

The Effectiveness of The Combination of Oketani Rolling Massage and Wollwich Rolling Massage on Breast Milk Production in Breastfeeding Mothers

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ABSTRACT

Background: Breast milk production greatly affects the breastfeeding process because it is a physiological stage that involves complex interactions between stimulation of the breast, nerve reflexes that play a role in the release of prolactin and oxytocin. The prolactin hormone plays a role in the production of breast milk; on the other hand the oxytocin hormone plays a role in the release of breast milk. Lack of stimulation of these mechanisms causes disruption of breast milk production and release. Breast massage techniques such as Oketani Breast Massage, Wollwich Massage and Rolling Massage aim to increase blood flow to the breast tissue and stimulate the release of the oxytocin hormone which plays a role in the milk ejection reflex. The study was to identify the average breast milk production before the administration of the Oketani Rolling Massage and Wollwich Rolling Massage methods and to analyze the differences in mothers who were lactating in the Sukorambi Community Health Center Working Area, Jember Regency. **Methods :** This study used a quasi-experimental pretest-posttest design in one group on postpartum mothers in the Sukorambi Community Health Center working area. Twelve respondents were selected as samples using a purposive sampling procedure, and they were divided into two groups of six respondents each. The first group received a combination intervention of Oketani Breast Massage and Rolling Massage, while the second group received a combination of Wollwich Massage and Rolling Massage. Breast milk production was measured based on the indicator of infant weight gain before the intervention, then the intervention was given for seven days, and re-measured on the eighth day. Data were analyzed using bivariate analysis or the Wilcoxon test. **Results:** showing a significance level of p-value of 0.002 (<0.05), which means there is a difference in breast milk production before and after the intervention. **Conclusions:** the following study concludes that the combination method of Oketani Rolling Massage and Wollwich Rolling Massage is effective in increasing breast milk production, Suggestion: so it is recommended to be implemented by health workers, especially midwives.

Keyword: Breast Milk Production; Stimulasi Oketani Breast; Massage Wollwich dan Rolling Massage.

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INTRODUCTION:

Breastfeeding is an important moment that provides enormous benefits for infant growth also development. Various studies show that breast milk has advantages that cannot be replaced by formula milk, both in terms of nutrition also

immunological function. The World Health Organization (WHO) also the United Nations Children's Fund (UNICEF) advise exclusive breastfeeding for at least six months in order to lower infant morbidity also mortality rates (Jannah et al., 2025) WHO targets a minimum breastfeeding coverage of 50% by 2025, but the current global achievement is only 36%, with several Southeast Asian countries reporting the following figures: India 46%, the Philippines 34%, also Vietnam 17% (Retnawati, 2024). In Indonesia, the 2023 Health Profile shows that the percentage 73.97% of infants between the ages of 0 also 5 months are exclusively breastfed, an increase from 71.58% in 2021 also 2022 (Ministry of Health, 2023). Sigizi 2024 data shows that exclusive breastfeeding coverage up to six months of age in East Java is 78.8%, while in Jember Regency the coverage is 75.38% (Dinkes Jember, 2024). Although this increase is encouraging, efforts to promote exclusive breastfeeding still need to be strengthened to support the Sustainable Development Goals (SDGs) to lower the infant mortality rate to 16 per 1,000 live births (Siti Dahlia 1, Sukmawati 2 & 1, 2024)

One factor contributing to breastfeeding failure is low milk production in mothers, especially in the early stages of childbirth. Breast care through lactation massage has been proven to increase milk production, including oxytocin massage, arugaan massage, marmet massage, as well as the Oketani Breast Stimulation Method, Wollwich Massage, also Rolling Massage (Felia et al., 2024). This technique is very effective for use in postpartum mothers for the breastfeeding process. The breastfeeding process is influenced by two main hormones: prolactin, which regulates milk production, also oxytocin, which facilitates milk ejection (Jannah et al., 2025). The first milk that comes out when a baby is born is called colostrum; direct skin contact between mother also baby can stimulate the hormone oxytocin so that breast milk flows more smoothly (Jannah et al., 2025)

Oketani massage, developed by Sotomi Oketani in Japan, can make breasts softer, increase areola elasticity, also facilitate milk flow through the lactiferous ducts also nipples

(Sihombing et al., 2024) This technique consists of eight steps, including one milking technique also seven massage techniques to separate the mammary glands, can be performed twice a day for 15–30 minutes, also taught to mothers or families for independent practice at home (Sihombing et al., 2024). Meanwhile, Wollwich massage enhances the production of milk by stimulating the myoepithelial cells around the glands, increasing prolactin also oxytocin responses (Ningsih et al., 2025) Rolling back massage is performed by massaging the spine from costae 5–6 to the scapula, stimulating the spinal cord also hypothalamus to trigger oxytocin secretion so that breast milk flows more smoothly (Andini, 2024)

Based on a review of previous studies, there have been no studies combining these three massage techniques into a single integrated method. Therefore, This investigation aimed to assess the effectiveness of the SMOWR method (Oketani Breast Stimulation, Wollwich also Rolling massages) on nursing moms' ability to produce milk using a pretest-posttest research design.

METHODS:

This study uses a one-group pretest-posttest design also is quasi-experimental in nature. All of the participants in this study were mothers who breastfed their babies for 0-6 months. The sample consisted of 12 respondents postpartum mothers in the Sukorambi Community Health Center work area, using purposive sampling based on the following inclusion criteria: 1) exclusive breastfeeding, 2) healthy babies, 3) mothers without mastitis, 4) no use of pharmacological galactagogues. The exclusion criteria were: 1) breast wounds, 2) abscesses, 3) or certain medical conditions. There were two groups in the study, with one group consisting of six respondents. Group 1 received an intervention combining the Oketani breast massage also rolling massage methods, while group 2 received an intervention combining the Wollwich massage also rolling massage methods. Breast milk output was measured prior to the intervention using infant weight as an indicator for both groups. The intervention was then

administered for seven days, also on the eighth day, the production of breast milk was evaluated again. The research instruments used included a questionnaire, digital scale, using a digital breast pump from the Crown Baby Care brand because it is more effective in influencing breast milk production. also a 15-minute procedure administered for 7 days. Before the intervention, the researchers analyzed The quantity of breast milk produced by nursing moms by weighing the babies. After the 7-day intervention, the babies' weight was weighed again on the 8th day as an indicator of breast milk production. Frequency distribution was employed for univariate analysis, while bivariate data analysis was carried out utilizing the Wilcoxon test because the data were not normally distributed. This research received ethical clearance from the Ethics Committee of Dr. Soebandi University with ethics number 1296/KEPK/UDS/X/2024.

RESULTS:

The general data in this study presents data on respondent characteristics consisting of age, education level, and parity.

Table 1 Characteristics frequency distribution

| Characteristics | Frequency (n=12) | Percentage (%) |
|---|------------------|----------------|
| Age | | |
| 20-35 Tahun | 11 | 91.7 |
| >35 Tahun | 1 | 8.3 |
| Edukaction | | |
| Elementary school | 2 | 16.7 |
| Junior high school - senior high school | 10 | 83.3 |
| Job | | |
| Housewife | 10 | 83.3 |
| Entrepreneur | 2 | 16.7 |
| Paritas | | |
| Primipara | 3 | 25 |
| Multipara | 8 | 66.7 |
| Grandemultipara | 1 | 8.3 |

Based on the data in table 1 which presents the frequency distribution based on age, it can be

seen that of the 12 breastfeeding mothers surveyed, most were in the healthy age range of 20-35 years old, totaling 11 respondents (91.7%). On education level, it can be seen that of the 10 respondents who were breastfeeding mothers, most had a junior high school or high school education, while 2 respondents (83.3%) had an elementary school education. The respondents' occupations, it can be seen that of the 12 breastfeeding mothers, most of them were housewives, totaling 10 respondents (83.3%). the parity of breastfeeding mothers, it can be seen that of the 12 breastfeeding respondents, most were multiparous, with 8 respondents or 66.7%.

Table 5 Breast Milk Production in Breastfeeding Mothers Before Intervention

| Breast Milk Production | Frequency | Percentage (%) |
|------------------------|-----------|----------------|
| Good | 4 | 33.3 |
| Less | 0 | 0 |
| Poor | 8 | 66.7 |
| Total | | 100% |

Based on the data in Table 5, it shows that out of 12 respondents, 8 (66.7%) had insufficient breast milk production also 4 (33.3%) had excessive breast milk production.

Table 6 Breast Milk Production in Breastfeeding Mothers After Intervention

| Breast Milk Production | Frequency | Percentage (%) |
|------------------------|-----------|----------------|
| Good | 5 | 33.3 |
| Less | 0 | 0,0 |
| Poor | 7 | 66.7 |
| Total | | 100% |

Based on the data in Table 6, it shows that out of 12 respondents, after the intervention, 7 (58.3%) mothers produced less breast milk also 5 (41.7%) produced more breast milk.

Table 7 Breast Milk Production in Breastfeeding Mothers

| Breast Milk Production | Pretest | | Posttest | | Total | | p-value |
|------------------------|---------|------|----------|------|-------|------|---------|
| | F | % | F | % | F | % | |
| Good | 8 | 66.7 | 7 | 58.3 | 15 | 62.5 | 0.002 |
| Less | 0 | 0.00 | 0 | 0.0 | 0 | 0.0 | |
| Poor | 4 | 33.3 | 5 | 41.7 | 9 | 37.5 | |
| Total | 12 | 100 | 12 | 100 | 24 | 100 | |

Based on Table 7, the results of the cross-tabulation analysis show that almost half of the respondents (62.5%) had insufficient breast milk, none had adequate breast milk, also 9 (37.5%) had more than adequate breast milk. Thus, the significance test yielded a p-value of 0.002 ($\alpha=0.05$), which means that H_a is accepted also H_o is rejected, leading to the conclusion that there is a difference in breast milk production before also after the implementation of the "SMOWR" method.

DISCUSSION:

Oketani massage is a distinctive breast treatment that was first made popular by Sotomi Oketani of Japan. It has been used in Bangladesh, Korea, also Japan, among other nations. Oketani massage can be performed by midwives who have undergone special training also techniques. In order to assist restore also preserve the breast's natural form also appearance, midwife Sotomi Oketani created a connective tissue massage that involves manually removing adhesions between the base of the breast also the main fascia of the chest muscle. The pectoralis muscles are stimulated by oketani strength massage, which increases milk production also softens also elasticizes the breasts, facilitating easier sucking for infants. In addition to improving breast milk quality, preventing nipple pain also breast milk blockage, also improving or reducing lactation issues brought on by flat also inverted nipples, oketani massage also gives mothers general relief also comfort (Angellina & Handayani, 2025).

The way that OBM Oketani breast massage therapy works is nearly identical to how a newborn sucking stimulates the mother's nipples also sensory nerve endings that serve as

mechanical receptors. The hypothalamus suppresses the release of factors that inhibit prolactin secretion and receives this signal via the spinal cord. Prolactin hormone activates the alveolar cells that make breast milk, also factors that increase prolactin secretion cause the pituitary gland to release prolactin. Pressure on acupuncture points applied through obm massage can release endorphins, reduce pain, relax the body, also increase feelings of happiness also confidence in mothers (Siti Dahlia 1, Sukmawati 2 & 1, 2024).

Research [8] on Oketani breast massage revealed the following outcomes: Oketani massage can strengthen the pectoralis muscles, which increases milk production also softens also elasticizes the breasts, making it simpler for babies to nurse. It also improves blood also lymphatic flow, resulting in reduced breast pain also anxiety in mothers. In addition, it can increase the baby's weight due to adequate nutrition also improve the bond between mother also baby. In conclusion, Oketani breast massage is highly effective in enhancing lactation (Pramuwidya & Fitriani, 2022).

Woolwich massage is applied to the lactiferous sinus area about 1-1.5 cm above the areola, which aims to release milk from the breast sinus. Nerve cells stimulate the breast, then continue to the hypothalamus, causing the hypothalamus to produce prolactin hormone in the anterior pituitary gland. Prolactin is responsible for blood flow to the myoepithelial cells, thereby producing also increasing milk production also preventing breast blockages also swelling. Performing woolwich massage affects the autonomic nerves also subcutaneous tissue, relaxing the tissue, increasing blood flow in the duct system, also removing residual cells from the duct system to prevent obstruction of breast milk flow through the lactiferous ducts, ensuring smooth breast milk flow (Retnawati, 2024).

This is consistent with studies that have been done (Jamilah & Yunaesah, 2025) Results revealed that nursing moms were producing

more breast milk; the average weight of their newborns before to receiving oxytocin also Woolwich massages was 3094.44, with a median of 3055.00 also a standard deviation of 397.477, minimum value of 2510 g, also maximum value of 4045 g. The results after treatment showed an average infant weight of 3128.28, median of 3073.00, standard deviation of 376.212, minimum value of 2558 g, also maximum value of 4081 g.

One technique for treating problems with breast milk supply is rolling massage. Rolling massage works by using a circular motion to massage the spine (costae 5-6 to the scapula). After giving delivery, mothers typically receive this massage, which can assist increase the production of breast milk by stimulating the hormone oxytocin (Sari, 2025). This is supported by research (Solehah & Dewi, 2024) This demonstrates a rise in the rate of breast milk production before also after back rolling massage, which can raise the hormones oxytocin also prolactin. Apart from inducing the let-down response, back rolling massage also relieves engorgement, relieves obstructions in the milk ducts, stimulates the release of oxytocin, also keeps the mother or infant producing milk when they are sick. It is advised that midwives use the Stimulation Massage Oketani Breast, Massage Woolwich, dan Rolling Massage (SMOWR) method with postpartum or nursing mothers in light of the research findings.

CONCLUSIONS:

The results of the study showed changes in breast milk production in breastfeeding mothers after being given a combination of the Oketani Rolling Massage and Woolwich Rolling Massage methods. Most respondents previously experienced insufficient breast milk production, while after the intervention there was an increase in production in some mothers to the category of more than sufficient. Statistical tests showed a significant p-value ($p < 0.05$), so it can be concluded that there is a significant difference between breast milk production before and after the combination of the two massage methods.

These findings indicate that the Oketani and Woolwich massage interventions are potentially effective in increasing breast milk production in breastfeeding mothers.

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REFERENCES:

- Andini, D. M. (2024). *Edukasi Rolling dan Areola Massage menggunakan Jitu Oil dengan Relaksasi Murottal Al-qur'an untuk pengeluaran ASI Dewi*. 5, 62–70. <https://doi.org/10.33860/pjpm.v5i1.2843>
- Angellina, S., & Handayani, L. (2025). *Efektivitas Oketani Breast Massage Terhadap Peningkatan Laktasi Pascapersalinan: Systematik Review Sherly*. 15(1).
- Felia, E. A., Yuliana, D., & Lestari, Y. (2024). *Pijat Oketani terhadap Kelancaran Produksi ASI Postpartum*. 5(2), 264–271.
- Jamilah, & Yunaesah. (2025). *Efektivitas Kombinasi Pijat Oksitosin Dan Woolwich Massage Serta Breastcare Terhadap Peningkatan Produksi Asi Pada Ibu Menyusui Di Klinik Dr Fitri Khairani Pulungan*. 5, 942–952.
- Jannah, M., Ratri, P. R., & Ayu, D. P. (2025). *Meningkatkan Kesadaran ASI Eksklusif Melalui Edukasi dan Emo Demo di Desa Sucopangepok , Kabupaten Jember , Jawa Timur*. 5, 464–471.
- Ningsih, D. A., Oktavia, L. D., Studi, P., Profesi, P., Kesehatan, F. I., Ibrahimy, U., Pangkalpinang, P. K., Wolwich, P., & Diri, E. (2025). *Pengaruh kombinasi pijat woolwich dan do'a pilihan menggunakan roll on saum oil terhadap efikasi diri ibu menyusui*. 9(2), 232–243.
- Pramuwidya, A., & Fitriani, H. (2022). *Pijat Oketani dan Pijat Woolwich Meningkatkan*

- Produksi ASI Ibu Nifas. *Jurnal Kebidanan Dan Keperawatan Aisyiyah*, 8(2), 208–215.
- Retnawati, S. A. (2024). *Pemberian Edukasi ASI Eksklusif Dan Pijat Woolwich Pada Ibu Nifas Di Wilayah RW 13 Kelurahan Batu IX*. 6(1), 15–20.
- Sari, P. P. (2025). *Intervensi Massage Rolling Punggung Terhadap Kelancaran ASI Pada Ibu Postpartum diatasi antara lain , payudara penuh , meningkatkan kelancaran produksi ASI Rolling punggung (Khasanah , Sukmawati & Massage Rolling punggung merupakan salah satu tindakan un. 1(2)*.
- Sihombing, J. C. B., Mariana, I., Wahyuni, J., Tinambunan, J. S. T., & Siregar, D. N. (2024). Efektivitas stimulasi oral terhadap peningkatan reflek hisap lemah pada bayi prematur di RSUD Royal Prima Medan. *Holistik Jurnal Kesehatan*, 18(2), 171–177. <https://doi.org/10.33024/hjk.v18i2.133>
- Siti Dahlia 1 , Sukmawati 2, Y. H. 2, & 1. (2024). *Efektifitas Terapi Oketani Breast Massage (OBM) Terhadap Peningkatan Produksi ASI: Case Report*. 173–180.
- Solehah, F. A., & Dewi, K. (2024). *Penerapan Kombinasi Kompres Dingin Daun Kubis Dan Back Rolling Massage Pada Ibu Nifas Untuk Memperlancar Poduksi Asi di Puskesmas Wanadadi 1 Banjarnegara. 2*, 44–51.