

The Relationship Between Post-Of-Mothers' Knowledge and Umbilical Cord Care In The Working Area Of Bies Public Health Center, Central Aceh Regency

Nurlaely HS, Rahmah, Lia Muslima, Helina Syafutri

STIKes Payung Negeri Aceh Darussalam, Indonesia

Corresponding author: nurlaely851@gmail.com

ABSTRACT

Umbilical cord care is a key aspect of neonatal care, particularly during the first two weeks of life. Umbilical cord care involves treating and tying the umbilical cord, physically separating the mother from the baby. The cord is then cared for in a clean state to prevent infection. Objective: This study aimed to determine the relationship between postpartum mothers knowledge and umbilical cord care in the Bies Community Health Center working area in Central Aceh Regency. Method: This study was descriptive and analytical. Total sampling was used. Respondents were 22 postpartum mothers. The research instrument was a questionnaire consisting of 20 questions about personal matters and respondents' knowledge. Data were analyzed statistically using the Fisher's exact test using SPSS. Results: Statistical analysis showed a relationship between postpartum mothers knowledge and umbilical cord care ($P = 0.001$). Conclusion: Umbilical cord care is crucial for preventing infection. This can reduce infant mortality. Therefore, further education on umbilical cord care in health services is needed in the future.

Keywords: Knowledge, Postpartum Mother, Umbilical Cord Care

INTRODUCTION

The provision of unsolved infant and child care from the family and community. Various roles exist within the family, namely the role of father, mother, and child, where the main function of the family towards its members is to hone, love, and nurture. Therefore, the role of mothers in good care and care for their babies is needed. Most problems experienced by the community are a lack of knowledge in newborn care, especially umbilical cord care. Especially in remote areas, where care for their babies uses traditional methods such as giving coconut oil, giving betel leaf and turmeric

concoctions, as well as low education and socioeconomic issues. In addition, it is also influenced by the lack of knowledge of mothers about the importance of neonatal or newborn care.(Ministry of Health of the Republic of Indonesia, 2024).

Many mothers still follow traditional traditions, such as administering traditional potions to prevent the umbilical cord from falling off or covering it with coins to prevent the umbilical cord from protruding. However, these measures are unnecessary and can actually be dangerous.(Aziz, 2024).

According to Aceh Health Profile data, the number of stillbirths in Aceh was 731 and the number of live births was 88,494. Therefore, the stillbirth rate in Aceh in 2013 was 8.0/1,000 live births due to prematurity and low birth weight, asphyxia (respiratory problems) in newborns, and breastfeeding problems. Although deaths due to neonatal tetanus did not occur, this needs to be avoided because it threatens the continuity of the nation's generations.(Aceh Health Profile, 2025).

The number of infant deaths for Central Aceh Regency in 2025 was 83 premature babies, LBW (Low Birth Weight), and asphyxia (respiratory problems) of newborns and the number of mothers giving birth was 3,783 people.(Central Aceh Health Office, 2025)

Based on preliminary data obtained, the number of mothers giving birth in 2024 was 157, the number of babies was 154, and the infant mortality rate was 3 due to prematurity, low birth weight (LBW), and newborn asphyxia. Neonatal tetanus is not a cause, but the community often complains of watery and reddish umbilical cords. If ignored, this can lead to infection and death. Meanwhile, the number of postpartum mothers as of October 2025 was 33.(Bies Health Center, 2025).

From the initial survey conducted by researchers on 10 postpartum mothers in the Bies Community Health Center Work Area, there were 2 postpartum mothers who knew how to care for the umbilical cord well, while 8 other postpartum mothers did not know how to care for the umbilical cord.

Therefore, this study aims to determine the relationship between postpartum mothers' knowledge and umbilical cord care in the working area of the Bies Community Health Center, Central Aceh Regency.

METHOD

This study used a cross-sectional design conducted at the Bies Community Health Center from October to December 2025.(Notoatmodjo, 2024).

The study population consisted of 22 postpartum mothers. The sample used a total population sampling technique, which involved all 22 postpartum mothers in the Bies Community Health Center working area in Central Aceh Regency.(Arikunto, 2024). Data collection was conducted using a structured knowledge questionnaire, the validity of which was previously tested (Cronbach's alpha = 0.78). Statistical analysis was conducted using the Fisher exact test. The Fisher exact test requires a sample size of less than 20 under any circumstances (regardless of whether or not there are cells with an E value of less than 5).(Boediarso, 2022).

RESULTS AND DISCUSSION

Univariate Analysis

Table 1. Characteristics of Postpartum Mothers

Characteristics	Respondents	
	N	%
Knowledge		
Good	3	13.6
Enough	7	31.8
Not enough	12	54.6
Umbilical Cord Care		
No	16	72.7
Yes	6	27.3
Total	22	100

Source: Primary Data, 2025

The study results showed that 54.6% of mothers had insufficient knowledge about umbilical cord care, while 72.7% indicated that mothers did not perform umbilical cord care on their babies. This is in line with the findings of the study.(Purnamasari et al, 2023)who reported that lack of maternal knowledge was a significant predictor of umbilical cord infection due to not performing umbilical cord care on her baby.

Bivariate Analysis

Table 2. Relationship between Postpartum Mothers' Knowledge and Umbilical Cord Care

Knowledge	Umbilical Cord Care				Amount		P Value
	Yes		No		F	%	
	F	%	F	%			
Good	3	50	0	0	3	13.6	0.001
Enough	3	50	4	25	7	31.8	
Not enough	0	0	12	75	12	54.6	
Total	6	100	16	100	22	100	

The table above shows that of the 22 respondents, there are 3 respondents (50%) who have good knowledge of carrying out umbilical cord care properly and correctly so that the umbilical cord breaks on the 5th to the 7th day without any complications, 0 respondents (0%) respondents who have good knowledge do not carry out umbilical cord care properly and correctly so that the umbilical cord breaks on the 5th to the 7th day without any complications, 3 respondents (50%) have sufficient knowledge to carry out umbilical cord care properly and correctly so that the umbilical cord breaks on the 5th to the 7th day without any complications, 4 respondents (25%) with sufficient knowledge do not carry out umbilical cord care properly and correctly so that the umbilical cord does not break on the 5th to the 7th day with complications, there are no respondents with insufficient knowledge who carry out umbilical cord care properly and correctly so that the umbilical cord breaks on the 5th to the 7th day without any complications, and 12 respondents (75%) with insufficient knowledge do not carry out umbilical cord care properly and correctly so that the umbilical cord does not break on the 5th to the 7th day with complications.

From the results of statistical tests using the Fisher exact test using the SPSS program. After testing the contingency coefficient of the Fisher exact test, a P value of 0.001 was obtained. This indicates a close relationship (association) between postpartum mothers' knowledge and umbilical cord care.

CONCLUSION AND SUGGESTIONS

Conclusion

This study confirms a significant relationship between postpartum mothers' knowledge and umbilical cord care. Improving education about umbilical cord care could play a significant role in reducing infant deaths due to umbilical cord infections.

Suggestion

Health centers should hold umbilical cord care education sessions for postpartum mothers.

Midwives and nurses should provide hands-on training on proper umbilical cord care techniques during postpartum visits.

BIBLIOGRAPHY

- Arikunto, S. (2024). *Research Procedures*. Rineka Cipta.
- Aziz. (2024). *Midwifery Student Practical Book on Neonatal, Infant, and Toddler Care*. Jakarta: EGC.
- Budiarto. (2022). *Bistatistics for Medicine and Public Health*. Jakarta: EGC.
- Central Aceh Health Office. (2025). *Infant Mortality Data*. Central Aceh.
- Ministry of Health, Republic of Indonesia. (2024). *Reference Book for Normal Delivery Care*. Ministry of Health: Jakarta.
- Machfoedz. (2020). *Research Methods*. Yogyakarta: Fitramaya.
- Notoatmodjo. (2024). *Health Promotion and Health Behavior*. Jakarta: Rineka Cipta.
- Puskesmas, Bies. (2025). *Infant Mortality Rate*. Central Aceh.
- Purnamasari. (2023). *The Relationship between Postpartum Mothers' Knowledge and Umbilical Cord Care*. *Journal of Health*.
- Saifuddin. (2022). *Maternal and Neonatal Health Services Practice Guidebook*. Jakarta: Bina Pustaka Sarwono Prawirohardjo Foundation.
- Yrama, (2020). *Child Health Care Guidelines*. Jakarta: EGC.