as discussed in the following theme.

Theme 4: Communication Strategies and Adaptive Approaches

Communication emerged as a key component of accompaniment, with nurses employing adaptive strategies tailored to mothers' emotional, cognitive, and socio-cultural conditions. Rather than using a uniform approach, communication was adjusted to enhance understanding, build trust, and sustain engagement throughout the caregiving process. These strategies are reflected in nurses' accounts, as illustrated in the following statements:

“We engage in two-way conversations, listening to their concerns” (N3).

“Using the mother tongue (Sundanese) so they can understand easily” (N5).

“When the mother had a mental health issue, we involved other family members as well” (N6).

“We joke with them and ask what they want to know about their baby” (N8).

These findings indicate that communication in neonatal accompaniment is flexible and relational, involving adjustments in language, interaction, and engagement strategies. The use of local language, family involvement, and humor enhances understanding and emotional comfort, supporting maternal readiness and participation. These adaptive strategies also influence the outcomes of accompaniment and shape expectations toward healthcare services, as discussed in the following theme.

Theme 5: Impacts and Expectations toward the Health-Care System

Nurses and head nurses perceived that accompaniment practices positively enhanced mothers' readiness, confidence, and engagement in caring for LBW infants, particularly in preparing them for home-based care. These impacts are reflected in participants' accounts:

“Mothers became ready to care for their babies at home” (N2).

“Alhamdulillah, it was well received and mothers became more enthusiastic” (N3).

“When the mother was able to care for the LBW baby and we received good news after discharge” (N4).

“It is important to update knowledge to improve services” (H3).

“There needs to be a growth clinic and an alumni group for NICU mothers” (N8).

To further support these findings, mothers' perspectives also highlight the perceived benefits of accompaniment:

"I feel more confident taking care of my baby at home after receiving guidance from the nurses" (M1).

"The explanations from the nurses helped me understand how to care for my baby properly" (M2).

"I am no longer as afraid as before because I have learned how to care for my baby" (M3).

These findings indicate that accompaniment not only improves immediate readiness but also sustains caregiving confidence beyond hospital settings. The alignment between healthcare providers' and mothers' perspectives strengthens evidence of maternal empowerment while highlighting the need for structured follow-up programs and integrated healthcare systems. Overall, accompaniment is a multidimensional process shaped by holistic care, maternal challenges, institutional conditions, and adaptive communication, with its sustainability depending on institutional support and continuity of care.

DISCUSSION

This study identified five major themes reflecting the complexity of accompanying mothers of LBW infants in hospital settings in Sumedang District, providing interpretative insights into how nurses enact their roles, navigate challenges, and implement strategies influencing maternal outcomes. The themes—holistic accompaniment, psychological and cultural challenges, institutional supports and barriers, adaptive communication strategies, and impacts with future expectations—demonstrate that accompaniment is a dynamic and relational process shaped by individual, cultural, and organizational factors (Hansen *et al.*, 2026; Avazeh *et al.*, 2026).

Holistic accompaniment highlights nurses' roles as facilitators of empowerment through education, emotional support, and culturally responsive interaction, fostering maternal engagement and confidence. This aligns with Maleki *et al.* (2022) and Sitzman and Watson (2019) and is supported by international findings linking maternal empowerment to improved caregiving competence and neonatal outcomes (Abukari *et al.*, 2025; Abukari *et al.*, 2026). The use of local language (Sundanese) and adaptive communication reflects a shift toward participatory care, reducing psychological distance and enhancing trust and maternal confidence (Bain *et al.*, 2026; Bastian *et al.*, 2025).

Mothers' psychological and cultural challenges, including anxiety, self-doubt, and family influence, underscore the importance of cultural competence in neonatal care. This finding is consistent with Madeleine Leininger's transcultural nursing theory, which emphasizes aligning care with patients' cultural values (McFarland & Wehbe-Alamah, 2019). In the Sundanese context, caregiving extends beyond the mother to the family unit, redefining the scope of nursing intervention. Institutional supports and barriers further shape accompaniment practices, with limited staffing, weak post-discharge coordination, and insufficient psychosocial training reflecting systemic constraints. These findings align with global evidence on the importance of institutional readiness, including policy support and workforce capacity, in sustaining neonatal care systems (Darmstadt *et al.*, 2023).

Adaptive communication strategies, including local language use, humor, and family involvement, demonstrate flexible and context-sensitive care aligned with dialogical engagement principles (Takona, 2024) and personalized communication approaches (Ricci, 2024). These strategies enhance maternal participation and understanding. The impacts of accompaniment include improved maternal readiness and confidence, supporting findings on the role of continuous education in enhancing self-efficacy (Davis-Berman, 2019; Halawani *et al.*, 2023).

This study contributes by addressing gaps in prior research (Maleki *et al.*, 2022; Yadav & Karna, 2021), which often emphasize clinical or knowledge aspects without integrating relational, cultural, and systemic dimensions. By combining these dimensions within a single framework, this study offers a more comprehensive understanding of accompaniment and suggests policy interventions such as cultural competence training, linguistic support, and structured post-discharge programs.

Finally, the researchers' positionality was acknowledged, with strategies such as triangulation, member checking, and collaborative analysis employed to minimize bias. Overall, accompaniment is a multidimensional, context-dependent process requiring the integration of clinical expertise, cultural

sensitivity, and institutional support to strengthen maternal empowerment and neonatal care systems.

Limitations

This study has several limitations. This study was conducted in a single hospital setting, which may limit the transferability of the findings to other healthcare contexts. The number of participants was relatively limited, as is typical in phenomenological research that prioritizes depth over generalizability. These findings are based on qualitative data and may involve subjective interpretation, although research quality was maintained through triangulation, member checking, and collaborative analysis.

Future Scope

Future research is recommended to develop and test comprehensive accompaniment models across diverse healthcare settings.

CONCLUSION

This study demonstrates that the accompaniment of mothers of LBW infants in hospital settings constitutes a multidimensional and transformative nursing practice, in which nurses extend their roles beyond clinical care to act as educators, emotional supporters, and facilitators of maternal empowerment. These practices are shaped by psychological, cultural, and institutional factors, requiring culturally responsive care, adaptive communication, and empathetic engagement. The effectiveness of accompaniment is strongly influenced by institutional capacity, including adequate staffing, structured psychosocial training, and continuity of post-discharge support. These findings highlight the need for strengthening structured training programs, family-centered care practices, and community-based support systems to sustain maternal empowerment. Future research is recommended to develop and test comprehensive accompaniment models across diverse healthcare settings.

CRedit Authorship Contribution Statement

I.A: Conceptualization, Methodology, Investigation, Writing – Original Draft, Supervision. D.N: Data Curation, Formal Analysis, Validation, Writing – Review and Editing. A.F: Resources, Visualization, Project Administration, Writing – Review and Editing. D.S.H : Software, Data Curation, Investigation, Writing – Review and Editing.

AI Assistance Declaration

The authors declare that Grammarly was used solely for language editing and grammatical improvement. No generative AI tools were used in data analysis, interpretation, or the development of scientific content. All ideas and findings are the authors' original work, and the authors take full responsibility for the manuscript.

Conflict of Interest

The authors declare no conflict of interest.

ACKNOWLEDGEMENT

The authors would like to express their sincere gratitude to the nurses, participating mothers, and head nurses at the hospital for their valuable contributions to this study. The authors also acknowledge the Directorate of Research and Community Service, Universitas Pendidikan Indonesia, Bandung, Indonesia for providing financial support for this research.

REFERENCES

- Abukari, A. S., Agyeibi, E., Adobea, C., Haruna, I. S., & Korsah, E. K. (2025). Navigating preterm motherhood: Perceived support and coping strategies in neonatal intensive care units. *Journal of Neonatal Nursing*, 31(6), 101742. <https://doi.org/10.1016/j.jnn.2025.101742>
- Abukari, A. S., Korsah, E. K., Okworu, E. F., Mensah, L., & Haruna, I. S. (2026). Domains of maternal knowledge and practices in essential newborn care in Urban Ghana: A factor analysis. *Midwifery*, 152, 104666. <https://doi.org/10.1016/j.midw.2025.104666>

- Amaliya, S., Kapti, R. E., Astari, A. M., Yuliatun, L., & Azizah, N. (2023). Improving knowledge and self-efficacy in caring at home for parents with low birth weight babies. *Jurnal Aisyah: Jurnal Ilmu Kesehatan*, 8(2), 819–826. <https://doi.org/10.30604/jika.v8i2.1952>
- Avazeh, M., Shahbazi, S., Borimnejad, L., Hosseini, M., & Jabraeili, M. (2026). Mothers' lived experiences of participating in pain management for hospitalised preterm infants during invasive procedures: An interpretive phenomenological study. *Scandinavian Journal of Caring Sciences*, 40(1), e70180. <https://doi.org/10.1111/scs.70180>
- Bain, M., Park, S., Zaidi, A., Atif, N., Rahman, A., Malik, A., & Surkan, P. J. (2026). Social support and spousal relationship quality improves responsiveness among anxious mothers. *Child Psychiatry and Human Development*, 57(1), 138–151. <https://doi.org/10.1007/s10578-024-01702-5>
- Bastian, L. R., Ozer Green, F. A., Whitmore, C. B., Greci, K. S., & Edwards, A. E. (2025). Facilitating culturally safe conversations around substance use disorder and contraception to provide inclusive care for neurodiverse and neurotypical populations. *Nursing for Women's Health*, 29(6), 393–404. <https://doi.org/10.1016/j.nwh.2025.07.006>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Bright, K. S., Mannion, C., White, D., & Bouchal, S. R. (2020). Transitioning into the role of mother following the birth of a very low-birth-weight infant: a grounded theory pilot study. *The Journal of Perinatal & Neonatal Nursing*, 34(2), 125–133. <https://doi.org/10.1097/JPN.0000000000000466>
- Brødsgaard, A., Pedersen, J. T., Larsen, P., & Weis, J. (2019). Parents' and nurses' experiences of partnership in neonatal intensive care units: A qualitative review and meta-synthesis. *Journal of Clinical Nursing*, 28(17–18), 3117–3139. <https://doi.org/10.1111/jocn.14920>
- Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches* (3rd ed.). Sage publications. https://www.ucg.ac.me/skladiste/blog_609332/objava_105202/fajlovi/Creswell.pdf
- Darmstadt, G. L., Al Jaifi, N. H., Arif, S., Bahl, R., Blennow, M., Cavallera, V., Chou, D., Chou, R., Comrie-Thomson, L., & Edmond, K. (2023). New World Health Organization recommendations for care of preterm or low birth weight infants: health policy. *EClinicalMedicine*, 63. <https://doi.org/10.1016/j.eclinm.2023.102155>
- Davis-Berman, J. (2019). *Self-efficacy and depressive symptomatology in older adults: An exploratory study*. Health and healthcare utilization in later life (pp. 39–47), Routledge. <https://doi.org/10.4324/9781315227375-3>
- Ecija, C., Catala, P., Gutierrez, L., & Peñacoba-Puente, C. (2025). Are worries and postpartum depression influenced by early depressive symptoms and mothers' lack of confidence? a prospective study. *Clinical and Experimental Obstetrics and Gynecology*, 52(3). <https://doi.org/10.31083/CEOG26969>
- Halawani, A. Z., Alharbi, M. A., Alkhuraym, Y. Y., Alharthi, A. H., Alqahtani, S. F. M., Al-Qahtani, M. M. A., Al-Faridi, S. G., Alharbi, S. O. S., Al-Khalidi, N. K., & Alotaibi, M. S. A. (2023). Low Birth Weight and Preterm Infants Nursing Care: an Updated Review. *International Journal of Health Sciences*, 7(S1), 3779–3794. <https://doi.org/10.53730/ijhs.v7nS1.15387>
- Hansen, S., Hessevaagbakke, E., Lindeflaten, K., Solberg, S. R., Bachke, A. N. F., & Lillekroken, D. (2026). Stepping up as confident caregivers and emerging leaders of care: exploring third-year nursing students' experiences of mentoring first-year peers in nursing homes. *BMC Medical Education*, 26(1). <https://doi.org/10.1186/s12909-026-08588-y>
- Iheme, P., Omoregbe, N. A., Misra, S., Adeloje, D., & Adewumi, A. (2017, July). Mobile-Bayesian Diagnostic System for Childhood Infectious Diseases. In *International Conference on Applied Digital Information and Web Technologies (ICADIWT)* (pp. 109–118). <https://doi.org/10.3233/978-1-61499-773-3-109>
- Jafari, Z., Kermanshahi, S. M. K., Vanaki, Z., & Mosayebi, Z. (2024). Parental barriers to implementing family-centred care in a neonatal intensive care unit in Islamic Republic of Iran. *Eastern Mediterranean Health Journal*, 30(5), 356–362. <https://doi.org/10.26719/2024.30.5.356>

- Kemendes Indonesia (2023, December 18). *Profil Kesehatan Indonesia 2022* [Indonesia Health Profile 2022]. <https://kemkes.go.id/id/profil-kesehatan-indonesia-2022>
- Kemendes Katalog Data. (2018). *Riset Kesehatan Dasar (Riskesdas) 2018* [Basic Health Research (Riskesdas) 2018]. <https://layanandata.kemkes.go.id/katalog-data/riskesdas/ketersediaan-data/riskesdas-2018>
- Kuint, J., Lerner-Geva, L., Chodick, G., Boyko, V., Shalev, V., Reichman, B., Heymann, E., Zangen, S., Smolkin, T., Mimouni, F., Bader, D., Rothschild, A., Strauss, Z., Felszer, C., Jeryes, J., Tov-Friedman, S. E., Bar-Oz, B., Feldman, M., Saad, N., ... Bakhrakh, L. (2017). Rehospitalization through childhood and adolescence: association with neonatal morbidities in infants of very low birth weight. *Journal of Pediatrics*, *188*, 135-141. <https://doi.org/10.1016/j.jpeds.2017.05.078>
- Kundu, T. K., Chatterjee, A., Bera, M., Chowdhury, A., & Guchhait, R. (2023). Analysis of risk factor specific mortality to improve neonatal mortality rate in a special newborn care unit: A cross sectional descriptive study. *Journal of Nepal Paediatric Society*, *43*(3), 121–125. <https://doi.org/10.60086/jnps1104>
- Lippke, S. (2020). Self-efficacy theory. *Encyclopedia of personality and individual differences*, 4722-4727. *Springer International Publishing*. https://doi.org/10.1007/978-3-319-28099-8_1167-1
- Lopez-Maestro, M., De la Cruz, J., Perapoch-Lopez, J., Gimeno-Navarro, A., Vazquez-Roman, S., Alonso-Diaz, C., Muñoz-Amat, B., Morales-Betancourt, C., Soriano-Ramos, M., & Pallas-Alonso, C. (2020). Eight principles for newborn care in neonatal units: Findings from a national survey. *Acta Paediatrica*, *109*(7), 1361–1368. <https://doi.org/10.1111/apa.15121>
- Maleki, M., Mardani, A., Harding, C., Basirinezhad, M. H., & Vaismoradi, M. (2022). Nurses' strategies to provide emotional and practical support to the mothers of preterm infants in the neonatal intensive care unit: a systematic review and meta-analysis. *Women's Health*, *18*, 17455057221104674. <https://doi.org/10.1177/17455057221104674>
- McFarland, M. R., & Wehbe-Alamah, H. B. (2019). Leininger's theory of culture care diversity and universality: an overview with a historical retrospective and a view toward the future. *Journal of Transcultural Nursing*, *30*(6), 540–557. <https://doi.org/10.1177/1043659619867134>
- Murdoch, M. R., & Franck, L. S. (2012). Gaining confidence and perspective: a phenomenological study of mothers' lived experiences caring for infants at home after neonatal unit discharge. *Journal of Advanced Nursing*, *68*(9), 2008–2020. <https://doi.org/10.1111/j.1365-2648.2011.05891.x>
- Murni, D., Kurniawati, Y., & Ramayanti, R. (2020). Risk of death for low birth weight babies using Cox regression. In *Proceedings of the 7th Mathematics, Science, and Computer Science Education International Seminar (MSCEIS 2019)* (Vol. 360). European Alliance for Innovation. <https://doi.org/10.4108/eai.12-10-2019.2296440>
- Naef, R., Kläusler-Troxler, M., Ernst, J., Huber, S., Dinten-Schmid, B., Karen, T., & Petry, H. (2020). Translating family systems care into neonatology practice: A mixed method study of practitioners' attitudes, practice skills and implementation experience. *International Journal of Nursing Studies*, *102*, 103448. <https://doi.org/10.1016/j.ijnurstu.2019.103448>
- Ntswane-Lebang, M. A., & Khoza, S. (2010). Mothers' experiences of caring for very low birth weight premature infants in one public hospital in Johannesburg, South Africa. *Africa Journal of Nursing and Midwifery*, *12*(2), 69-82. <https://hdl.handle.net/10520/EJC19351>
- Petty, J., Jones, T., Van den Hoogen, A., Walker, K., & Kenner, C. (2022). *Neonatal nursing: A global perspective*. Springer. <https://doi.org/10.1007/978-3-030-91339-7>
- Petty, J., Whiting, L., & Harding, C. (2025). Neonatal Nurses' Understanding of the Factors That Enhance and Hinder Early Communication Between Preterm Infants and Their Parents: A Narrative Inquiry Study. *International Journal of Language & Communication Disorders*, *60*(4), e70093. <https://doi.org/10.1111/1460-6984.70093>
- Rafii, F., Alinejad-Naeini, M., & Peyrovi, H. (2020). Maternal role attainment in mothers with term neonate: A hybrid concept analysis. *Iranian Journal of Nursing and Midwifery Research*, *25*(4), 304–313.

https://doi.org/10.4103/ijnmr.IJNMR_201_19

- Ricci, S. (2024). *Essentials of maternity, newborn, and women's health nursing*. Lippincott Williams & Wilkins.
- Sitzman, K. L., & Watson, J. (2019). *Assessing and measuring caring in nursing and health science: Watson's caring science guide* (3rd ed.). Springer Publishing Company. <http://doi.org/10.1891/9780826195425>
- Starks, H., & Brown Trinidad, S. (2007). Choose your method: A comparison of phenomenology, discourse analysis, and grounded theory. *Qualitative Health Research*, 17(10), 1372–1380. <https://doi.org/10.1177/1049732307307031>
- Tabrizi, F. M., Alizadeh, S., & Radfar, M. (2017). Barriers of parenting in mothers with a very low- birth- weight preterm infant, and their coping strategies: A qualitative study. *International Journal of Pediatrics*, 5(9), 5597–5608. <https://doi.org/10.22038/ijp.2017.23566.1984>
- Tisdell, E. J., Merriam, S. B., & Stuckey-Peyrot, H. L. (2025). *Qualitative research: A guide to design and implementation*. John Wiley & Sons.
- Vaughan-Johnston, T. I., & Jacobson, J. A. (2020). Self-efficacy theory. In *The Wiley Encyclopedia of Personality and Individual Differences, Models and Theories* (pp. 375–379). John Wiley & Sons. <https://doi.org/10.1002/9781119547143.ch62>
- Watson A. (2025). A Postmodernist Qualitative Research Approach: Choosing Between Descriptive and Interpretive Phenomenology. *Journal of Advanced Nursing*, 81(10), 6968–6973. <https://doi.org/10.1111/jan.16730>
- World Health Organization (WHO). (2025). *Low birth weight*. <https://www.who.int/data/nutrition/nlis/info/low-birth-weight>
- Yadav, U., & Karna, B. K. (2021). Knowledge regarding care of low birth weight babies among nurses working in pediatric wards of a university hospital in Eastern Nepal. *Journal of BP Koirala Institute of Health Sciences*, 4(1), 43–47. <https://doi.org/10.3126/jbpihs.v4i1.36101>
- Zubaidah, Z., Rustina, Y., Nurhaeni, N., & Hastono, S. P. (2021). Experience of mother on caring of children with low birth weight in an urban setting, indonesia: A descriptive phenomenological study. *Open Access Macedonian Journal of Medical Sciences*, 9, 124–129. <https://doi.org/10.3889/oamjms.2021.8260>