p-ISSN: 2089-6778
e-ISSN: 2549-5054

RELATIONSHIP BETWEEN POST SECTIO CAESAREA MATERNAL PAIN AND BREASTFEEDING AT MGR.GABRIEL MANEK SVD HOSPITAL ATAMBUA

Ngatwati [1)], Woro Setia Ningtyas[2)], Mahendra Tri Arif Sampurna[3)], Lilik Djuari[4)]
Email: ngatwati28@gmail.com[1)],, woro.setia@fk.unair.ac.id [2)], mahendra.tri@fk.unair.ac.id [3)], lilik-d@fk.unair.ac.id[4)]
[1,2)]Midwifery Study Programme, Faculty of Medicine, Universitas Airlangga, Surabaya, Indonesia
[3)]Department of Pediatrics, Faculty of Medicine, Universitas Airlangga, Surabaya, Indonesia
[4)]Department of Public Health and Preventive Medicine, Faculty of Medicine, Universitas Airlangga, Surabaya, Indonesia

Article Information

Received:
September 12, 2024

Revised:
November 21, 2024

Accepted:
December 10, 2024

Abstract

The pain experienced by the mother can result in the mother being reluctant to breastfeed her baby as soon as possible and preferring to focus on herself. This study aims to analyze the relationship between post sectio caesarea pain and breastfeeding at MGR.Gabriel Manek SVD Hospital Atambua. The method used a cross sectional approach. The population in this study were post Sectio Caesarea mothers in the Anggrek room at MGR. Gabriel Manek SVD Hospital Atambua from May to June 2023. Based on existing criteria, sampling was carried out using a purposive sampling technique, a sample of 85 data were obtained. Data collection techniques were carried out using a questionnaire. Data analysis used univariate analysis was used to describe post-sectio caesarea maternal pain and to describe breastfeeding, while bivariate analysis used the Spearman correlation test to look for the relationship between pain and breastfeeding. The results of statistical analysis using the spearman correlation test, obtained a p value <0,001 (p value <0,05), which means there is a significant relationship between maternal pain after caesarean section and breastfeeding. The result of the correlation coefficient are 0,771, which shows that maternal pain after caesarean section and breastfeeding has a strong relationship.

Keyword: *Pain, Sectio Caesarea, Breastfeeding*

Correspondence:
Mahendra Tri Arif Sampurna, *Department of Pediatrics, Faculty of Medicine, Universitas Airlangga, Surabaya, Indonesia,* mahendra.tri@fk.unair.ac.id

1. Introduction

Breastfeeding (ASI) is a critical aspect of child health, particularly during the early years of life. ASI not only provides optimal nutrition for infants but also contains antibodies that protect them from various infections. The Indonesian government aims to increase the rate of exclusive breastfeeding to 100% for infants aged 0-6 months, in accordance with recommendations from the World Health Organization (WHO). However, various barriers often hinder mothers who deliver via cesarean section (c-section) from achieving this goal. One of the primary barriers is postoperative pain, which can significantly affect a mother's ability to breastfeed. The pain

p-ISSN: 2089-6778
e-ISSN: 2549-5054

experienced after a cesarean delivery is often localized at the incision site and can range from mild to severe. Such pain can disrupt comfortable breastfeeding positions, leading to significant discomfort for the mother [1].

Severe postpartum pain, particularly following cesarean delivery, can hinder mother-infant bonding by limiting the mother's emotional expression and gaze during interactions. This can lead to reduced emotional responses in the infant and less engagement with the mother, affecting the essential dyadic regulation for bonding and development [2]. Although some studies suggest that severe postpartum pain does not directly disrupt mother-infant bonding when controlling for other factors—such as the mother's mental health and rooming-in practices—it highlights the complexity of this relationship [3]. Specifically, postpartum pain related to breastfeeding is a significant factor contributing to non-exclusive breastfeeding (NEBF) at the six-month postpartum mark. Women experiencing persistent pain and sensory over-responsiveness (SOR) are more likely to discontinue exclusive breastfeeding, underscoring pain as a barrier to prolonged breastfeeding [4].

The experience of pain is highly complex and can lead to the cessation of breastfeeding. Women report this pain as an unpleasant sensory and affective experience, emphasizing the necessity for accessible breastfeeding support to help women achieve their breastfeeding goals [5].

The Indonesian Ministry of Health aims to raise the exclusive breastfeeding target to 80%. However, the rate of exclusive breastfeeding in Indonesia remains low at 66.1%, with Nusa Tenggara Timur reporting 74.5% [6].

Exclusive breastfeeding has substantial benefits for infants, including enhancing their immune system and providing vital nutrition. This is attributed to the presence of colostrum, which is rich in antibodies and proteins that bolster immune resistance and eliminate pathogens, thereby reducing the risk of infant mortality [6]. Breastmilk contains significant levels of immunoglobulins, particularly secretory IgA and IgG, which are critical for the infant's immune defense. Research indicates that the concentration of these immunoglobulins increases with prolonged lactation, offering ongoing immune protection to the child [7].

One significant barrier to exclusive breastfeeding for mothers is the experience of c-section. Post-surgical pain and discomfort can hinder a mother's ability to care for her infant, often resulting in delays in initiating breastfeeding. The World Health Organization (WHO) recommends that the standard rate for cesarean deliveries should be maintained between 5% and 15%. However, findings from the WHO's Global Survey on Maternal and Perinatal Health in 2011 revealed that approximately 46.1% of all births were conducted via cesarean section, with rates in Indonesia ranging between 30% and 80%. Specifically, the prevalence of C-sections in Indonesia was reported to be 18.92% among women aged 20-49 years and 10.03% among those aged 15-19 years [8]. According to the Riskesdas 2018 data, the rate of cesarean deliveries in Indonesia was 17.6%, while Nusa Tenggara Timur reported a lower figure of 10.0%. In addition, records from MGR. Gabriel Manek SVD Hospital in Atambua indicate that in 2021, out of 1,741 deliveries, 998 were performed via cesarean section. Alarmingly, data from

p-ISSN: 2089-6778
e-ISSN: 2549-5054

February 2023 showed that 13.2% of postpartum women who underwent a cesarean delivery did not breastfeed their infants at all.

The pain experienced by mothers post-sectio caesarea not only hinders mobility but also obstructs the breastfeeding process. The discomfort may discourage mothers from breastfeeding their infants promptly as they may prioritize self-care over breastfeeding. This study aims to analyze the relationship between postoperative pain following cesarean delivery and the provision of exclusive breastfeeding at MGR. Gabriel Manek SVD Hospital in Atambua.

2. Method

This study employs a quantitative research methodology using a correlation analytical design with a cross-sectional approach. The sample for this research consists of postpartum women who underwent cesarean sections (sectio caesarea) in the Anggrek ward at RSUD MGR. Gabriel Manek SVD Atambua, within the period of May to June 2023, totaling 85 respondents. Data collection was carried out using a pain scale (Borbuanis scale) and an observational checklist for breastfeeding practices. Statistical analysis utilized Spearman's correlation test with a significance level set at $\alpha = 0.05$.

3. Results and Discussion

Characteristics and General Data

Table 1. Characteristics of the Respondents

Variable	f	%
Age (years old)		
< 20	2	2,4
20 – 25	16	18,8
26 – 30	26	30,6
> 30	41	48,2
Education		
Elementary School	33	38,8
Junior High School	10	11,8
Senior High School	25	29,4
Higher Education	17	20,0
Frequency of Cesarean Deliveries		
First cesarean	59	69,4
Second cesarean	24	28,2
More than two cesareans	2	2,4
Early Initiation of Breastfeeding		
Practiced (Baby placed on mother's abdomen but not breastfeeding)	2	2,4
Not practiced (Baby taken to another room)	83	97,6
Birth Weight (gram)		
> 2500	82	96,5
< 25000	3	3,5
Childbirth Order		
Primipara	23	27,1
Multipara	62	72,9
First Feeding Time		
3-24 hours after delivery	13	15,3
Second day after delivery	66	77,6
More than 2 days after delivery	6	7,1
Breast Milk Production		
First day after delivery	28	32,9
Second day after delivery	44	51,8
More than 2 days after delivery	13	15,3
Pain Scale		
Mild Pain	24	28,2
Moderate Pain	60	70,6
Severe Pain	1	1,2

Table 1 reveals that the majority of mothers giving birth were over 30 years of age, totaling 41 individuals (48.2%). Existing research suggests that the ideal age for childbirth typically ranges from 20 to 35 years. Studies indicate that a mother's age at childbirth is associated with risks for both the child and the mother. Mothers who deliver below 20 years or above 35 years are at an increased risk of giving birth to infants with conditions that may elevate neonatal morbidity and mortality rates [9,10].

p-ISSN: 2089-6778
e-ISSN: 2549-5054

Under 20 years is often associated with underdeveloped reproductive organs, while over 35 years may increase susceptibility to degenerative diseases that can impact pregnancy outcomes [9].

A significant number of the respondents had an elementary educational background, comprising 33 individuals (38.8%). Accordingly, respondents with higher knowledge levels are more likely to provide breast milk to their infants, whereas those with moderate and low knowledge largely tend not to breastfeed. The educational attainment of mothers has been correlated with the duration of breastfeeding, where mothers with postgraduate education average 8.77 months of breastfeeding as opposed to 7.82 months for those with less education. However, the frequency of breastfeeding is not significantly influenced by maternal education, suggesting that while education [11].

The majority of respondents who underwent their first cesarean delivery were 59 individuals (69.4%). Mothers with a multipara (or grand multipara) status were 4.60 times more likely to provide exclusive breastfeeding compared to primipara mothers. Parity is closely linked to a mother's experience with breastfeeding and has been shown to significantly influence exclusive breastfeeding practices. Research indicates that multipara women (those who have given birth more than once) are more likely to engage in exclusive breastfeeding compared to primipara women. A systematic review of multiple studies confirms a consistent relationship between higher parity and increased rates of exclusive breastfeeding, highlighting the critical role of experience and knowledge gained from previous childbirths [12].

Furthermore, the vast majority of respondents, totaling 85 individuals (97.6%), did not practice early initiation of breastfeeding (IMD). Early initiation of breastfeeding has been demonstrated to enhance the likelihood of exclusive breastfeeding. One study found that mothers who practiced IMD had a 1.699 times higher chance of successfully breastfeeding exclusively compared to those who did not, although the statistical significance was weak ($p > 0.05$) [13]. Another study revealed a significant correlation between early breastfeeding initiation and exclusive breastfeeding, with a p-value of 0.010, indicating that early initiation facilitates effective breastfeeding learning for infants and prepares mothers to produce breast milk more swiftly [14].

Most infants had a birth weight greater than 2,500 grams, with 82 individuals (96.5%) in this category. The majority of deliveries at RSUD MGR Gabriel Manek SVD Atambua were among multipara mothers, totaling 62 individuals (72.9%). Additionally, most mothers initiated breastfeeding on the second day after delivery, accounting for 66 individuals (77.6%). Breast milk production for the first time occurred on the second day after delivery in 44 cases (51.8%). The smooth production of breast milk is a multifaceted process influenced by various physiological, psychological, and environmental factors. Research indicates that interventions such as psychological support, physical techniques, and nutritional supplementation can significantly enhance breast milk production in breastfeeding mothers [15]. Moreover, a significant proportion of mothers who underwent cesarean sections experienced moderate pain, totaling 60 individuals (70.6%). This pain can vary in meaning

p-ISSN: 2089-6778
e-ISSN: 2549-5054

among individuals and is often expressed differently depending on cultural backgrounds; some may express discomfort calmly, while others may do so more emotively. Acute post-surgical pain is a common experience, affecting approximately 80% of patients undergoing elective surgeries, including cesarean deliveries. This pain can substantially impact patient satisfaction and recovery [16]. In the context of chronic pain, studies have shown that a significant percentage of patients experience persistent discomfort following surgical interventions, with a reported prevalence of chronic pain in intensive care unit (ICU) patients at 23.8% [17].

Table 2. Relationship Between Post-Cesarean Pain and Breastfeeding Practices..

Post-Cesarean Pain	Exclusive Breastfeeding						Total		P *Value*	Correlation Coefficient
	Exclusive Breastfeeding		Partial Breastfeeding		Non-exclusive		Σ	%		
	n	%	N	%	n	%				
Mild	24	100,0	0	0	0	0,0	24	100,0	<0,001	0,771
Moderate	8	13,3	45	75,0	7	11,7	60	100,0		
Severe	0	0,0	0	0,0	1	100,0	1	100,0		
Total	32	37,6	45	52,9	8	9,4	85	100,0		

Table 2 illustrates the relationship between post-cesarean pain and exclusive breastfeeding practices. Among mothers with mild post-cesarean pain, all 24 individuals (100.0%) reported engaging in exclusive breastfeeding. In contrast, among those experiencing moderate pain, 45 individuals (75.0%) did not practice exclusive breastfeeding. For those with severe pain, the single respondent did not engage in exclusive breastfeeding. Statistical analysis using the Spearman correlation test yielded a p-value of <0.001 ($p < 0.05$), indicating a significant association between post-cesarean pain and breastfeeding practices. Furthermore, the correlation coefficient of 0.771 suggests a strong positive relationship between post-cesarean pain and breastfeeding, as it falls within the range of 0.60 – 0.7999. Postoperative pain can significantly impact a mother's breast milk production. When mothers experience severe pain, it is likely that their milk production will decrease; conversely, mothers with mild pain can produce a higher quantity of breast milk. Mothers who undergo cesarean deliveries typically experience discomfort at their incision sites. This postoperative pain may delay the initiation of breastfeeding, as mothers may be physically limited and focus more on managing their pain than on breastfeeding [18]. Effective analgesia has been shown to significantly reduce the time required to initiate breastfeeding after cesarean delivery. Research indicates that women receiving a specific analgesic regimen began breastfeeding earlier than those with less effective pain management strategies. Severe postoperative pain can hinder early mobility and breastfeeding, highlighting the importance of effective pain

p-ISSN: 2089-6778
e-ISSN: 2549-5054

management strategies in promoting successful breastfeeding [19].

Early mobilization is crucial for expediting maternal recovery, allowing mothers to return to daily activities as soon as possible. However, mothers who undergo cesarean sections often face difficulties with early mobilization due to fatigue and pain. One contributing factor is a lack of awareness regarding the benefits of early mobilization, resulting in diminished motivation to engage in it. Additionally, postoperative pain from cesarean incisions frequently presents challenges in breastfeeding. Studies have shown that early mobilization, initiated six hours post-surgery, significantly reduces pain levels in post-cesarean patients. For instance, a study conducted at Bhayangkara TK II Sartika Asih Hospital reported that patients who engaged in early mobilization experienced a decrease in pain scores from a median of 5 to 3, while no changes were observed in the control group [20].

The Enhanced Recovery After Caesarean Section (ERACS) protocol, which includes early mobilization, has proven to be more effective in reducing pain and facilitating quicker recovery compared to traditional methods. This approach has led to statistically significant improvements in pain levels and mobilization timing [21]. Providing interventions to alleviate postoperative pain is anticipated to enhance mothers' ability to breastfeed, thereby ensuring that their infants' nutritional needs are met.

4. Conclusion

There exists a significant relationship between post-cesarean pain and breastfeeding practices among mothers at RSUD MGR Gabriel Manek SVD Atambua, with a majority experiencing moderate pain, rated on a scale of 3 to 6. Post-surgical pain following cesarean delivery can adversely affect the breastfeeding process, as discomfort may deter mothers from successfully attempting to breastfeed, leading to a reduction in both the frequency and duration of breastfeeding sessions. Mothers with moderate to severe pain (scales 3-6) may encounter difficulties in achieving an appropriate breastfeeding position, which can contribute to increased stress and anxiety—factors that can further impede breast milk production.

Given these points, it is essential to implement several key interventions to support mothers in managing post-cesarean pain and enhancing their breastfeeding experience. First and foremost, education plays a critical role. Providing mothers with comprehensive information about the importance of breastfeeding and effective strategies to manage post-cesarean pain is vital. This knowledge empowers mothers, helping them understand how addressing pain can facilitate a more successful breastfeeding journey. In addition to education, psychological support is crucial for boosting mothers' motivation to breastfeed. Encouragement and emotional support can help alleviate stress and anxiety, fostering a more positive attitude toward breastfeeding. Addressing mothers' emotional needs is just as important as the physical aspects of postpartum recovery. Implementing effective pain management strategies is another essential intervention. This includes the use of appropriate analgesics, relaxation techniques, and physical therapy. By prioritizing maternal comfort during breastfeeding, these strategies can help mothers feel more at ease, ultimately supporting their ability to breastfeed successfully.

p-ISSN: 2089-6778
e-ISSN: 2549-5054

Moreover, adequate medical support is paramount. The medical team must be proactive in offering assistance, such as helping mothers achieve comfortable breastfeeding positions and teaching them proper breastfeeding techniques. This guidance can significantly reduce discomfort, making the breastfeeding experience more enjoyable.

Finally, ongoing monitoring of maternal pain levels and breastfeeding success is necessary. This allows healthcare providers to tailor interventions to meet the specific needs of each mother, ensuring they receive the appropriate support as they navigate the challenges of postpartum recovery and breastfeeding.

By integrating these interventions—education, psychological support, effective pain management, adequate medical assistance, and regular monitoring—healthcare providers can create a supportive environment that promotes both pain relief and successful breastfeeding for mothers recovering from cesarean deliveries.

5. Acknowledgment

The author would like to thank all parties involved in this research, namely:

a. MGR.Gabriel Manek SVD hospital Atambua
b. Respondents who are willing to take the time to participate in the study
c. Supervising lecturers

6. References

[1]. Indra Lestari, P., Nurfajriyani, I., & Fauziah, F. (2024). Relationship Of Immediate Breastfeeding On Pain Levels In Post Caesaria Sectio Patients In The Kuta Room Of Sumber Kasih Hospital, Cirebon City. Jurnal Kesehatan Mahardika, 11(1), 40–44. https://doi.org/10.54867/jkm.v11i1.204

[2]. Abargil M, Irani M, klein Selle N, Atzil S. Breastfeeding at Any Cost? Adverse Effects of Breastfeeding Pain on Mother–Infant Behavior. Biology (Basel). 2023 Apr 22;12(5):636.

[3]. Shebelsky R, Sadi W, Heesen P, Aber RN, Fein S, Iluz-Freundlich D, et al. The relationship between postpartum pain and mother-infant bonding: A prospective observational study. Anaesth Crit Care Pain Med. 2024 Feb;43(1):101315.

[4]. Freund-Azaria A, Bart O, Regev R, Bar-Shalita T. Breastfeeding-related Pain, Sensory Over-responsiveness, and Exclusive Breastfeeding at 6 Months: A Prospective Cohort Study. Women's Health Issues. 2024 Jan;34(1):80–9.

[5]. Jackson KT, Mantler T, O'Keefe-McCarthy S. Women's Experiences of Breastfeeding-Related Pain. MCN: The American Journal of Maternal/Child Nursing. 2019 Mar;44(2):66–72.

[6]. Kemenkes RI. Profil Kesehatan Indonesia 2020. Jakarta: Kemenkes; 2021.

[7]. Czosnykowska-Łukacka M, Lis-Kuberka J, Królak-Olejnik B, Orczyk-Pawiłowicz M. Changes in Human Milk Immunoglobulin Profile During Prolonged Lactation. Front Pediatr. 2020 Aug 7;8.

[8]. WHO.<https://www.who.int/data/gho/data/indicators/indicator-details/GHO/hem-births-by-caesarean-section-(in-the-two-or-three-years-preceding-the-survey)-(-)> [7 December 2022].

p-ISSN: 2089-6778
e-ISSN: 2549-5054

2022. Births by Caesarean Section (in the Two or Three Years Preceding the Survey) (%) (Health Inequality Monitor).

[9]. Andriyani Z. Gambaran Usia Dan Pendidikan Ibu Melahirkan Dengan Kejadian Berat Badan Lahir Rendah Pada Bayi. Jurnal Kesehatan. 2022 Aug 19;15(2):110–9.

[10]. Novi NER, Aryanti D, Triguna Y. Analisis Usia Gestasi Ibu Melahirkan dengan Berat badan Bayi Baru Lahir di Rumah Sakit. Media Informasi. 2022 Nov 30;18(2):67–72.

[11]. Safdar MB, Naveed M, Razzaq M, Razaq MU, Batool S. Impact of Maternal Education on Breast Feeding and Complementary Feeding Practices of Infants. Journal of University College of Medicine and Dentistry. 2023 Jun 6;2(2):55–9.

[12]. Putri Ifada L, Atik Maryanti S, Bachri S. Relationship Between Parity and Exclusive Breastfeeding in Breastfeeding Mothers. D'Nursing and Health Journal (DNHJ). 2023 Mar 27;4(1):1–15.

[13]. Fitriana A, Stianto M, Fatimah S. Effect Of Implementing Early Breastfeeding (Imd) To Promote Exclusive Breastfeeding. Mikia: Mimbar Ilmiah Kesehatan Ibu dan Anak (Maternal and Neonatal Health Journal). 2024 Feb 27;

[14]. Emiliana F, Hardjito K, Titisari I, Rahmawati RSN. Correlation Between History of Type of Childbirth and Early Initiation of Breastfeeding with Exclusive Breastfeeding. Jurnal Kebidanan. 2023 Nov 6;12(02):120–7.

[15]. Citra Dewi AD, Susmita. Relationship of mother's psychological condition to smooth milk production in breastfeeding mothers. Science Midwifery. 2023 Apr 18;11(1):115–20.

[16]. Azizah N, Rosyidah R, Rohamah J. Acupuncture at points LI4 and SP6 on Postpartum Sectio Caesarea (SC) Pain. Academia Open. 2023 Jul 24;8(1).

[17]. Akiria Santi A, Sukarni S. The Effectiveness Of Using Corsets On Reducing Pain Scale In Post SC Patients At Eka Hospital, South Tangerang In 2022. International Journal of Health and Pharmaceutical (IJHP). 2023 May 3;3(4):677–82.

[18]. Hitijahubessy C. Breasteeding Self Efficacy And Behavior Of Sexio Post Mothers For Breast Milk In Source Living Hospital Ambon. Interdiciplinary Journal and Hummanity (INJURITY). 2022 Oct 8;1(1):13–9.

[19]. Hooda R, Malik N, Pathak P, More H, Singh V. Impact of Postoperative Pain on Early Initiation of Breastfeeding and Ambulation After Cesarean Section: A Randomized Trial. Breastfeeding Medicine. 2023 Feb 1;18(2):132–7.

[20]. Sulistiawati T, Rahmilasari G, Puspitasari NA. Early mobilization and post-cesarean delivery pain management. Malahayati International Journal of Nursing and Health Science. 2024 Apr 28;7(2):224–30.

[21]. Millizia A, Iqbal TY, Fadhilati NI. Comparison Between Eracs and Non Eracs Methods on The Level of Pain and Mobilization in Post-Caesarean Section Patients.

p-ISSN: 2089-6778
e-ISSN: 2549-5054

AVERROUS: Jurnal Kedokteran dan Kesehatan Malikussaleh. 2023 Nov 7;9(2):1. Indra Lestari, P., Nurfajriyani, I., & Fauziah, F. (2024). Relationship Of Immediate Breastfeeding On Pain Levels In Post Caesaria Sectio Patients In The Kuta Room Of Sumber Kasih Hospital, Cirebon City. Jurnal Kesehatan Mahardika, 11(1), 40–44. https://doi.org/10.54867/jkm.v11i1.204

[22]. Perrella, S. L., Abelha, S. G., Vlaskovsky, P., McEachran, J. L., Prosser, S. A., & Geddes, D. T. (2024). Australian Women's Experiences of Establishing