



## IMPLEMENTATION OF NON-PHARMACOLOGY ON POST-PARTUM MOTHERS AT INDEPENDENT PRACTICE OFFICE OF MIDWIFE

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### ABSTRACT

Exclusive breastmilk (ASI) is the breastmilk that is given to newborn without any additional food or liquid such as formula milk, orange juice, and water before the newborn ages 6 months. Several factors can cause the breastmilk production is not smooth, such as nutritional factor, baby sucking factor, breast maintenance, psychological factor, knowledge factor, and socio-cultural factor. One of the efforts to overcome the issues is by providing non-pharmacology care such as woolwich massage. This research aims to know the effect of woolwich massage on breastmilk production. In this case, the method applied is Pretest-Posttest without Control Group Design. The population involved in this research is 20 post-partum mothers with normal labor, which were further chosen as the research samples through total sampling. Furthermore, this study was carried out in December 2023. The intervention carried out since the first day to the third day is the woolwich massage that was given twice a day (morning and afternoon) for  $\pm$  15 minutes. In this case, the instrument used was observation sheet, electric breastmilk pump, and measuring cup. Data analysis was further done through univariate analysis and bivariate analysis using dependent t-test. Woolwich massage affects the production of breastmilk.

Keywords: breastmilk production; massase; woolwich

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### INTRODUCTION

Exclusive breastmilk is breastmilk given to newborns without any other additional food or liquid such as formula milk, orange juice, and water before the baby ages 6 months (Mufdlilah et al., 2017). Naturally, it is also proven that the provision of exclusive breastmilk can meet the nutritional need of baby, According to Usman (2019), Exclusive Breastmilk provision program is quite difficult to be developed since it is related to various social issues in the society (Wahyuni et al., 2021). The low exclusive breastmilk scope for the first six months of baby life is caused by many factors, one of which is mother who is not confident with the breastmilk she has (Yanti, 2021). The breastmilk production that is not smooth is also caused by several factors, such as nutritional factor, baby sucking factor, breast maintenance, psychological factor, knowledge factor, and socio-cultural factor. (Yuliana & Nur Hakim, 2020). A mother who experiences stress can stress can cause the occurrence of vasoconstriction of alveolar blood vessels that can lead to the obstruction of oxytocin to epithelium, thus causing the blockage from the letdown reflex due to adrenalin release (epinephrine) (Swastika, 2022).

Breastmilk gives many benefits for baby because its composition affects the development and tissue of babies' brain. In addition, exclusive breastmilk can also protect the baby from

Sudden Infant Death Syndrome (SIDS) (Dolang et al., 2021). The effect that can emerge from baby who is not given breastmilk is the disruption of nutritional need fulfillment and infection disruption on the baby (Amran & Amran, 2013) and mastitis on the mother (Trisanti & Nasriyah, 2019). Several ways that can be conducted to increase the production of breastmilk has been done and socialized by the health workers, wither through pharmacological method or non-pharmacological method. In pharmacology, it can be carried out by providing vitamin such as moloco B12, and ASIfit (Efendi, 2021). Meanwhile, in non-pharmacology method, it can be carried out through complementary care and medical herbal that have been socialized numerously, such as oxytocin massage (Indrayani & Ph, 2019), woolwich massage, *oketani* massage (Indrayani & Risza, 2022), *marmet* massage (Lestari et al., 2021), rolling massage and acupressure. Medical herbal provision is one of the alternative to increase the breastmilk production, such as by giving *katuk* leaves and *moringa* leaves extract (Dahlia & Maisura, 2021), papaya leaves extract (Harahap et al., 2021), fenugreek seeds (Indrayani & Andriani, 2024) and dates (Yuviska et al., 2021). Woolwich massage can improve the prolactin and oxytocin reflex that further can increase oxytocin release by pituitary that is in charge of releasing breastmilk from the alveoli (Arkha, 2018). In addition, woolwich also aims to help mother relax and comfortable so it can increase the breastmilk production. This research aims to know the effect of woolwich massage on breastmilk production.

**METHOD**

This research used quasi-experimental method with Pretest-Posttest without Control Group Design approach. The population involved in this research is 20 post-partum mothers with normal labor, which were further chosen as the research samples through total sampling. Furthermore, this research was carried out in TPMB N in December 2023 to January 2024. In this case, the post-partum mothers were given intervention since the first day to the third day by woolwich massage that was given twice a day (morning and afternoon) for ± 15 minutes. In addition, the instrument used was observation sheet, electric breastmilk pump, and measuring cup. Data analysis was further done through univariate analysis and bivariate analysis using dependent t-test. This research is a quasi-experimental research that does not use a questionnaire, so no validity test is carried out and only uses an observation sheet.

**RESULTS**

Table 1.  
Frequency Distribution of Post-partum Mother’s Breastmilk Production before the implementation of Woolwich Massage

Breastmilk Production	Pretest	
	f	%
Poor (0 – 3 ml)	17	85
Sufficient (4 – 6 ml)	3	15
Good (7 – 12 ml)	0	0

Based on Table 1 above, the breastmilk production before lactation massage was carried out is in poor category on 17 respondents (85%)

Table 2.  
Frequency Distribution of Post-partum Mother’s Breastmilk Production after the implementation of Woolwich Massage

Breastmilk Production	Pretest	
	f	%
Poor (0 – 3 ml)	0	0
Sufficient (4 – 6 ml)	1	5
Good (7 – 12 ml)	19	95

Table 2, the breastmilk production after the implementation of woolwich massage is in the good category by 19 respondents (95%).

Table 3.  
The Mean Breastmilk production of Post-Partum Mother before and after the Implementation of Woolwich Massage

Breastmilk Production	Mean	Std. Deviation	Min	Max
Pretest	2.45	1.099	1	5
Posttest	9.80	1.673	6	12

Table 3, the mean value of breastmilk production before the implementation of woolwich massage is 2.45 ml with standard deviation of 1.099. Meanwhile, after the implementation of woolwich massage, the mean value of the breastmilk production is 9.80 ml with standard deviation of 1.673.

Table 4.  
Effect of the Implementation of Woolwich Massage on the Breastmilk Production of Post-Partum Mothers

Breastmilk Production	Mean	Std. Deviation	Sig.
Pretest	2.45	1.099	0,000
Posttest	9.80	1.673	

Table 4, it shows that the mean value of post-partum mothers’ breastmilk production increased by 7.35 ml, that is from 2.45 ml to 9.80 ml. Statistical test that was carried out obtained Asymp. Sig (2-tailed) value of 0.000 ( $< \alpha = 0.05$ ). Hence, it can be concluded that there is an effect of the provision of woolwich massage on the breastmilk production.

## DISCUSSION

Research findings revealed that there is an effect of the provision of woolwich massage on the postpartum mothers’ breastmilk production, indicating that woolwich massage needs to be socialized more on the postpartum mothers who experience issue on their breastmilk production. Several benefits of breastmilk on baby includes improving immune system, protection, warm from the skin contact with the mothers, reduce hemorrhage, as well as protect the iron, protein, and other nutrients (Nurdahlia et al., 2022). Exclusive breastmilk can also decrease the allergy risk, respiratory issue, and obesity on baby (Mufdlilah et al., 2017). Breast milk is the best food for babies. For this reason, breast milk must be given to babies at least up to 6 months of age and can be continued up to 2 years. Exclusive breastfeeding is giving only breast milk without additional fluids such as formula milk, water, orange juice, or other additional foods before reaching the age of 6 months. Baby who does not receive exclusive breastmilk can obtain negative risks including death due to diarrhea that they can experience by 3.94 higher than baby who receives exclusive breastmilk (Dompas, 2021). Meanwhile, baby who only receives breastmilk will experience a healthier condition compared to baby who only receives formula milk (Sutriyanti et al., 2022).

Woolwich massage is a massage carried out in the lactifyrus sinus area, precisely 1-1.5 cm above the mammary areola, with the aim of removing breast milk that is in the lactifyrus sinus (Fadhilah & Listiyanawati, 2024). One effort that can be made to stimulate the hormones prolactin and oxytocin in the mother after giving birth is to provide a relaxing sensation to the mother, namely by doing a woolwich massage which will stimulate the nerve cells in the breast (Herdiyani et al., 2024), followed by the hypothalamus and responded by the anterior pituitary to release the hormone prolactin which will be channeled by blood to breast myoepithelial cells to produce breast milk. Meanwhile, oxytocin massage can influence the oxytocin hormone which functions as a stimulus for breast milk production in mothers during breastfeeding. This action can also relax the mother and improve nerve flow and milk ducts in both breasts (Lailiyah et al., 2024). Woolwich massage or circular massage is a method to make the mother relax after giving birth and increase prolactin and oxytocin hormone. Woolwich massage was carried out for 15 minutes using two thumbs on lactiferous sinus area, precisely 1-1.5 cm outside the areola mammae (Nuampa & Payakkaraung, 2021). This treatment can trigger the nervous system of the breast that further is continued to hypothalamus and responded to by the anterior pituitary to release the hormone prolactin, which will be distributed to the breast myoepithelial cells to produce breast milk. In this case, the benefit of woolwich massage is to increase the breastmilk release, breastmilk secretion, and prevent inflammation on breast or mastopathy (Melvia et al., 2023).

Research that was carried out on post-partum mothers through woolwich massage towards the mothers' breastmilk production in the working area of Mapane Public Health Center found a significant effect. Similar finding is also obtained by another previous research done by Sari et al (2023) that woolwich massage technique can affect the breastmilk release on Post-Partum mothers in PMB Sumarni, Poso Regency (Sari et al., 2023). In this case, researchers assumed that woolwich massage affects the breastmilk production, in which the implementation of this massage can trigger the release of prolactin and oxytocin hormones that can further increase the breastmilk production and make the mothers relax. Therefore, this massage needs to be socialized to pregnant mothers so when they experience problem on during post-partum period related to their breastmilk, they can overcome the problem directly.

## CONCLUSION

The implementation of woolwich massage increase the breastmilk production of post-partum mothers from 2.45 ml to 9.80 ml. in this case, the statistical test obtained Asymp. Sig (2-tailed) value of 0.000 ( $< \alpha = 0.05$ ), so it can be concluded that woolwich massage affects the breastmilk production.

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