

THE RELATIONSHIP BETWEEN POST-OF-MOTHERS' KNOWLEDGE ABOUT UMBILICAL CORD CARE AND THE DURATION OF UMBILICAL CORD REMOVAL

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Abstract

Background: The postpartum period is a crucial phase for both mother and baby, especially regarding umbilical cord care. Umbilical cord infections can cause severe complications and even death. At PMB Elly, many postpartum mothers still lack sufficient knowledge, which affects the time taken for the umbilical cord to fall off. **Objective:** This study was designed to assess the relationship between the level of postpartum mothers' knowledge about umbilical cord care and the duration of umbilical cord detachment at PMB Elly in 2025. **Methods:** This study utilized a quantitative descriptive design involving a population of 30 postpartum mothers at PMB Elly. The total sampling technique was applied to select participants. Primary Data collection involved questionnaires, followed by univariate and bivariate analysis via the Chi-Square test. **Results:** the bivariate analysis yielded a p-value of 0.000, demonstrating a significant correlation between maternal knowledge and the duration of umbilical cord separation. **Conclusion:** Good knowledge among postpartum mothers contributes to faster umbilical cord detachment.

Keywords: *Postpartum mothers; knowledge; umbilical cord care; duration of detachment; PMB Elly.*

Background

Postpartum mothers must understand how to care for the umbilical cord to prevent problems for their babies. A study by Widiastuti (2023) showed that proper umbilical cord care reduces the risk of infection by up to 73%. This finding is crucial for improving postpartum mothers' understanding of safe umbilical cord care procedures. The postpartum period is a crucial time for both mother and baby, requiring special attention when it comes to umbilical cord care. The risk of infection and complications in newborns can increase if the umbilical cord is not properly cared for. According to 2023 World Health Organization (WHO) data, infection is the cause of death in 25% of newborns in developing countries, with umbilical cord infections accounting for 7% of these cases. In 2022, Indonesia's infant mortality rate remained at 21 per 1,000 live births. According to the Indonesian Ministry of Health, the primary cause is infection. Unsterile umbilical cord care and poor maternal knowledge are the main causes of this increase (Indonesian Ministry of Health, 2022).

Socioeconomic factors play a significant role in the prevalence of umbilical cord infections. A study by Nugroho (2023) found that fifty-five percent of infections occurred in families with low economic status, and sixty-two percent were related to lack of access to healthcare facilities. Postpartum mothers experience three stages of adaptation: taking in, taking hold, and letting go. These stages influence how they care for their babies, including umbilical cord care, and make the situation even more challenging. The taking in phase is when postpartum mothers are still dependent, more self-centered, and may feel disturbed by the changes in their physical condition. In the taking hold phase, mothers begin to face challenges in caring for their babies, which can sometimes lead to feelings of inadequacy and negligence in providing proper care, including umbilical cord care. In the letting go phase, mothers begin to adapt and adjust to their role as parents and their babies' needs.

There has been promising progress in umbilical cord care. A study by Sutrisno & Pratiwi (2023) found that mobile applications can improve maternal understanding by up to 85%. Furthermore, Handayani's (2023) research

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demonstrated that betel leaf extract is effective in umbilical cord care, with an 89% success rate in preventing infection, far surpassing the 76% success rate of conventional approaches. The normal time for a baby's umbilical cord to fall off is generally between the 5th and 7th day after birth, but research by Rahmawati (2023) found that mothers with less knowledge may wait up to 14 days. This increases the risk of infection and complications in the baby. Conventional methods, which have not been proven safe, remain a major challenge in implementing umbilical cord care. Hidayah (2021) found that many primiparous mothers still use traditional methods such as powders or leaves based on family advice, which actually increases the risk of tetanus infection. According to Rahmawati and Sulistyowati (2022), 45% of healthcare workers in rural areas still face difficulties implementing optimal sterilization protocols.

The Indonesian Ministry of Health (2023) has issued new guidelines to address this issue. These guidelines emphasize the importance of a broader approach to infection prevention. These guidelines include continuing education programs, sterilization protocols, and standard care techniques. Implementing these guidelines requires a comprehensive approach involving collaboration between the government, healthcare professionals, and the community, as well as increased access to high-quality healthcare services. One crucial component in maintaining a newborn's health is that postpartum mothers must know how to care for the umbilical cord. The umbilical cord serves as a connection between mother and baby during pregnancy, but after birth, proper cord care is essential to prevent complications such as infection and bleeding. At PMB Elly, some postpartum mothers may not fully understand proper umbilical cord care techniques, potentially affecting the duration of cord removal. Inadequate cord removal can lead to health complications for both the baby and the mother.

In theory, the umbilical cord is considered the primary route of infection in newborns, and the risk can be minimized through proper care. Babies are at risk of developing neonatal tetanus, which can be fatal, if umbilical cord care is not performed properly. Therefore, nursing staff are expected to provide quality umbilical cord care services (Wibowo, 2013, cited in Rani 2019). According to research published in the Yesi Oktavia journal (2023), the majority of respondents, 42 (80.8%), had good knowledge, while 5 (9.6%) had sufficient or insufficient knowledge. This indicates that most postpartum mothers have a good understanding of umbilical cord care for their babies. Based on a preliminary survey at PMB Elly, it was found that most postpartum mothers did not fully understand proper umbilical cord care, including the importance of maintaining cleanliness and the proper use of antiseptics. Furthermore, some mothers reported that their babies' umbilical cords took more than 10 days to fall off, which is likely related to a lack of knowledge about umbilical cord care. Therefore, the aim of this study was to determine the relationship between postpartum mothers' understanding of umbilical cord care and how quickly their babies' cords fell off.

Based on the background, the researcher wants to conduct further research related to "Postpartum Mothers' Knowledge of Umbilical Cord Care with the Duration of Umbilical Cord Removal at PMB Elly in 2024".

Current Research	Previous Research
Title: The relationship between postpartum mothers' knowledge about umbilical cord care and the length of time the umbilical cord is released Method: Quantitative using descriptive design Sample: Postpartum mothers at PMB Elly Population: 30 postpartum mothers with newborn babies at PMB Elly 2025 Location: PMB Elly	Title: Level of Knowledge of Postpartum Mothers Regarding Umbilical Cord Care in Babies in 2023 Method: Descriptive quantitative Sample : 52 Mother postpartum in PMBAppi Ammelia Population: 60 postpartum mothers at PMB Appi Ammelia Location: PMB Appi Ammelia

Formulation of the problem

Supported by the background that has been explained, testing whether or not there is a significant relationship between postpartum mothers' knowledge about umbilical cord care and the length of time the baby's umbilical cord falls off at PMB Elly in 2024?

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Research purposes

General purpose

The researcher's general objective is to analyze the relationship between the level of knowledge of postpartum mothers regarding umbilical cord care and the length of time for umbilical cord removal at PMB Elly in 2024.

Special purpose

- a. Determining the characteristics of postpartum mothers, including age, level of education, type of work, and number of children.ritas at PMB Elly in 2024.
- b. Determining the level of understanding of new mothers about umbilical cord care procedures and the relationship between the length of time for umbilical cord removal at PMB Elly in 2024.

Benefits of research

For Postpartum Mothers

It is possible to educate and encourage postpartum mothers about umbilical cord care and the appropriate and safe duration of cord removal.

For Educational Institutions

As a source of literature in the field of obstetrics and as a learning reference regarding understanding the relationship between mothers' knowledge about postpartum umbilical cord care procedures and the duration of umbilical cord loss in babies.

For Research Locations

It is hoped that research sites can use this information as a basis for assessing postpartum mothers' awareness of umbilical cord care and the duration of cord removal. This can also help improve the quality of care provided, including providing better information and support to mothers after delivery.

For Further Researchers

As a reference for further research related to postpartum mothers' knowledge regarding umbilical cord care and its impact on infant health, as well as a basis for improving clinical practice and health policy.

RESEARCH METHODS

Types and Design of Research

This study was conducted using a quantitative approach using a descriptive design, which means objectively describing or describing the current or ongoing situation. Postpartum mothers' knowledge of umbilical cord care at PMB Elly will be assessed in 2025.

Place and Time of Research Place of Research

This research will be conducted at PMB Elly and will begin in 2025 to assess postpartum mothers' knowledge of umbilical cord care and how long it takes for a newborn's umbilical cord to fall off naturally.

Research Time

The research is planned to take place in the period March to May 2025.

Population and Sample Population

Sugiyono (2021) stated that a research population is a group of people or an area that serves as a source of information for a specific feature being studied. This study involved 30 postpartum mothers who gave birth and had healthy babies at the Elly PMB.

Sample

Sample is a group of subjects (or objects) selected from the entire population (Sugiyono, 2020). This study applies a total sampling technique, in which all subjects in the population who meet the inclusion criteria are included as samples. The sample size in this study consisted of 30 postpartum mothers who gave birth and had healthy newborns at PMB Elly.

Operational Definition

Operationalization is the process of specifically determining research variables based on measurable characteristics. This is done using predetermined dimensions or indicators to represent the research variables (Widodo, 2019 in Charles, 2023).

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Operational Definition Table

Variables	Operational Definition	Measuring instrument	Measuring Scale	Measurement Results
Mother's knowledge about umbilical cord care and the duration of umbilical cord removal at BBL at PMB Elly	All respondents know about Umbilical Cord Care and the length of time for umbilical cord removal in newborns at PMB Elly	Questionnaire	Ordinal	1. Less = < 56% 2. Enough = 56-75% 3. Good = 76-100%

Data Collection Tools

The data used in this study is divided into primary data and secondary data.

Primary data is data collected directly by researchers through respondents without intermediaries, usually collected through interviews, observations, or distributing questionnaires to postpartum mothers as research subjects. It is considered very valuable because it reflects accurate and up-to-date information from the subjects being studied. For data collection, the measurement method used is a questionnaire. Secondary data is data obtained from Elly's Independent Midwife Practice (PMB), which contains information about postpartum mothers according to standards set by the researcher. This data is taken from readily available sources, such as visit reports and other service records.

A questionnaire, also known as a questionnaire, is a data collection tool in the form of a form containing a number of questions given to respondents to obtain responses or answers. This method is used from individuals or groups within an organization. The responses are analyzed to achieve the objectives. Researchers can analyze the questionnaire completion process, understand respondent feedback, and determine the extent to which certain views or opinions are widespread or limited among respondents (Wijaya, 2016 in Karyo 2019).

Data processing

The research activity known as data processing includes data analysis, which includes the following processes:

1. Data editing: Checking all data collected from surveys given to students.
2. Data coding is the process of systematically organizing collected raw data into specific numerical codes. The purpose of this coding is to facilitate data processing using computer software.
3. Data selection, also known as data organization, is the process of grouping or classifying data according to certain categories, such as time of collection or type of information, to make the data more structured and easier to analyze.
4. Data Transfer to Computer: This stage is the process of entering coded data (in the form of numbers) into a computer using a specific computer program.
5. Data Cleaning: This process aims to ensure that all data entered into the computer is correct, consistent, and appropriate, so that the results of the data analysis obtained are accurate and reliable.
6. Data Presentation (Data Output): The results of data processing in this study are presented in numerical form or displayed in tables to facilitate interpretation.

Data analysis

In this study, univariate analysis was used to analyze one variable or per variable. The aim of this analysis is to measure the level of knowledge of postpartum mothers about umbilical cord care and the duration of umbilical cord removal at BBL in PMB Elly. To calculate the proportion of each variable studied, descriptive statistical tests were used.

Univariate Analysis

One variable, the level of postpartum mothers' understanding of umbilical cord care procedures and practices and the duration of umbilical cord removal in newborns at Elly's PMB, was analyzed using univariate analysis. This analysis aimed to describe and determine the proportion of each studied variable. For this purpose, descriptive

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statistics were used.

Bivariate Analysis

Using bivariate analysis, we found a relationship between two variables: postpartum mothers' knowledge of umbilical cord care and the duration of cord removal in newborns. The study aimed to determine whether there was a significant correlation between these two variables, including maternal understanding and the duration of cord removal in Elly's PMB. This analysis used appropriate statistical tests, such as the chi-square test or the t-test, depending on the type of data being studied.

RESULTS AND DISCUSSION

In this chapter, the researcher presents the research results and objectives, namely to assess the relationship between the level of postpartum mothers' understanding of umbilical cord care and the duration of umbilical cord removal at PMB Elly. Furthermore, this chapter analyzes the characteristics of respondents based on their age, education level, type of employment, and knowledge. The study involved 30 postpartum mothers who had just given birth to healthy babies, and was conducted at PMB Elly from March to May 2025. All respondents were given a questionnaire, and the following description presents the results of the study.

Univariate Test Results

Respondent Characteristics

Table 1. Respondent Characteristics Based on Mother's Age in PMB Elly in 2025

No	Age Category	Frequency (f)	Percentage (%)
1	< 29 years	16	53.3%
2	> 28 years	14	46.7%
Total		30	100.0%

Of the 30 respondents, the majority (16 people) were under 29 years of age (53.3%), while the remaining 14 (46.7%) were over 28 years of age. This indicates that the majority of respondents were young. This age range is relevant in research on the relationship between postpartum mothers' age and their knowledge of umbilical cord care, as age can influence a mother's level of experience and understanding in caring for a newborn.

Table 2. Respondent Characteristics Based on Education Mother at PMB Elly in 2025

No	Education	Frequency (f)	Percentage (%)
1	Elementary School	2	6.7%
2	JUNIOR HIGH SCHOOL	9	30.0%
3	SENIOR HIGH SCHOOL	11	36.7%
4	D3	3	10.0%
5	S1	5	16.7%
Total		30	100.0%

Based on the results of a univariate analysis of the education level variable, of the 30 respondents studied, the majority (11 respondents) had a high school education (36.7%). Meanwhile, 9 respondents had a junior high school education, 9 respondents had a bachelor's degree, 5 respondents had a doctoral degree, 3 respondents had a diploma (D3), and 2 respondents had only completed elementary school. Postpartum mothers' education plays a crucial role in influencing their knowledge of umbilical cord care. The higher a mother's education, the better her understanding and application of infant care, particularly in maintaining hygiene and preventing umbilical cord infections.

Table 3. Respondent Characteristics Based on Mother's Occupation in PMB Elly in 2025

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No	Work	Frequency (f)	Percentage (%)
1	housewife	23	76.7%
2	Self-employed	4	13.3%
3	Private employees	3	10.0%
Total		30	100.0%

Of the 30 respondents, the majority, 23 (76.7%), were housewives. Meanwhile, 4 (13.3%) were self-employed, and 3 (10.0%) were private employees. Employment status can influence a mother's knowledge and involvement in infant care, including umbilical cord care. Housewives tend to spend more time at home and typically have greater opportunities to practice direct umbilical cord care, although this is still influenced by education and knowledge.

Table 4. Respondent Characteristics Based on Knowledge of Umbilical Cord Care at PMB Elly in 2025

No	Knowledge	Frequency (f)	Percentage (%)
1	Good	9	30.0%
2	Enough	17	56.7%
3	Not enough	4	13.3%
Total		30	100.0%

The results of a univariate analysis of the umbilical cord care knowledge variable showed that of the 30 people surveyed, the majority of respondents, 17 (56.7%), had sufficient knowledge. Meanwhile, 10 (30%) had good knowledge, and only 4 (13.3%) had poor knowledge.

A mother's level of knowledge plays a crucial role in determining proper umbilical cord care practices for newborns. Mothers with adequate or good knowledge are more likely to implement care practices that meet health standards, reducing the risk of infection and expediting the cord shedding process.

Table 5. Respondent Characteristics Based on the Duration of Umbilical Cord Removal at PMB Elly in 2025

No	Category	Frequency (f)	Percentage (%)
1	Fast	8	26.7%
2	Normal	18	60.0%
3	Long	4	13.3%
Total		30	100.0%

Based on the research results, the majority of babies at the 2025 Elly PMB experienced normal umbilical cord detachment, namely 18 respondents (60%). Meanwhile, 8 babies (26.7%) experienced premature cord detachment, and 4 babies (13.3%) experienced delayed detachment. These findings indicate that healthcare workers likely performed optimal umbilical cord care in accordance with midwifery service standards.

Bivariate Test Results

Duration of Umbilical Cord Removal

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No.	Normal	Fast Knowledge	Long	Total P value
	Maintenance			
	Umbilical Cord	F %	f %	f %
1. Good	8 26.7%	1 3.3%	0 0%	9 30%
2. Enough	0 0%	17 56.7%	0 0%	17 56.7%
3. Less	0 0%	0 0%	4 13.3%	4 13.3%
Total	8 26.7%	18 60%	4 13.3%	30 100%

In the table, 26.6% (8 mothers) who had good knowledge showed rapid release of their baby's umbilical cord, while 56.7% (17 mothers) who had sufficient knowledge showed normal release of the baby's umbilical cord, while 13.3% (4 mothers) who had low knowledge showed longer release of the umbilical cord. The chi-square bivariate test showed a significant correlation between postpartum maternal knowledge regarding umbilical cord care and the speed of the baby's umbilical cord falling off at PMB Elly in 2025. The p-value of 0.000 confirmed that maternal knowledge during the postpartum period was closely related to the speed or slowness of the baby's umbilical cord falling off process.

DISCUSSION

A total of 30 postpartum mothers who gave birth at PMB Elly between March and May 2025 were the subjects of the study. Age, education level, type of employment, and knowledge of umbilical cord care were the characteristics of the respondents. The majority of respondents (53.3%) were under 29 years of age, indicating that the majority of mothers giving birth were young. Most respondents had a high school education (36.7%), and the majority worked as housewives (76.7%). Mothers who have good knowledge are able to carry out proper umbilical cord care, such as keeping the umbilical cord area clean, avoiding the use of hazardous materials, and knowing the signs of infection or abnormal detachment.

Several factors, including age, education level, previous birth experience, and access to health information, significantly influence postpartum mothers' knowledge. According to Kristina's (2023) research, mothers with good knowledge typically implement umbilical cord care according to health workers' recommendations, while mothers with less knowledge often perform care incorrectly. This demonstrates the crucial role of health workers in providing clear, consistent, and understandable education. In this study, the majority of respondents were under 29 years old and had a high school education. The majority of them worked as housewives, providing them with the opportunity to receive information and devote time to caring for their babies. However, despite the large number of housewives, some still lacked adequate knowledge, necessitating the need for more intensive information and guidance from healthcare providers.

Other factors can contribute to delayed umbilical cord shedding, such as poor hygiene, the home environment, the habit of administering herbal remedies, or a lack of supervision from healthcare professionals. Environmental and sociocultural factors sometimes involve traditional practices, such as applying coffee, turmeric, coconut oil, or powder to the umbilical cord. This can delay shedding and even trigger infection. A bivariate chi-square test ($p=0.000$) showed a correlation between maternal knowledge of umbilical cord care and the length of time it took for the cord to fall off. Mothers with good knowledge of umbilical cord care generally (26.7%) experienced faster cord separation. Mothers with adequate knowledge generally experienced separation within a normal time (56.7%), while mothers with poor knowledge were more likely to experience slower cord separation (13.3%). This finding suggests that the higher the mother's knowledge of umbilical cord care, the greater the likelihood of a successful or faster cord separation.

A mother's discipline in cleaning the umbilical cord daily influences the cord shedding process. Cord shedding is categorized as rapid if it occurs in less than five days, normal if it lasts five to seven days, and slow if it lasts more than seven days. A mother's knowledge influences the method and frequency of care provided, including how to keep the umbilical cord area clean, use antiseptics, and watch for signs of infection or complications. Proper care practices can speed up the drying of the umbilical cord and ultimately lead to its safe fall.

CONCLUSION AND SUGGESTIONS

Conclusion

1. This study shows a correlation between postpartum mothers' knowledge about umbilical cord care and the length of time the baby's umbilical cord falls off, indicated by a value of 0.000.
2. Mothers with a high level of knowledge tend to experience the release of the baby's umbilical cord in a shorter period of time (26.7%).
3. Most mothers with sufficient knowledge experienced the process of releasing the baby's umbilical cord within a relatively normal time (56.7%).
4. Mothers with low knowledge often experience longer umbilical cord removal (13.3%).
5. Increasing maternal knowledge is very important to accelerate safe and healthy umbilical cord removal.

Suggestion

1. For postpartum mothers (Respondents)
Research can increase mothers' understanding of how important it is to carry out umbilical cord care in the correct manner.
2. For health workers,
This study is expected to be the basis for improving the quality of health services, especially in terms of support and education for postpartum mothers.
3. For educational institutions,
The findings of this study can be used as additional literature on midwifery to support the theory of how maternal knowledge relates to umbilical cord care.
4. For further researchers
The research can be used as a reference for further studies with larger samples, wider coverage areas, and the addition of variables such as culture, environment, and traditional care habits that influence umbilical cord release in the long term.

REFERENCES

- Charles G. Polii., Amran T. Naukoko2., & Hanly F. Dj. Siwu. (2023). Pengaruh Indeks Pembangunan Manusia (IPM) Dan Pertumbuhan Ekonomi Terhadap Tingkat Pengangguran Di Kota Tomohon. *Jurnal Berkala Ilmiah Efisiensi*, 23(5), 17. Diakses dari <https://ejournal.unsrat.ac.id/index.php/jbie/article/view/48036>
- Derina., & Usrawati Pasaribu. (2024) Pengetahuan Ibu Nifas Tentang Perawatan Tali Pusat Di Klinik Bidan Mona Kota Padangsidimpuan Tahun 2023. *Sekolah Tinggi Ilmu Kesehatan Sentral*, 4(1), 55. Diakses dari <https://stikessentral.ac.id/ojs/index.php/sj/article/view/73/39>
- Handayani, S., Wijaya, R., & Putri, D. (2023). Efektivitas Ekstrak Daun Sirih dalam Pencegahan Infeksi Tali Pusat: Studi Eksperimental. *Jurnal Keperawatan Indonesia*, 26(2), 112-120. Diakses dari <https://jki.ui.ac.id/index.php/jki/article/view/>
- Kementerian Kesehatan RI. (2023). Pedoman Pencegahan dan Pengendalian Infeksi Neonatal. Jakarta: Kemenkes RI. Diakses dari <https://www.kemkes.go.id/pustaka/>
- Kementerian Kesehatan RI. (2022). Profil Kesehatan Indonesia Tahun 2022. Jakarta: Pusat Data dan Informasi Kementerian Kesehatan RI. Diakses Melalui Serial Online: <https://www.kemkes.go.id/downloads/resources/>
- Karno Nur Cahyo., Martini., & Eri Riana. (2019). Perancangan Sistem Informasi Pengelolaan Kuesioner Pelatihan Pada PT Brainmatics Cipta Informatika. *Journal of Information System Research (JOSH)*, 1(1), 45. Diakses dari <https://ejurnal.seminar-id.com/index.php/josh/article/download/44/30>
- Nugroho, B., Santoso, H., & Rahman, F. (2023). Analisis Faktor Sosio-ekonomi terhadap Kejadian Infeksi Tali Pusat di Indonesia. *Jurnal Kesehatan Masyarakat*, 18(1), 45-53. Diakses dari <https://journalunnes.ac.id/nju/index.php/kemas/article/view/>
- Rahmawati, A., & Sulistyowati, D. (2022). Evaluasi Penerapan Protokol Sterilisasi dalam Perawatan Tali Pusat di Fasilitas Kesehatan Rural. *Jurnal Kebidanan dan Keperawatan*, 17(3), 78-86. Diakses dari <https://ejournal.stikesaisyiyah.ac.id/index.php/jkk/article/view/>

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- Rani Kawati., & Linda. (2019). Hubungan Perawatan Tali Pusat Dengan Kejadian Infeksi Pada Bayi Baru Lahir Di RSUD Dr. Pirngadi Medan 2019. *Jurnal Keperawatan Priority*, 2(2), 58. Diakses dari <https://jurnal.unprimdn.ac.id/index.php/jukep/article/view/556>
- Rizza A., Yusrial T., & Lisdayanti S. (2023) Hubungan Pengetahuan & Sikap Ibu Tentang Perawatan Tali Pusat Bayi Baru Lahir Dengan Kejadian Infeksi. *Excellent Midwifery Journal*, 6(1), 81. Diakses dari <https://jurnal.mitrabusa.ac.id/emj/article/view/239/192>
- Sugiyono, (2021). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Bandung : Afabeta.
- Sutrisno, E., & Pratiwi, R. (2023). Implementasi Edukasi Digital dalam Peningkatan Pengetahuan Ibu tentang Perawatan Tali Pusat. *Jurnal Teknologi Kesehatan*, 15(2), 167-175. Diakses dari <https://ejurnal.poltekkes-tjk.ac.id/index.php/JTK/article/view/>
- World Health Organization (WHO). 2023. WHO recommendations on Newborn Health: Guidelines Approved by the WHO Guidelines Review Committee. Geneva: World Health Organization
- Widiastuti, T., Hartono, R., & Susanto, H. (2023). Faktor-faktor yang Mempengaruhi Kejadian Infeksi Tali Pusat pada Neonatus: Systematic Review. *Jurnal Penelitian Kesehatan*, 20(1), 23-32. Diakses dari <https://jurnal.poltekkes-oepaoen.ac.id/index.php/HWS/article/view/>
- Yesi Oktavia., Eka Oktavia., & Margiyati. (2023). Tingkat Pengetahuan Ibu Nifas Tentang Perawatan Tali Pusat Pada Bayi Tahun 2023. *Jurnal Ilmiah Multidisplin*, 2(6), 418-419. Diakses dari <https://jurnal.arkainstitute.co.id/index.php/nautical/article/view/936>
- Ulvi Chamidah., Kristina Maharani., & Ns. Siti Juwariyah. (2023). Hubungan Antara Tingkat Pengetahuan Ibu Tentang Perawatan Tali Pusat Di Wilayah Kerja Puskesmas Sayung I Kabupaten Demak. *Jurnal Inovasi Riset Ilmu Kesehatan* 1(1), 161-162. Diakses dari <https://ejurnal.politeknikpratama.ac.id/index.php/Detector/article/view/1137>
- Annesya Atma Batty., Rica Arie Shintami., & Nia Kasniah. (2019). Perbedaan Lama Lepas Tali Pusat antara Perawatan Tali Pusat Menggunakan Kasa Steril dengan Perawatan Terbuka pada Neonatus. *Jurnal Kesehatan Pertiwi*, 1(2), 62. Diakses dari <https://journals.poltekkesbph.ac.id/index.php/pertiwi/article/view/13>
- Ririn Anggraini., & Vivin Nopitasari. (2020). Pengaruh Asuhan Kebidanan Pada Bayi Baru Lahir Terhadap Kemampuan Ibu Dalam Memandikan Bayi Dan Merawat Tali Pusat Bayi Baru Lahir Di BPM Lismarini Palembang. *Jurnal Kesehatan Abdurahman Palembang*, 9(1), 3. Diakses dari <https://ejournal.stikesabdurahman.ac.id/index.php/jkab/article/view/99>
- Leny., & Tirta Anggraini. (2023). Analisis Perbandingan Perawatan Tali Pusat Menggunakan Kassa Steril dan Dibiarkan Terbuka dengan Lama Lepas Tali Pusat. *Jurnal Ilmu Kesehatan Budi Mulia*, 13(1), 52-53. Diakses dari <https://journal.budimulia.ac.id/index.php/kebidanan/article/view/345>
- Wiwid Ria Trijayanti., Listyaning Eko Martanti., & Sri Wahyuni. (2020). Perbedaan Perawatan Tali Pusat Tertutup Dan Terbuka Terhadap Lama Pelepasan Tali Pusat Di Puskesmas Srandol Dan Puskesmas Ngesrep Kota Semarang. *Midwifery Care Journal*, 1(2), 16. Diakses dari <https://ejournal.poltekkes-smg.ac.id/ojs/index.php/micajo/article/view/5550>
- Yuni Lestari Ningsih., & Fida'Husain. (2022). Waktu Pelepasan Tali Pusat Pada Neonatus Lebih Cepat Dengan Penerapan Metode Terbuka. *Jurnal Keperawatan*, 1(2), 69. Diakses dari <https://jourkep.jurkep-poltekkesaceh.ac.id/index.php/jourkep/article/download/23/9>