

## **THE EFFECTIVENESS OF WOOLWICH MASSAGE AND ROLLING (BACK) MASSAGE ON BREAST MILK QUANTITY**

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### **ABSTRACT**

Inadequate breast milk production can cause breastfeeding to stop before the baby is 6 months old. One effort that can be done to stimulate the hormones prolactin and oxytocin in the mother. There are 2 non-pharmacological ways to maximize the production of prolactin and oxytocin, namely Woolwich massage and rolling back massage. The purpose of this study was to look at the effectiveness of Woolwich massage and rolling back on the expenditure or quantity of breast milk. This research is a type of intervention research with experimental quasy design. The location used for this study is in the working area of the midwife clinic Rahmawati Serang – Banten in June – July 2023. The samples used in this study were 15 people as the woolwich group and 15 postpartum mothers as the rolling back group. The bivariate analysis used in this study was to determine whether there was a relationship with the Chi-Square test. In the rolling massage group there were 10 respondents (33.3%) and not much different in the Woolwich massage group also the majority of breast milk volume >500 ml there were 11 (36.7%) respondents. Analysis results (OR: 0.73; 95% Confident Interval 0.15 – 3.49; p value 0.690).

Keywords: breast milk; woolwich massage; rolling back massage

### **INTRODUCTION**

*World Health Organization* (WHO) and *United Nations Children's Fund* (UNICEF) recommends exclusive breastfeeding, namely breast milk given to infants from birth for 6 (six) months, without adding and/or replacing with other foods or drinks.(Rosyaria Badrus, 2018) In reality, exclusive breastfeeding in Indonesia still has many obstacles. One of the factors that causes the failure of exclusive breastfeeding is the lack of milk production so that it cannot cover the nutritional needs of the baby. It takes an effort that can be done to stimulate the hormones prolactin and oxytocin in the mother after giving birth is to give a relaxing sensation to the mother. There are several methods that can be done to stimulate breast milk production, including breast care, breast massage, Early Breastfeeding Initiation (IMD), back rolling massage and endhorphin massage. Back rolling massage and Woolwich massage (Sholeha, 2019)(Retnosari, 2021)(Mayangsari, 2020)

One of the efforts that can be made to stimulate the hormones prolactin and oxytocin in mothers after giving birth is to provide a relaxing sensation to the mother by doing Woolwich massage. Woolwich massage is a massage performed in the area of the active sinuses precisely 1-1.5 cm above the areola mammae, with the aim of removing milk in the active sinuses. Woolwich massage will stimulate nerve cells in the breast. These stimuli will be forwarded to the hypothalamus and responded by the anterior hyphaphysis to secrete the hormone prolactin which will be flowed by the blood to breast myopitel cells to produce breast milk.(Dinengsih, 2020)(Aprianti, 2023)(Nurfija, 2020)

Another technique that has also been reported to have effectiveness in increasing milk production is Rolling massage is a relaxation therapy aimed at stimulating the central nerves in the posterior and anterior pituitary so as to increase milk production, especially in postpartum mothers and

provide comfort and relaxation after delivery. Massage is one of the effective complementary therapies to reduce physical discomfort as well as improve mood disorders. Reduction of discomfort in nursing mothers will help smooth the release of breast milk. The purpose of this study was to determine the effectiveness of Woolwich massage and rolling back massage on increasing milk production.(Muryani, 2022)(Kartini, 2023)(Anggraini, 2022)

## METHOD

This research is a type of intervention research with an experimental quasi design. The location used for this research is in the working area of the Rahmawati Anyar midwife clinic, Serang City, Banten Province in June – July 2023. The sample used in this study used a total sampling of 15 postpartum mothers as the woolwich group and 15 postpartum mothers as the rolling back group. Inclusion criteria: Postpartum mother for at least 2 days and no abnormal bleeding or infection. Intervention Woolwich massage is done in the area of the active sinuses precisely 1-1.5 cm above the mammary areola, with the aim of removing milk in the active sinuses is done for 3-5 minutes. Control intervention in the form of rolling back is massage of the spine (five-six costa), helps the hormone oxytocin work in milk production and increases comfort after childbirth (Farida, 2022)(DELVIA REHULINA, 2020) The instrument used in the study was an observation sheet to determine milk production in postpartum mothers with a cut off point of 500 ml. The bivariate analysis used in this study was to determine whether there was a relationship with the Chi-Square test.

## RESULT AND DISCUSSION

Based on the results of research that has been conducted, it is illustrated that the majority of pregnant women are the most in productive age, which is between 20 – 35 years old with 20 people or equivalent to 66.7%, most of which are first or primiparous childbirth, namely 20 (66.7%) and mayotitas respinden have completed education in high school as many as 26 respondents (86.7%).

Table 1.  
 Characteristics of Respondents (n=30)

Characteristic	f	%
<b>Age of Respondents</b>		
< 20 Years	7	23.3
20 – 35 Years	20	66.7
> 35 Years	3	10
<b>Parity</b>		
Primipara	20	66.7
Multiparous	10	33.3
<b>Education</b>		
Elementary (Elementary-Junior High)	4	13.3
SMA	26	86.7

Based on cross-tabulations (table 2) it can be seen that the majority of respondents who received Woolwich massage intervention and rolling massage had a fairly high volume of breast milk > 500 ml. In the rolling massage group there were 10 respondents (33.3%) and not much different in the Woolwich massage group also the majority of breast milk volume >500 ml there were 11 (36.7%) respondents.

Table 2.  
 Cross Tabulation of Breast Milk Volume Woolwich Massage Group and Rolling back Massage Group

Volume of breast milk	Woolwich Massage		Rolling Back Massage		Total	Percentage
	h	Percentage (%)	h	Percentage (%)		
< 500 ml	4	13.3	5	16.7	9	30
> 500 ml	11	36.7	10	33.3	21	70

Table 3.  
 Analysis of the Effectiveness of Woolwich Massage and Rolling Back Massage on Increased Breast Milk Levels

Risk Estimate	Value	95% Confident Interval		P Value
		Lower	Upper	
Odds Ratio for Breast Milk Levels	0.73	0.15	3.49	0.690

Based on the results of the analysis, the odds ratio value (OR: 0.73; 95% Confident Interval 0.15 – 3.49; p value 0.690) can be concluded that there is no significant difference between the intervention of Woolwich massage and rolling back massage on improving the quality of breast milk. Both interventions have been shown to increase breast milk production. This result is in line with research reporting that based on the Independent t-test obtained p value = 0.77 >  $\alpha$  (0.05) so that there was no effect on the average milk adequacy of the woolwich massage group and oxytocin massage on the back. (Dinengsih, 2020) Rolling Massage or massage of the spine (costae to five-six), helps the hormone oxytocin work in milk production and increases comfort after childbirth. Massage of the spine ranging from costae five-six to the scapula, will accelerate the parasympathetic nerves convey signals to the back brain to stimulate the work of oxytocin in flowing milk out by stimulating the hormones prolactin and oxytocin (Savitri, 2018). (Ari Shanti, 2018)

Massage or stimulation of the spine, neurotransmitters will stimulate the medulla oblongata directly send a message to the hypothalamus in the posterior hypophyse to secrete oxytocin causing the breasts to secrete milk. Massage in the spinal area will also relax tension and relieve stress and thus one solution to overcome the smoothness of milk production and assisted by baby suction on the areola (Amalia, (2022, July)) Woolwich massage is a massage performed in the area of the active sinuses precisely 1-1.5 cm above the mammary areola, with the aim of removing milk in the active sinuses. With this massage can stimulate nerve cells in the breast, the stimulation is forwarded to the hypothalamus and responded by the anterior pituitary to release the hormone prolactin which will be flowed by the blood to the breast myopitel cells to produce milk, increase breast milk volume, and prevent breast dams that cause swollen breasts. (Sinaga, 2022) (Malatuzzulfa, 2022)

Woolwich massage is given to postpartum mothers 2 times / day in the morning and evening at least done for 3 days. The procedure for doing woolwich massage is done circular massage using both thumbs in the area of the active sinuses exactly 1-1.5 cm outside the areola mammae for 15 minutes (LEDYSANI, 2020). This woolwich massage method is based on the observation that the

drainage of breast milk is more important than the secretion of milk by the breast milk glands. The production and expenditure of breast milk is influenced by two hormones, namely prolactin and oxytocin. Prolactin affects the amount of milk production, while oxytocin affects the process of milk production. Prolactin is related to maternal nutrition, the better the nutritional intake, the production produced is also a lot. In other words, the working system and mechanism of woolwich massage and rolling back have many similarities so that both can be effective for use in efforts to increase breast milk.(Risakotta, 2023).

## **CONCLUSION**

There was no significant difference between the Woolwich massage intervention and rolling back massage on improving breast milk quality. Both interventions have been shown to increase breast milk production

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