

## THE EFFECT OF OXYTOCIN MASSAGE ON THE EFFECT OF BREAST MILK IN POST PARTUM MOTHERS AT MUHAMMAD SANI KARIMUN HOSPITAL IN 2024

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### Abstract

Oxytocin massage is done to stimulate the oxytocin reflex or let down reflex. By doing this massage, the mother will feel relaxed, so that the hormone oxytocin comes out of the breast milk quickly. The aim of this research is to determine the effect of Oxytocin Massage on the Smoothness of Breastfeeding in Post Partum Mothers at Muhammad Sani Karimun Regional Hospital 2024. This research method uses *Pre-Experimental Design* with shape *One Group Pretest-Posttest*. The sampling technique in this research was carried out using the method *purposive sampling* with the criteria of mother with *after caesarean section*. The number of samples in this study was 30 samples. The results of the normality test showed that the data distribution was not normal, so to test the effect before and after the oxytocin massage, the test was used *Wilcoxon Signed Rank Test*. The results of the study showed that there was an increase in the average score of breastfeeding fluency at the initial measurement of 2.5 and at the final measurement of 7.3 so that the difference (*mean difference*) of 4.8, which means that there was an increase in the average score of breastfeeding fluency after oxytocin massage. On test *Wilcoxon Signed Rank Test* The results obtained show that the significance of 0.000 is smaller than 0.05, so it can be stated that there is an influence of oxytocin massage on the smooth flow of breast milk in post partum mothers at Muhammad Sani Regional Hospital in 2024. It is hoped that oxytocin massage can be used as an alternative to increase breast milk production in post partum.

Keywords: Oxytocin Massage, Smooth Breastfeeding



## Introduction

Breast milk (ASI) is the best living fluid that babies really need, which contains various substances that are important for the baby's growth and development and suit their needs. *World Health Organization* (WHO) recommends that the best step to maintain the health of babies and their mothers is breastfeeding for at least 6 months. Breast milk is not only based on the consideration that breast milk is the best food for babies, but is also an integral part of the reproductive process which has important implications for the health of breastfeeding mothers and breastfeeding for 6 months actually encourages optimal baby growth (Herman et al., 2021).

Mother's milk (ASI) is a fluid secreted by the mother's breast glands, which is the first, main and best natural food for babies (Kurniawati et al., 2020). Apart from influencing the baby's growth and development process and health, breast milk also reduces the risk of heart disease as an adult and breast milk protects babies from various other diseases. The World Health Organization (WHO) reports data on exclusive breastfeeding globally, namely that around 44% of babies aged 0-6 months worldwide received exclusive breastfeeding during the 2015-2020 period, this has not yet reached the target for coverage of exclusive breastfeeding in the world, namely by 50% then more than 820,000 children's lives could be saved each year among children under 5 years of age, if all children aged 0-23 months were breastfed optimally (World Health Organization, 2023).

In Indonesia, coverage of exclusive breastfeeding has also stagnated in the last two years. From data from the Indonesian Nutrition Status Survey (SSGI), early initiation of breastfeeding was 47.4 percent in 2021 and 58.1

percent in 2022. Meanwhile, data on exclusive breastfeeding aged 0-5 months in 2021 was 52.1 percent and in 2022 as much as 52.2 percent (Ministry of Health, 2022). Coverage of exclusive breastfeeding in the Riau Islands Province increased from 2021, namely 69.60% to 72.80% in 2022. And in Karimun Regency coverage experienced a decrease in exclusive breastfeeding in 2021 by 56.3% to 52.1% in 2022 (Riau Islands Health Service, 2023).

According to research conducted by Lestari (2018), the reasons given by mothers for not giving breast milk until their baby is 6 months old include insufficient breast milk production, the baby's difficulty in sucking, the condition of the mother's nipples not being prominent and the influence of advertising/promotions for breast milk substitutes. In fact, looking at the benefits, breast milk has beneficial ingredients, such as breast milk from the first to the fourth day, namely colostrum which has an important role in relation to the baby's immunity because colostrum is a substance that contains immunity for the baby (Rimandini, 2022).

However, even though there are many known benefits, not all mothers can provide breast milk smoothly and optimally. The cause of irregular milk production is greatly influenced by the secretion of the hormone prolactin and the hormone oxytocin. These two hormones are influenced by the mother's psychological condition. Mothers who experience psychological tension (stress) will suppress the function of the hypothalamus, thereby inhibiting the secretion of the hormone prolactin and the hormone oxytocin by the pituitary gland (Wulandari & Machmudah, 2024).

To overcome the problem of producing breast milk caused by decreased stimulation of the hormone oxytocin, namely by breastfeeding



frequently, this is the most important key to increasing breast milk production. Breast milk will flow more smoothly if the breast as a store for breast milk is stimulated continuously. This is done by increasing the frequency of breastfeeding during the first 72 hours of birth. Breast milk production will increase naturally if the baby sucks breast milk more frequently. Apart from that, you can do an oxytocin massage which can increase oxytocin production, and massage can also reduce levels of the stress hormone (cortisol) and have a relaxing effect on tense muscles and improve blood flow. One massage technique that can increase breast milk production is oxytocin massage (Wulandari & Machmudah, 2024).

Oxytocin massage is one solution to overcome irregular breast milk production. This massage is carried out along the spine (vertebrae) to the fifth and sixth ribs to stimulate the hormones prolactin and oxytocin after giving birth (Muliani et al., 2020). Oxytocin massage is a movement carried out by the husband/family/mother's companion during the postpartum period for breastfeeding mothers in the form of back massage on the mother's back to increase the release of the hormone oxytocin. (Lestari et al., 2021).

According to research conducted by Novitasari & Maryatun (2023) which aims to determine the effect of oxytocin massage on the smooth production of breast milk, where the results show the smooth release of breast milk before the application of Oxytocin Massage shows that breast milk is not flowing smoothly. Smooth milk production after Oxytocin Massage shows that breast milk is flowing smoothly. There was a smooth development of breast milk during 3 days of applying oxytocin massage. There was a change in the smoothness of breast milk production in both respondents after

applying oxytocin massage or breast milk increased. In line with the results above, in research conducted by Gultom et al. (2023) shows that there is an influence of oxytocin massage on the smooth flow of breast milk in postpartum mothers with a value of  $p\text{-value}=0,000$ .

Data obtained from the medical records of RSUD Muhammad Sani Karimun at the initial data collection on the number of births during the last 3 years was 4,067 (2021-2023) birth cases. In 2021 there were 1,357 cases of post partum mothers, in 2022 there were 1,373 cases, while in 2023 there were 1,337 cases. Based on results studies introduction done by researcher Of HOSPITAL Muhammad Know Regency Karimun on July 2024 with do interview on 15 people mother post partum during control or outpatient visits at the obstetrics polyclinic at Muhammad Sani Regional Hospital obtained results 5 post partum mothers said breast milk was not flowing smoothly pain in the breasts and pain in the surgical scars, making post partum mothers less interested in trying to breastfeed their children, meanwhile 10 people post partum mother other said only a little breast milk came out.

Based on results interview researcher with a nurse at the Obstetrics Polyclinic that the post partum mother who was checked on the fifth day, some of her breast milk was not yet flowing... Polyclinic Nurse say effort Which done to post partum mothers, namely providing education and encouraging mothers to breastfeed their babies, because breastfeeding the baby may help stimulate breast milk production. The polyclinic nurse said she knew about oxytocin massage to stimulate breast milk production, but it had not been educated and practiced on post partum mothers. Researchers took data from post-partum mothers during control at the



obstetrics clinic. Researchers visited post-partum mothers' homes and provided education and carried out oxytocin massages.

## Research Methods

The experimental research method that will be used is *Pre-Experimental Design* with shape *One Group Pretest-Posttest Design*. The sample in this study was mothers in labor *caesarean section* At Muhammad Sani Hospital a total of 30 respondents were taken using techniques *purposive* sampling by establishing inclusion and exclusion criteria. The research was carried out in July 2024 at Muhammad Sani Regional Hospital. AThe data collection tool for this research used a breastfeeding fluency questionnaire. The breastfeeding fluency

questionnaire contains criteria for smooth breastfeeding. This questionnaire was not tested for validity because it had been carried out by previous researchers, namely in the Telaumbanua research (2022) where the results of the validity test on the breastfeeding fluency questionnaire were obtained from 10 question items, 8 valid items were obtained with an *r* value of 0.382-0.707. The results of the questionnaire reliability test with 8 questions obtained a value *alpha cronbach* 0.930. The measurement results are categorized into 2, namely breast milk is said to be smooth if the score is  $> 4$ , while breast milk is said to be not smooth if the score is  $\leq 4$ . Data was collected and analyzed using *Wilcoxon Signed Ranks Test*.

## Research Result

**Table 1**  
**Frequency Distribution of Post-Partum Mothers' Breastfeeding Smoothness Before Oxytocin Massage**

Smoothness Breast milk before	N	%	Mean
Not Smooth	30	100	2,5

Based on table 4.1, the results show that as many as 30 respondents (100%) experienced poor breastfeeding before oxytocin massage. The results showed that the average score for smooth breastfeeding before oxytocin massage was 2.5.

**Table 2**  
**Frequency Distribution of Post-Partum Mothers' Breastfeeding Smoothness After Oxytocin Massage**

Smoothness Breast Milk After	N	%	Mean
Fluent	30	100	7,23

Based on table 4.2, the results show that as many as 30 respondents (100%) experienced smooth breastfeeding after oxytocin massage. The results showed that the average score for smooth breastfeeding after oxytocin massage from 30 respondents was 7.23.



**Table 3**  
**The Effect of Oxytocin Massage on the Smoothness of Breast Milk in Post Partum Mothers at Muhammad Sani Regional Hospital in 2024**

Smooth breastfeeding	Mean	Min-Max	SD	Mean Difference	P Value
Pre Test	2,5	0 – 4	1,16	4,73	0,000
Post Test	7,23	5 – 8	0,93		

From the test results it can be seen that there is an increase in the average score of breastfeeding fluency in the initial measurement of 2.5 and the final measurement of 7.23 so the difference is (*mean difference*) of 4.73, which means that there was an increase in the average score of breastfeeding fluency after oxytocin massage. On test *Wilcoxon Signed Rank Test* The results obtained show that the significance of 0.000 is smaller than 0.05, so it can be stated that there is an influence of oxytocin massage on the smooth flow of breast milk in post partum mothers at Muhammad Sani Regional Hospital in 2024.

## Discussion

### a. Post-Partum Mother's Breast Milk Smoothness Before Giving Oxytocin Massage

The results of the study showed that as many as 30 respondents experienced poor breast milk before the oxytocin massage. The results showed that the average score for smooth breastfeeding before oxytocin massage from 30 respondents was 2.5. The results of the research are in line with research conducted by Rimandini (2022) where the majority of respondents before being given oxytocin massage produced less than 17 mothers (85%).

According to Wulandari & Machmudah (2024), the causes of irregular milk production are greatly influenced by the secretion of the hormone prolactin and the hormone oxytocin. These two hormones are influenced by the mother's psychological condition. Mothers who experience psychological tension (stress) will suppress the function of the hypothalamus,

thereby inhibiting the secretion of the hormone prolactin and the hormone oxytocin by the pituitary gland.

Researchers assume that the researchers did not experience smoothness in the process of giving breast milk (ASI) before the intervention was carried out most likely because there was no special intervention carried out after they underwent caesarean section surgery. Sectio caesarea itself often has an impact on the production and release of breast milk, where delays in the initiation of breastfeeding or psychological factors such as post-operative pain and anxiety can hinder the lactation process. Poor breastfeeding in mothers undergoing caesarean section is closely related to the lack of support and medical intervention immediately after surgery. Without intervention, such as oxytocin massage, which can stimulate the production and release of breast milk.

This is in accordance with the opinion expressed by Asiyah & Wigati (2015) who said that post-



caesarean anesthesia can also disrupt the breastfeeding process and disrupt the breast milk stimulus. Patients also complain of pain in the surgical scar which makes them anxious and so that breast milk stimulation is not optimal.

In line with what Anggeni (2021) stated, the mother's psychological state, namely anxiety, can inhibit the hormone oxytocin which plays a role in the lactation process. Every woman after giving birth will of course produce abundant breast milk to meet her baby's nutritional needs. However, quite a few postpartum mothers experience decreased breast milk production so that the baby's breast milk needs are not met.

#### **b. Post Partum Mother's Breast Milk Smoothness After Giving Oxytocin Massage**

The results of the study showed that as many as 30 respondents experienced smooth breastfeeding after oxytocin massage. The results showed that the average score for smooth breastfeeding after oxytocin massage from 30 respondents was 7.23. The research results are in line with research conducted by Batubara & Dewi (2019) where the results showed that of the 33 respondents who received oxytocin massage, 28 people (84.8%) obtained smooth breastfeeding in the smooth category.

In accordance with the theory put forward by Yuliana & Nulhakim (2022), mothers who do oxytocin massage regularly and regularly will experience an increase in breast milk production. Oxytocin massage is a breast milk massage that is often done in order to increase the

smoothness of breast milk production. Oxytocin massage, the baby's father or family can help with the massage. Oxytocin massage is done to stimulate the oxytocin reflex or let down reflex. Apart from being useful for stimulating the let down reflex, other benefits of oxytocin massage include reducing swelling (engorgement), stimulating the release of the hormone oxytocin, providing comfort to the mother, reducing breast milk blockages, maintaining breast milk production when the mother and baby are sick (Rahayu in Lestari et al., 2021).

According to the researchers' assumptions, the results obtained were based on the results of the oxytocin massage intervention, where all 30 respondents showed an increase in smooth breast milk production after receiving this treatment. This indicates that oxytocin massage plays a significant role in stimulating the hormone oxytocin, which is known to play an important role in the process of producing breast milk. Oxytocin massage can be considered as one of the reliable and safe approaches in supporting the lactation process.

Oxytocin massage is a movement carried out by husbands on breastfeeding mothers in the form of back massage on the mother's back to increase the release of the hormone oxytocin. Oxytocin massage performed by the husband is able to provide comfort to breastfeeding mothers and provide comfort to breastfed babies (Rahayu in Lestari et al., 2021).

By doing oxytocin massage, it will have an impact on the smooth flow of breast milk, which will provide benefits such as the reflex of releasing breast milk, being



stimulated more easily with skin to skin contact, being more economical, stimulating increased milk production, reducing swelling in the breasts, reducing blockage or stasis of breast milk, maintaining milk production and maintaining health. breast (Ariyani et al. 2021).

This is in line with research (Tuasikal & Indrayani, 2022) which states that doing oxytocin massage will provide a feeling of relaxation and calm so that it can increase breast milk production. Mothers who have just gone through the birthing process often feel tired and stressed due to the pain they experience. Therefore, support from various parties, including husbands, family or health workers, is very necessary because the mother's unstable psychological condition can reduce the stimulus of the hormone oxytocin. The impact that occurs is that breast milk production is hampered. Providing massage and providing adequate nutrition and rest will make the mother's body more relaxed and comfortable so that breast milk production becomes smoother.

**c. The Effect of Oxytocin Massage on the Smoothness of Breastfeeding in Post Partum Mothers at Muhammad Sani Karimun Regional Hospital in 2024**

The results of the study showed that there was an increase in the average score of breast milk fluency in the initial measurement by 2.5 and the final measurement was 7.23, so the difference (mean difference) was 4.73, which means there was an increase in the average score of breast milk fluency after oxytocin massage. . In the Wilcoxon

Signed Rank Test, the results showed that the significance of 0.000 was smaller than 0.05, so it could be stated that there was an influence of oxytocin massage on the smoothness of breast milk in post partum mothers at Muhammad Sani Regional Hospital in 2024.

The results of the research are in line with research conducted by (Susianti & Usman, 2019) which aims to determine the effect of Oxytocin Massage on breast milk production in post section mothers where the results of the study show that there is a difference in the proportion of smooth breast milk before and after oxytocin massage ( $P$  value  $< 0.05$ ). The results of a similar study conducted by Lubis & Anggraeni (2021) showed that the results of research that had carried out oxytocin massage showed that there was an effect of oxytocin massage intervention which could increase breast milk production by 0.52, from 1.12 before the intervention to 1.64 after the intervention. oxytocin massage. Based on the results of the dependent T test, the  $P$ -value was 0.0001, which means there is a significant relationship between giving oxytocin massage and the quantity of breast milk production.

The results of the study showed that there was an increase in the average score of breastfeeding fluency before and after oxytocin massage by 4.8. In accordance with research conducted by Marantika (2022), the results of the research showed that the average value of the smooth production of breast milk before and after oxytocin massage had increased as indicated by the mean value of 53.33 (pre-test) to 87.33 (post-test).



According to researchers' assumptions, oxytocin massage, which is known as a method to stimulate the production of the hormone oxytocin, has proven effective in supporting the smooth flow of breast milk. The hormone oxytocin has an important role in the process of producing breast milk, where this hormone helps contract the muscles around the mammary glands, making the breastfeeding process easier. The increase in breast milk flow fluency scores after this intervention indicates that oxytocin massage provides real benefits for post partum mothers in facilitating breast milk production.

By doing an oxytocin massage on the mother's back area, it will stimulate the release of the oxytocin hormone (Handayani & Sofiyanti, 2023). Physiologically, this increases the hormone oxytocin which is sent to the brain so that the hormone oxytocin is released and flows into the blood, then enters the mother's breasts, causing the muscles around the alveoli to contract and making breast milk flow in the breast milk ducts. The hormone oxytocin also makes the breast milk ducts wider, making breast milk flow more easily (Triananinsi, 2019).

The frequency of oxytocin massage will increase breast milk production which is closely related to the baby's weight. The research results of Lestari et al., (2021) show that there is a significant relationship between the frequency of oxytocin massage and the weight of babies aged 43 months ( $p=0.009$ ). Similar research results by Doko et al. (2019) showed that there was a significant difference between the baby's weight after being given treatment between the intervention

group and the control group ( $p=0.003$ ). This research is also in line with Dewi's 2018 research showing that there is an influence of the frequency of oxytocin massage in post partum mothers on increasing baby weight which is significant at  $p=0.00$ .

Oxytocin massage is done to stimulate the oxytocin reflex or let down reflex. Apart from stimulating the let down reflex, the benefits of oxytocin massage are providing comfort to the mother, reducing swelling, reducing breast milk blockages, stimulating the release of the hormone oxytocin, maintaining breast milk production when the mother and baby are sick (Juwita & Febriani, 2020).

## Conclusion

Based on the results of the research discussion entitled "The Effect of Oxytocin Massage on the Smoothness of Breastfeeding in Post Partum Mothers at Muhammad Sani Hospital in 2024" several conclusions can be drawn:

- The average flow of breast milk before the oxytocin massage was carried out was 2.5, which is the category of breast milk that is not smooth.
- The average flow of breast milk after oxytocin massage was 7.23, which is the category of smooth breast milk.
- There was an increase in the average score before and after doing oxytocin massage by 4.8. The results of the analysis show that there is an influence of oxytocin massage on the smooth flow of breast milk in post partum mothers at Muhammad Sani Regional Hospital in 2024 ( $p\text{ value} = 0,000$ ).



## Suggestion

Based on the conclusions above, the author can put forward the following suggestions

- a. For Post Partum Mothers  
Oxytocin massage is recommended as part of postnatal care, because mothers who do it regularly show increased milk production, which helps babies get exclusive milk.
- b. For Muhammad Sani Karimun Regional Hospital  
Oxytocin massage, which has been shown to increase breast milk production and speed up the lactation process, should be part of a new mother's general care. To support this, relevant health professionals should be trained and mothers should be informed about the benefits of oxytocin massage.
- c. For Further Researchers  
Future researchers can expand the research sample by including more demographics, maternal health conditions and family or husband support. Apart from that, taking a qualitative approach such as in-depth interviews can help reveal mothers' subjective experiences regarding oxytocin massage and compare oxytocin massage with other massages.

## Reference

- Anggeni, U. (2021). The Effect of Oxytocin Massage on Production in Postpartum Mothers (Literature Study) Year 2021. *Journal of Health and Development*, 11(22), 61–72.
- Ariyani, Y., Alynesi, F., & Fathunikmah. (2021). *Lactation Process and Oxytocin Massage Technique*. Malay Culture Studies.
- Asiyah, N., & Wigati, A. (2015). Lavender Aromatherapy Oil as a Media to Increase Breast Milk Production. *Jikk*, 6(2).
- Batubara, N. S., & Dewi, S. S. S. (2019). Education and development journal, South Tapanuli Education Institute. *Journal of Education and Development, South Tapanuli Education Institute, South Tapanuli Education*, 7(4), 230. <https://journal.ipts.ac.id/index.php/ED/article/view/4771/3073>
- Riau Islands Health Service. (2023). *Riau Islands Province Health Profile for 2022*. Riau Islands Provincial Health Service.
- Doko, T. M., Aristiati, K., & Hadisaputro, S. (2019). The Effect of Oxytocin Massage by Husbands on Increasing Breast Milk Production in Postpartum Mothers. *Silampari Nursing Journal*, 2(2), 66–86. <https://doi.org/10.31539/jks.v2i2.529>
- Gultom, C. E., Jasmawati, J., & Nulhakim, L. (2023). The Effectiveness of Oxytocin Massage by Husbands and Midwives in Increasing the Fluency of Breastfeeding in Postpartum Mothers. *PubHealth Public Health Journal*, 2(2), 79–89. <https://doi.org/10.56211/pubhealth.v2i2.370>
- Handayani, F., & Sofiyanti, S. (2023). Comprehensive Midwifery Care for Mrs M Using Oxytocin Massage in the Bayongbong Community Health Center Area, Garut Regency. *Siliwangi Health Journal*, 4(1), 453–462. <https://doi.org/10.34011/jks.v4i1.1537>
- Herman, A., Mustafa, M., Saida, S., & Chalifa, W. O. (2021). The Relationship between Mother's Knowledge and Attitudes with Exclusive Breastfeeding. *Professional Health Journal*, 2(2),



- 84–89. <https://doi.org/10.54832/phj.v2i2.103>
- Juwita, S., & Febriani, A. (2020). The Effect of Oxytocin Massage on the Smoothness of Breast Milk in Postpartum Mothers in the Payung Sekaki Health Center Working Area. *Call for Paper National Midwifery Seminar*, 84–89.
- Ministry of Health. (2022). Pocket Book of 2022 Indonesian Nutrition Status Survey (SSGI) Results. *Ministry of Health*, 1–154.
- Kurniawati, D., Hardiani, R. S., & Rahmawati, I. (2020). Breast Milk Pocket Book. In *KHD Production* (Vol. 42, Issue 4). KHD Production.
- Lestari, P., Fatimah, & Ayuningrum, L. D. (2021). *Oxytocin Massage*. Elmatara Publisher.
- Lestari, R. R. (2018). Factors Associated with Exclusive Breastfeeding in Mothers. *Journal of Obsession: Journal of Early Childhood Education*, 2(1), 130. <https://doi.org/10.31004/obsesi.v2i1.17>
- Lubis, D. R., & Anggraeni, L. (2021). Oxytocin Massage on the Quantity of Breast Milk Production in Breastfeeding Mothers Who Have Babies Aged 0-6 Months. *Malahayati Midwifery Journal*, 7(3), 576–583. <https://doi.org/10.33024/jkm.v7i3.3501>
- Marantika, S. (2022). The Effect of Oxytocin Massage on Smooth Breast Milk Production in Post Partum Mothers. *Menara Medika Journal*, 13(2), 225. <https://doi.org/10.32382/jmk.v13i2>.
- Muliani, Gusman, & Dilla, T. N. (2020). Effectiveness of Combination of Breast Care and Oxytocin Massage on Breast Milk Production in Post Partum Mothers at Bpm Setia. *Poltekita: Journal of Health Sciences*, 12(2), 80–87. <https://doi.org/10.33860/jik.v12i2.22>
- Novitasari, E., & Maryatun, M. (2023). Application of Oxytocin Massage by Husbands on the Smooth Production of Breast Milk in Post Partum Mothers at the Kebakkramat 1 Health Center, Karanganyar Regency. *Journal of Health Sciences Research Innovation*, 1(4), 11–25. <https://doi.org/10.55606/detector.v1i4.2487>
- Rimandini, D. K. (2022). The Effect of Oxytocin Massage on the Smoothness of Breast Milk in Primiparous Post Partum Mothers at Moty Care Baby, Kids & Mom Ciangsana in 2022. *Keris Husada Midwifery Academy*, 9. <https://ojs.akbidkerishusada.ac.id/index.php/jurnal-ilmiah-kesehatan/article/download/46/35/74#:~:text=The hormone oxytocin will cause cells, breast milk oxytocin will flow smoothly go out.>
- Susianti, S., & Usman, A. (2019). The Effect of Oxytocin Massage on Breast Milk Production in Post-Cesarean Mothers. *Smart Midwife Journal (JBC)*, 2(3), 149. <https://doi.org/10.33860/jbc.v2i3.281>
- Telaumbanua, M. (2022). *Analysis of Factors that Influence the Smoothness of Breast Milk Production at the East Lahewa Community Health Center, North Nias Regency*. Helvetia Medan Health Institute.
- Triananinsi, D. (2019). The Effect of Oxytocin Massage Therapy on the Smoothness of Breastfeeding in Postpartum Mothers at the Caile Community Health Center, Bulukumba Regency. *Seminar Proceedings...*, 3(1), 69–78.



- World Health Organization. (2023).  
*Infant and Young Child Feeding*.  
World Health Organization.  
<https://www.who.int/news-room/fact-sheets/detail/infant-and-young-child-feeding>
- Wulandari, A., & Machmudah, M. (2024). Application of oxytocin massage to successful breastfeeding in post partum patients. *Young Nurse*, 5(1), 68.