Implementation of Deep Breathing Relaxation and Early Mobilization to Overcome Pain and Mobility Problems in Post-Section Caesarean Mothers Indicated with Premature Rupture of Membranes in Patient, Mrs. R P3a0 at Rskb Columbia Asia

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Sectio Caesarea is a surgical procedure performed to deliver a baby through an incision in the abdominal wall and uterus. This procedure may cause several NERS ing problems in the mother, such as acute pain, limited physical activity, and breastfeeding difficulties. In addition, infants born through surgical delivery may experience early adaptation problems, including the risk of ineffective thermoregulation, risk of infection, and risk of impaired attachment processes. Therefore, comprehensive NERS ing care is required to support maternal recovery and assist newborn adaptation. The purpose of this case study is to describe the implementation of NERS ing care for a post–Sectio Caesarea mother and her newborn using the NERS ing process approach, which includes assessment, NERS ing diagnosis, intervention planning, implementation, and evaluation. The method used in this study is a case study conducted on Mrs. M with post–Sectio Caesarea at the inpatient ward. The assessment results showed several NERS ing problems in the mother, including acute pain related to the surgical procedure, activity intolerance related to postoperative physical weakness, and ineffective breastfeeding related to breast engorgement and lack of optimal breastfeeding stimulation. In the newborn, the identified NERS ing problems included the risk of ineffective thermoregulation, risk of infection related to immature immune defense and umbilical cord care, and risk of impaired attachment process due to mother–baby separation. NERS ing interventions implemented included pain management, gradual mobilization, breastfeeding education, monitoring the baby's body temperature, umbilical cord care, and facilitating mother–infant bonding. After two days of NERS ing care, the condition of both mother and baby showed improvement, indicated by decreased pain levels, improved maternal activity tolerance, the initiation of breast milk production, stable neonatal temperature, and the beginning of mother–infant interaction. In conclusion, the implementation of a comprehensive NERS ing process can improve recovery in post–Sectio Caesarea mothers and support the physiological and psychological adaptation of newborns.
Keywords: Postpartum, Sectio Caesarea, NERS ing Care, Newborn, NERS ing Process.

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1. Introduction

Cesarean section is an obstetric surgical procedure performed to deliver the fetus through an incision in the abdominal wall and uterus, based on maternal or fetal indications. Over the past five years, the rate of cesarean deliveries has continued to increase globally, in both developed and developing countries. This increase is associated with medical factors such as preeclampsia, fetal distress, placenta previa, and Premature Rupture of Membranes (PROM), all of which may increase the risk of infection and complications

if delivery is not carried out promptly [1]. The high number of these procedures has led to a growing need for optimal postoperative care to prevent complications and accelerate maternal recovery.

Premature Rupture of Membranes (PROM) is one of the main indications for cesarean section when accompanied by conditions that make normal vaginal delivery impossible. PROM can increase the risk of intrauterine infection, maternal sepsis, and neonatal complications if not managed quickly and appropriately [2]. In such cases, surgery becomes the safest option; however, the consequence is that the mother must undergo a postoperative recovery phase characterized by incision pain, limited mobility, and the risk of secondary complications such as thromboembolism and respiratory disorders.

Post-cesarean pain is a major issue that affects the mother's recovery process. Uncontrolled pain may cause delayed mobilization, sleep disturbances, increased stress, and difficulties in breastfeeding and caring for the baby [3]. In addition, a high perception of pain may trigger a physiological stress response that increases cortisol levels and slows wound healing [4]. Therefore, pain management is an essential component of postoperative nursing care.

Pain management approaches do not rely solely on pharmacological therapy but can also be combined with safe, easily applicable non-pharmacological interventions with minimal side effects. One technique proven effective is deep breathing relaxation. This technique works by activating the parasympathetic nervous system, improving tissue oxygenation, and reducing muscle tension that contributes to pain perception (Sari & Wijaya, 2023). Recent studies have shown that structured deep breathing exercises in postoperative abdominal surgery patients can significantly reduce pain scores compared to patients who receive only standard analgesic therapy [4].

In addition to deep breathing relaxation, early mobilization is an important intervention in accelerating recovery after cesarean section. Early mobilization helps improve blood circulation, prevent deep vein thrombosis, enhance respiratory function, and accelerate the return of gastrointestinal function [5]. Studies indicate that mothers who perform early mobilization within the first 6–8 hours after surgery experience better mobility recovery and shorter hospital stays compared to those with delayed mobilization [2].

The combination of deep breathing relaxation and early mobilization is considered to have a synergistic effect in accelerating postoperative recovery. Deep breathing relaxation helps reduce pain intensity, allowing patients to mobilize more effectively without fear or barriers caused by excessive pain. This synergy has the potential to improve patient comfort, accelerate independence in daily activities, and enhance the quality of the postpartum experience [4].

In Indonesia, the implementation of non-pharmacological interventions in maternity nursing practice is still not optimal and is often not systematically documented as part of service standards [6]. This highlights the need for case-based evaluations to strengthen evidence-based nursing practice in the context of local healthcare services.

RSKB Columbia Asia Pulomas, as a maternity hospital committed to quality and patient safety, plays an important role in developing evidence-based nursing practices. In the case of Mrs. R, who underwent a cesarean section due to Premature Rupture of Membranes, complaints of postoperative pain and limited mobility were identified during the early recovery phase. This condition provided an important basis for implementing structured deep breathing relaxation and early mobilization interventions to assess their effectiveness in reducing pain and improving patient mobility.

Based on the explanation above, this study aims to analyze the effectiveness of deep breathing relaxation and early mobilization in reducing pain and improving mobility in post-cesarean mothers with PROM

indication. This study is expected to provide empirical evidence regarding the benefits of combining these two interventions and serve as a foundation for developing more comprehensive and evidence-based maternity nursing care standards at RSKB X.

2. Literature Review and Problem Statement

Premature Rupture of Membranes (PROM) is the rupture of the amniotic sac before the onset of labor, occurring at term or preterm gestation. It is clinically marked by leakage of amniotic fluid without adequate uterine contractions [7]. PROM is an important obstetric complication because it increases the risk of maternal and neonatal infection, prematurity, and fetal distress. The condition is caused by multiple factors, including intrauterine infection, inflammation, increased intrauterine pressure, collagen weakness, nutritional deficiency, smoking, and a previous history of PROM. Early diagnosis and prompt management are essential to reduce complications.

The clinical manifestations of PROM mainly include sudden or continuous leakage of clear fluid from the vagina, absence of regular contractions at first, reduced amniotic fluid volume, and possible changes in fetal presentation. If prolonged, PROM may lead to signs of infection such as maternal fever, uterine tenderness, foul-smelling fluid, tachycardia, and leucocytosis [8]. Fetal complications may include cord compression, abnormal fetal heart rate, prematurity, neonatal sepsis, and respiratory distress. In addition, mothers often experience anxiety and fear regarding the baby's safety and the possibility of surgery.

Diagnosis of PROM is established through history taking, sterile speculum examination, and supporting tests. Common diagnostic methods include the Nitrazine test, ferning test, ultrasound to assess amniotic fluid volume, laboratory tests for infection, and modern biomarker tests such as PAMG-1 or IGFBP-1. Fetal well-being is monitored through non-stress tests and cardiotocography. Management depends on gestational age, maternal condition, fetal status, and presence of infection. At term, labor induction is usually recommended, while preterm PROM may require conservative management, corticosteroids, antibiotics, and close monitoring. Cesarean section is performed when indicated by fetal distress or obstetric complications [9].

The postpartum period is the six-week recovery phase after childbirth when the mother's body returns to its pre-pregnancy condition. It includes uterine involution, hormonal adjustments, tissue healing, and psychological adaptation [4]. This period is divided into immediate, early, and late postpartum stages. During recovery, healthcare providers monitor vital signs, uterine fundus, lochia, pain, surgical wounds, breastfeeding progress, and emotional well-being. Mothers may experience postpartum blues, fatigue, sleep disturbance, or difficulty adapting to their new role, so psychological support is very important.

Cesarean section is a surgical procedure used to deliver a baby through abdominal and uterine incisions when vaginal delivery is unsafe or impossible. It may be elective or emergency, depending on clinical urgency [10]. Common indications include fetal distress, placenta previa, PROM with infection risk, malpresentation, and labor complications. Although often lifesaving, cesarean section carries risks such as hemorrhage, wound infection, thromboembolism, anesthesia complications, and neonatal respiratory problems. Proper preoperative, intraoperative, and postoperative management is necessary to improve outcomes.

Nursing care for mothers with PROM after cesarean section follows the nursing process: assessment, diagnosis, planning, implementation, and evaluation. Priority assessments include pain level, signs of infection, mobility limitations, breastfeeding ability, urinary elimination, emotional status, and newborn adaptation [11]. Common nursing diagnoses include acute pain, risk of infection, ineffective breastfeeding,

activity intolerance, sleep disturbance, and impaired family processes. Nursing interventions focus on pain management, early mobilization, wound care, infection prevention, breastfeeding support, emotional counseling, and collaboration with the obstetric and neonatal team to promote safe maternal and infant recovery [12].

3. Method

This study used a qualitative descriptive design in the form of a case study. It aimed to explore nursing care for Mrs. R (P3A0) on Day 0 postpartum after cesarean section due to Premature Rupture of Membranes (PROM) at RSKB Columbia Asia Pulomas. The focus of the study was the nursing process, including assessment, nursing diagnosis, planning, implementation, and evaluation of care. The subject of this case study was one postpartum mother who had undergone cesarean section because of PROM.

The instruments used in this study included nursing care forms for assessment, diagnosis, planning, implementation, and evaluation. Data were collected through direct observation, interviews, physical measurements, and documentation review. Observation focused on the patient's general condition, vital signs, skin turgor, fluid balance, and signs of infection. Interviews were conducted with the patient, family members, nurses, and other healthcare staff to obtain information regarding identity, medical history, psychological condition, spiritual status, socioeconomic background, and daily activities. Measurements included temperature, respiratory rate, pulse, blood pressure, body weight, wound size, edema, and pain scale assessment. Supporting hospital documents such as laboratory and diagnostic results were also reviewed.

The case study was conducted in the second-floor inpatient ward of RSKB Columbia Asia Pulomas for three days, from January 19 to January 21, 2026. Data analysis was performed systematically by organizing findings from interviews, observations, and documentation, then comparing them with relevant theories to identify nursing problems and determine appropriate interventions. Data were presented narratively, supported by tables, figures, or charts when necessary. Ethical principles applied in this study included informed consent, anonymity, confidentiality, privacy, and dignity, ensuring that the patient's rights, personal information, and participation were fully protected throughout the research process.

4. Results And Discussion

Results

Description of thVe Case Study Location

The study was conducted in the inpatient ward of RSKB Columbia Asia Pulomas, specifically on the second floor. This inpatient unit is led by a head nurse and supported by several nurses working in three shifts: morning, afternoon, and night. In addition to the ward staff, several nursing students from Universitas Karya Husada Semarang were also completing their clinical practice and participated in providing nursing care to the client.

Participant Characteristics (Client Identity)

The participant in this case study was Mrs. R, a 30-year-old woman. The researcher conducted the study on Mrs. R in the second-floor inpatient ward of RSKB Columbia Asia Pulomas with the medical diagnosis of Day 0 post-cesarean section due to Premature Rupture of Membranes (PROM).

Nursing Data Analysis

a. Assessment

The nursing assessment of Mrs. R was conducted on January 19, 2026, at 4:00 PM, approximately one hour after cesarean section under spinal anesthesia. Based on the collected data, the patient was a 30-year-old woman with obstetric status G3P2A0 at 38 weeks of gestation who underwent cesarean section due to PROM that had occurred approximately five hours before hospital admission. She came with the main complaint of greenish amniotic fluid leakage since 3:00 AM accompanied by increasingly frequent contractions.

At the time of assessment, the patient appeared weak and grimaced due to pain at the surgical wound site. Vital signs were relatively stable, with blood pressure ranging from 120–138/72–96 mmHg, pulse rate 72–101 beats/minute, respiratory rate 17–20 breaths/minute, and temperature 36.6–36.8°C. Physically, the surgical wound was covered with sterile gauze, the uterus was firm with the fundal height at the level of the umbilicus, and no active bleeding was observed. The patient still had a urinary catheter and intravenous infusion in place.

Regarding daily activities, the patient experienced limited mobility due to the effects of spinal anesthesia and postoperative pain, so all activities were assisted by nurses and family members. She also complained of weakness and numbness in both legs. Nutritionally, she had not eaten or drunk anything at the time of assessment and complained of mild nausea. In terms of elimination, she was using a urinary catheter and had not yet had a bowel movement since surgery.

Psychosocially, the patient was cooperative, had fairly good knowledge, and received family support, especially from her husband. However, she experienced mild anxiety related to her postoperative condition and the breastfeeding process. Breast examination revealed swelling, warmth, and no breast milk production yet. In addition, the baby had not roomed-in with the mother, so mother–infant interaction was not yet optimal.

The newborn assessment showed a female infant weighing 2,720 grams and measuring 48 cm in length, with APGAR scores of 6 at the first minute and 8 at the fifth minute. The baby appeared active with stable vital signs but was still in the adaptation period, placing her at risk for hypothermia, infection, and impaired bonding because rooming-in had not yet been initiated.

b. Data Analysis

Based on subjective and objective data, nursing problems were identified. In the mother, complaints of pain at the surgical wound site, grimacing, incision wound, and post-cesarean condition indicated stimulation of pain receptors due to tissue injury, leading to the diagnosis of acute pain. Complaints of weakness, numbness in the lower extremities, and limited mobility due to spinal anesthesia indicated temporary decreased muscle strength, leading to activity intolerance.

Regarding lactation, complaints of swollen and painful breasts with no milk production, reinforced by the absence of rooming-in, caused inadequate breastfeeding stimulation, resulting in breast engorgement and ineffective breastfeeding.

In the newborn, the immature thermoregulation mechanism and transition from the intrauterine to extrauterine environment placed the baby at risk for impaired thermoregulation. The presence of the umbilical cord stump as a possible entry point for microorganisms and an immature immune system

increased the risk of infection. The absence of rooming-in also reduced mother–infant contact, creating the potential for impaired attachment processes.

c. Nursing Diagnoses

Based on the data analysis, several nursing diagnoses were established for both mother and baby. For the mother, diagnoses included acute pain related to physical injury from cesarean surgery, activity intolerance related to postoperative physical weakness, and ineffective breastfeeding related to breast engorgement and lack of breastfeeding stimulation due to separation from the baby.

For the newborn, diagnoses included risk for ineffective thermoregulation related to immature temperature regulation mechanisms, risk for infection related to inadequate body defenses and the presence of the umbilical cord wound, and risk for impaired attachment related to separation from the mother.

d. Nursing Interventions

Nursing interventions were developed based on the identified diagnoses with the main goal of optimizing the patient's condition. For acute pain, interventions focused on comprehensive pain assessment, monitoring vital signs, providing non-pharmacological therapies such as deep breathing relaxation, distraction, semi-Fowler positioning, and collaboration for analgesic administration.

For activity intolerance, interventions were directed toward gradually increasing activity ability through early mobilization, range-of-motion exercises, and monitoring the body's response to activity. Education was also provided to help the patient understand the importance of progressive activity.

For ineffective breastfeeding, interventions included education on proper breastfeeding techniques, oxytocin massage, warm compresses, and encouraging skin-to-skin contact to stimulate milk production. Collaboration with a lactation counselor was also important.

For the newborn, thermoregulation interventions included maintaining warmth through the use of an infant warmer, swaddling, and regular temperature monitoring. Infection prevention involved sterile umbilical cord care and observation for signs of infection. For the risk of impaired attachment, interventions focused on facilitating rooming-in, skin-to-skin contact, and educating the mother on the importance of bonding.

e. Nursing Implementation

Nursing implementation was carried out according to the intervention plan. For Mrs. R, actions included regular pain assessment, monitoring vital signs, and providing relaxation therapy and positioning to reduce pain. Gradual mobilization was also initiated, starting with bed exercises, progressing to sitting, and then walking slowly.

To address breastfeeding problems, nurses provided education on proper latch techniques, performed oxytocin massage, and recommended warm compresses before breastfeeding. Emotional support was also provided to increase the mother's confidence in breastfeeding.

For the baby, implementation included routine body temperature monitoring, maintaining warmth with an infant warmer, and keeping the umbilical cord clean and dry. Nurses also facilitated mother–infant interaction through direct contact and breastfeeding, while educating the mother on the importance of bonding.

f. Nursing Evaluation

The nursing evaluation showed improvement in both mother and baby. For acute pain, the pain scale decreased from 5 to 1–2, the patient appeared more relaxed, and she was able to perform light mobilization, so the pain problem was considered partially resolved.

For activity intolerance, the patient demonstrated improved activity tolerance, progressing from only being able to lie down to being able to sit, stand, and walk slowly without significant complaints, indicating improvement.

Regarding breastfeeding, breast milk production began, the breasts were no longer tense, and the baby was able to breastfeed well, indicating effective breastfeeding.

For the baby, body temperature remained stable within the normal range, so hypothermia did not occur. The umbilical cord appeared clean and dry without signs of infection, and the bonding process between mother and baby had begun to develop well through breastfeeding and direct contact.Overall, the nursing care provided showed positive outcomes, with most problems resolved or improved. Interventions could therefore be continued with a focus on optimal recovery and further education for the mother and family.

Discussion

After the author provided nursing care to Mrs. R P2A0 with Postpartum Sectio Caesarea due to Premature Rupture of Membranes at RSKB Columbia Asia Pulomas for three days, from January 19, 2026 to January 21, 2026, the author gained valuable experience and learning in providing maternity nursing care. In particular, the author was able to compare the theoretical concepts learned during education with the implementation of nursing practice in the clinical setting.

During the nursing care process, the author conducted a comprehensive assessment covering both the post-sectio caesarea mother and the newborn baby, determined nursing diagnoses, planned interventions, implemented nursing actions, and evaluated the outcomes of the care provided. Throughout this process, the author found several interesting points as well as differences between theory and actual clinical conditions.

Several gaps between theory and practice were found in the implementation of nursing care for Mrs. R with postpartum sectio caesarea, especially related to postoperative recovery, early mobilization, breastfeeding in postoperative mothers, and rooming-in practices between mother and baby. In theory, mothers after sectio caesarea are encouraged to begin early mobilization and have direct contact with the baby immediately to support bonding attachment and successful breastfeeding. However, in clinical practice, several conditions prevented these processes from being optimally carried out at the beginning of treatment, such as the mother's postoperative condition and ward service policies [13].

In addition, the author also found that nursing care for newborns requires more intensive monitoring, especially regarding body temperature regulation (thermoregulation), prevention of umbilical cord infection, and the baby's adaptation process to the extrauterine environment. This is in accordance with theory stating that neonates have immature physiological systems and therefore require close observation and special care during the first days of life [14].

Based on this experience, the author understood that the nursing process does not only focus on directly applying theory, but must also be adjusted to the patient's condition, hospital policies, and existing clinical situations. Therefore, the systematic and comprehensive application of the nursing process is very important in providing optimal nursing care to patients [15].

Assessment

Assessment is the first stage of the nursing process aimed at collecting systematic and comprehensive data regarding the patient's condition as the basis for determining nursing diagnoses. In this case, the author conducted an assessment of Mrs. R P2A0 with postpartum sectio caesarea due to premature rupture of membranes at RSKB Columbia Asia Pulomas, as well as an assessment of the newborn baby. The assessment was carried out through interviews, observation, physical examination, and medical record documentation review.

Based on the assessment results of the mother, subjective data showed that the patient complained of intermittent pain at the sectio caesarea surgical wound. Objectively, the patient appeared grimacing, there was an abdominal incision covered with sterile gauze, and vital signs were within normal limits. In addition, the patient also complained of weakness and numbness in both legs due to the effect of spinal anesthesia after surgery. Reproductive system assessment revealed the uterine fundus at the level of the umbilicus and a firm uterus, indicating a normal uterine involution process during the postpartum period.

The assessment also showed complaints regarding the mother's breasts, namely swelling, pain, and breast milk not yet being expressed. This condition occurs due to physiological adaptation after childbirth, where hormonal changes affect milk production. In addition, at the beginning of treatment, the baby had not yet roomed-in with the mother, so breastfeeding stimulation was not optimal. This may cause breast engorgement and affect breastfeeding in the postpartum mother.

In addition to the mother's assessment, the author also assessed the newborn baby. The baby was born full-term appropriate for gestational age and was 1 day old. Examination showed body temperature ranging from 36.5–36.6°C, and the baby was cared for using an infant warmer to maintain body temperature. This indicates that the baby was at risk of impaired thermoregulation because neonatal temperature regulation is still immature. In addition, the baby had limited subcutaneous fat, making heat loss to the environment easier.

Umbilical cord assessment showed that the cord was still in the healing phase after being cut during delivery. This condition causes the baby to be at risk of infection because the neonatal immune system is not yet fully developed. Therefore, clean and dry cord care is very important to prevent microorganism entry.

Besides physical aspects, psychosocial assessment was also carried out on the mother. The results showed that the mother expressed a desire to care for and breastfeed her baby, but interaction between mother and baby was not yet optimal at the beginning of treatment because rooming-in had not been implemented. This condition can affect the bonding attachment process between mother and baby during the baby's early life.

Based on the assessment results, the author identified several nursing problems experienced by both mother and baby. In the mother, acute pain, activity intolerance, and ineffective breastfeeding were found, while in the baby, the problems identified were risk for ineffective thermoregulation, risk of infection, and risk of impaired attachment process. The data obtained from this assessment became the basis for determining nursing diagnoses and planning appropriate nursing interventions according to the patient's needs.

5. Conclusion

In addition, this study has several limitations that should be considered. This case study was conducted on only one patient, so the findings cannot be generalized to all postpartum sectio caesarea patients with

premature rupture of membranes. The duration of observation was also relatively short, limiting the evaluation of the long-term effectiveness of nursing interventions, particularly regarding postoperative recovery, mobility improvement, and maternal adaptation after discharge. Furthermore, this study focused mainly on the implementation of nursing care and did not compare the effectiveness of different intervention methods or include quantitative measurements on a larger scale.

Therefore, future research is recommended to involve a larger number of participants and use broader research designs, such as comparative or quasi-experimental studies, to obtain more comprehensive evidence regarding the effectiveness of nursing interventions in postpartum sectio caesarea patients. Future studies are also expected to explore the psychological adaptation of mothers, breastfeeding outcomes, and family support during the postpartum period. In addition, longer follow-up observations are recommended to evaluate the sustainability of recovery outcomes and the quality of life of both mother and baby after discharge from the hospital.

Based on the evaluation of the nursing actions provided, most of the patient's nursing problems showed improvement. The intensity of pain decreased, the patient gradually became able to mobilize, and the patient demonstrated increased understanding regarding self-care after surgery. The baby's condition was also stable and showed no signs of complications. Therefore, it can be concluded that the nursing care provided helped improve the health condition of both mother and baby. It is recommended that RSKB Columbia Asia Pulomas continue to improve the quality of nursing services, especially for postpartum sectio caesarea patients. Future researchers are expected to develop more in-depth studies related to nursing care for postpartum sectio caesarea patients and newborns with specific risks. Educational institutions are also expected to continue improving the quality of maternity nursing clinical education so that students are able to optimally apply theory in professional clinical practice.

6. References

[1] Miller, Johnson, and Lee, "The impact of helmet use on the severity of mandibular injuries in motorcycle accidents," *Trauma Surg. Acute Care Open*, p. 7(2), 2022.

[2] Safari FRN, "Faktor-Faktor Yang Berhubungan Dengan Kejadian Ketuban Pecah Dini Di RSU H. Abdul Manan Simatupang Tahun 2016," *Wahana Inovasi*, vol. 6, p. 2, 2017.

[3] S. Manurung, *Buku Ajar Keperawatan Maternitas Asuhan Keperawatan Intranatal*. In Trans Info Media, 2011.

[4] Patel, Smith, and Jones, *Stress in Medical Students: Prevalence, Causes, and Coping Mechanisms*. 2023.

[5] Lopez, Garcia, and Santos, "Benefits of early mobilization in patients with deep venous thrombosis: A scope review.," *Journal of Vascular Nursing and Rehabilitation*, vol. 5(2), pp. 112–120, 2021.

[6] I. Ayu W, M. Febrianti, and A. Octaviani, "Faktor yang Berhubungan Terhadap Kejadian Ketuban Pecah Dini (KPD) di RSIA Sitti Khadijah I Makassar Tahun 2019," *Jurnal Kesehatan Delima Pelamonia*, vol. 3, no. 1, 2019.

[7] Sundini, "Asuhan Keperawaan Pada Ny. D Dengan Post Secito Caesarea Hari Ke 1 Dengan Indikasi Keruban Pecah DINI 90 Di Ruang Raden Dewi Sartika Raumah Sakit Sekarwangi Kabupaten Sukabumi," *eprints.ummi.ac.id.*, 2020.

[8] S. J. Reeder, H. L. Martin, and D. koniak Griffin, *Keperawatan Maternitas : Kesehatan Wanita, Bayi dan Keluarga (Malernilymursing = Family Newborn, and Womens Health Care)*, 18th ed. Jakarta EGC, 2017.

[9] Legawati, *Determinan Kejadian Ketuban Pecah Dini di Ruang Cempaka RSUD Dr. Doris Sylvanus Palangkaraya.* Surya Medika., 2018.
[10] A. Maryunani, *Buku Praktis Kehamilan dan Persalinan Patologis (Risiko Tinggi dan Komplikasi*. Trans Info Media, 2016.
[11] A. Ratnawati, *Asuhan Keperawatan Maternitas*. In Pustaka Baru, 2017.
[12] Deswani, *Keperawatan Maternitas : Bahan Ajar Keperawatan. Jakarta : Indo.Kemkes.BPPSDM.* Jakarta: Indo Kemkes, 2017.
[13] M. M, "Comprehensive nursing management of newborns in the neonatal intensive care unit: A narrative review," *International Journal of Research in Paediatric Nursing*, vol. 8, no. 1, pp. 01–04, Jan. 2026, doi: 10.33545/26641291.2026.v8.i1a.260.
[14] M. Broom *et al.*, "Mapping neonatal nursing interventions that significantly impact on neonatal outcomes to neonatal practice standards," *Journal of Neonatal Nursing*, vol. 31, no. 1, pp. 196–205, Feb. 2025, doi: 10.1016/j.jnn.2024.07.030.
[15] J. Foster *et al.*, "Scoping review of systematic reviews of nursing interventions in a neonatal intensive care unit or special care nursery," *J. Clin. Nurs.*, vol. 33, no. 6, pp. 2123–2137, Jun. 2024, doi: 10.1111/jocn.17053.