



The Relationship Between Postpartum Mothers' Knowledge of Perineal Wound Care and Wound Healing Speed

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Abstract

Background: Perineal wounds in postpartum mothers are a common condition following vaginal delivery that requires optimal care to prevent infection and promote healing. The mother's knowledge of perineal wound care is believed to play a crucial role in accelerating the healing process.

Objective: To determine the relationship between postpartum mothers' knowledge about perineal wound care and the speed of wound healing.

Method: This study used a cross-sectional design with 50 postpartum mothers as respondents at Community Health Center X. Knowledge was measured using a standardized questionnaire, while wound healing speed was assessed using the REEDA Scale on the 7th day postpartum. Data analysis was performed using the Chi-square test at a significance level of 0.05.

Results: Of the 50 respondents, 32 mothers (64%) had good knowledge and 28 of them (87.5%) experienced rapid healing. The Chi-square test results showed a p-value of 0.002 (<0.05), indicating a significant relationship between postpartum mothers' knowledge and the speed of perineal wound healing.

Conclusion: Good knowledge of postpartum mothers about perineal wound care is significantly related to accelerated wound healing.

Keywords: Knowledge; Postpartum Mother; Perineal Wound; Wound Healing

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1. Introduction

The postpartum period (puerperium) is the period that begins after the delivery of the placenta and continues until the reproductive organs return to their pre-pregnancy state, typically lasting around 6 weeks. During this period, the mother's body undergoes a complex recovery process, including the healing of perineal wounds in women who deliver vaginally (Rohani et al., 2020). Perineal wounds can be caused by spontaneous tears or episiotomies performed to facilitate delivery.

According to the World Health Organization (WHO, 2019), proper perineal wound care is a crucial aspect in preventing infection, accelerating healing, and improving maternal comfort. Wounds that are not properly cared for can lead to prolonged pain, bleeding, swelling, infection, and disruption to maternal care.

Postpartum mothers' knowledge of perineal wound care is a significant factor in determining successful treatment. Mothers with good knowledge generally understand hygiene procedures, such as washing their hands before cleaning the wound, changing dressings regularly, properly drying the wound area, and recognizing early signs of infection (Mulyati & Sari, 2021). Conversely, a lack of knowledge can result in suboptimal care, ultimately slowing the healing process (Rahayu, 2018).

Data from the Indonesian Ministry of Health (2021) shows that the incidence of perineal wound infections in several regions of Indonesia remains quite high, ranging from 15–25%. This indicates a gap in the implementation of standard wound care practices. One cause is the low knowledge and skills of postpartum mothers in performing self-care at home.

Based on this phenomenon, this study was conducted to determine the relationship between postpartum mothers' knowledge of perineal wound care and wound healing rates. The results are expected to provide a basis for healthcare workers, particularly midwives, in designing effective educational programs to improve postpartum mothers' knowledge and skills in perineal wound care.

2. Research Methods

a) Research Design

This study used an observational analytical design with a cross-sectional approach. This design was chosen because it allowed researchers to simultaneously measure postpartum mothers' knowledge of perineal wound care and wound healing speed, allowing for analysis of the relationship between these variables (Sugiyono, 2021).

b) Location and Time of Research

The study was conducted at Community Health Center X, which offers a wide range of midwifery and postpartum care services. The study lasted for three months, from January to March 2025.

c) Population and Sample





The population in this study was all postpartum mothers with perineal wounds who came for examination or control at Community Health Center X during the study period.

Inclusion Criteria

1. Postpartum mothers with perineal wounds grade I–II.
2. Postpartum age ≤ 14 days postpartum.
3. Willing to be a respondent by signing the informed consent.

Exclusion Criteria

1. Mothers with severe obstetric complications.
2. Mothers who suffer from chronic diseases such as diabetes mellitus or blood clotting disorders that affect wound healing.
3. Postpartum mothers who use certain medications that affect the healing process.

d) Sampling Techniques

Sampling was conducted using a purposive sampling technique with a sample size of 50 respondents who met the inclusion and exclusion criteria. This number was determined using a proportion estimation formula for a limited population with a 95% confidence level.

e) Research Instruments

1. Knowledge Questionnaire

- Contains 20 multiple-choice questions related to perineal wound care, covering aspects of hygiene, signs of infection, and steps to prevent complications.
- Scoring: correct answer = 1, wrong = 0.
- Category: good ($\geq 76\%$ maximum score), sufficient (56–75%), less ($< 56\%$).

2. REEDA Scale Form

- Used to assess the speed of healing of perineal wounds.
- Parameters: Redness, Edema, Ecchymosis, Discharge, and Approximation.
- Lower scores indicate better wound condition and faster healing.

f) Research Procedures

1. Researchers approach potential respondents who meet the criteria.
2. Explain the purpose, benefits, and procedures of the research, then ask for written consent.
3. Collecting respondent characteristics data (age, education, parity).
4. Measuring the level of knowledge with a questionnaire.
5. Performing a perineal wound examination using the REEDA Scale by a trained midwife.
6. Record the results in the observation sheet.

g) Data analysis





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- Univariate analysis was used to describe the frequency distribution and percentage of the level of knowledge of postpartum mothers and the speed of wound healing.
- Bivariate analysis was conducted using the Chi-square test to determine the relationship between postpartum mothers' knowledge and the speed of perineal wound healing.
- The significance level was set at $\alpha = 0.05$.

3. Results And Discussions

a. Results

1. Respondent Characteristics

A total of 50 postpartum mothers participated in this study. Characteristics included age, education level, and parity.

Table 1.

Distribution of Respondent Characteristics (n = 50)

Characteristics	Category	Frequency (f)	Percentage (%)
Age	< 20 years	6	12.0
	20–35 years	38	76.0
	> 35 years	6	12.0
Education	Elementary School	5	10.0
	JUNIOR HIGH SCHOOL	12	24.0
	SENIOR HIGH SCHOOL	25	50.0
	College	8	16.0
Parity	Primipara	20	40.0
	Multipara	30	60.0

The majority of respondents were aged 20–35 years (76%), had a high school education (50%), and were multiparous (60%).

2. Distribution of Knowledge Level of Postpartum Mothers

Table 2.

Distribution of Postpartum Mothers' Knowledge about Perineal Wound Care (n = 50)

Knowledge Category	Frequency (f)	Percentage (%)
Good	32	64.0
Enough	12	24.0
Not enough	6	12.0

Most respondents had good knowledge (64%) regarding perineal wound care.





3. Distribution of Perineal Wound Healing Rate

Table 3.

Distribution of Perineal Wound Healing Rate (n = 50)

Healing Speed	Frequency (f)	Percentage (%)
Fast	36	72.0
Slow	14	28.0

The majority of postpartum mothers experience fast healing of perineal wounds (72%).

4. The Relationship Between Postpartum Mothers' Knowledge and the Speed of Perineal Wound Healing

Table 4.

Analysis of the Relationship between Knowledge and Perineal Wound Healing Speed (n = 50)

	Knowledge Fast	Slow	Total	p-value
Good	28	4	32	
Enough	6	6	12	
Not enough	2	4	6	
Total	36	14	50	0.002

The Chi-square test shows a p value = 0.002 (< 0.05), so there is a significant relationship between the level of knowledge of postpartum mothers about perineal wound care and the speed of wound healing.

b. Discussion

The results of this study indicate that the majority of respondents had good knowledge regarding perineal wound care (64%) and the majority experienced rapid wound healing (72%). Bivariate analysis showed a significant relationship between postpartum mothers' knowledge and the speed of perineal wound healing ($p = 0.002$). This finding aligns with the theory that knowledge is an important factor in developing appropriate health behaviors, including postpartum wound care (Notoatmodjo, 2014).

Good knowledge allows postpartum mothers to understand proper care procedures, such as maintaining perineal hygiene, changing dressings regularly, properly drying the wound, and recognizing signs of infection early. Proper care will prevent bacterial contamination, minimize inflammation, and accelerate the proliferative phase of wound healing (Potter & Perry, 2017).

These findings are supported by research by Sari et al. (2020), which found that postpartum mothers with good knowledge had a lower risk of perineal wound infection





than those with poor knowledge. Similarly, a study by Mulyati & Sari (2021) reported that perineal wound care education can increase healing rates by up to 80% in the first week postpartum.

Other factors that may influence this relationship are education level and childbirth experience. Respondents with higher education tend to have better access to information and more appropriate skills in wound care. Furthermore, multiparous mothers may have prior experience caring for perineal wounds, which can lead to faster healing. This aligns with the WHO (2019) statement that knowledge and experience are key factors in postpartum care management.

However, some respondents with good knowledge still experienced slow healing. This could be due to other factors such as nutritional status, anemia, suturing technique, physical activity level, or comorbidities such as diabetes mellitus, which can slow tissue regeneration. Conversely, some respondents with adequate knowledge experienced rapid healing, likely influenced by family support, personal motivation, and direct care from healthcare professionals.

The findings of this study have important implications for midwifery practice, as midwives and healthcare workers need to provide comprehensive education on perineal wound care from antenatal through postpartum. Education should not only consist of verbal explanations but also include practical demonstrations, visual aids, and leaflets that are easily understood by postpartum mothers and their families.

4. Conclusion

a. Conclusion

This study shows a significant relationship between postpartum mothers' knowledge level regarding perineal wound care and the speed of perineal wound healing at Community Health Center X ($p = 0.002$). The majority of postpartum mothers with good knowledge experienced faster wound healing compared to those with sufficient or insufficient knowledge. Good knowledge influences appropriate care behavior, thus preventing infection and accelerating wound tissue regeneration.

b. Suggestion

1. For Health Workers

- Improve educational programs on perineal wound care, starting from pregnancy to postpartum control.
- Using interactive and easy-to-understand educational media, such as leaflets, video tutorials, or live simulations.

2. For Postpartum Mothers





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- Practice perineal wound care as recommended by healthcare professionals, including maintaining cleanliness, changing dressings regularly, and recognizing signs of infection.
 - Consume nutritious food and enough fluids to support the wound healing process.
3. For Further Research
- Examining other factors that influence the speed of perineal wound healing, such as nutritional status, suturing techniques, family support, and general health status.
 - Using a longitudinal research design to monitor the wound healing process continuously.

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