

The Effect of Woolwich Massage on Breast Milk Production in Postpartum Mothers at the Marbau Health Center, Marbau District, Labuhan Batu Utara Regency in 2021

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ABSTRACT

Woolwich massage has several benefits, including increasing prolactin and oxytocin reflexes (let down reflex), preventing blockage, increasing milk production and preventing inflammation or breast engorgement. Labuhan Batu Utara in 2021. This study uses a pre-experimental design, One Group pre-test and post-test design without a control group, the subject group was observed before intervention. The population in this study were all postpartum mothers in February, namely 15 people, Sampling in this study was carried out by the total sampling method, using the Wilcoxon test. The result of this research is that the production of breast milk before woolwich massage is done on postpartum mothers is less than 11 respondents (73.3%). The majority of breast milk production after woolwich massage was carried out on postpartum mothers was sufficient, namely as many as 10 respondents (66.7%). There is a significant effect between woolwich massage on breast milk production in postpartum mothers at the Marbau Health Center, Marbau District, Labuhan Batu Utara Regency in 2021, with a p value of 0.014 ($p < 0.05$). The conclusion of this study is that there is a significant influence between woolwich massage on breast milk production in postpartum mothers at the Marbau Health Center, Marbau District, Labuhan Batu Utara Regency in 2021. It is recommended for health service institutions that health workers and the community can use woolwich massage as an alternative relaxation method to improve and facilitate milk production.

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INTRODUCTION

Exclusive breastfeeding is breast milk that is given to newborns without the addition of other foods or additional liquids such as formula milk, orange juice, water, before the baby reaches 6 months of age. It has also been scientifically proven that exclusive breastfeeding can meet the nutritional needs of infants. However, the exclusive breastfeeding program is quite difficult to develop

because it is interrelated with various social problems in society (Usman, 2019). Indonesia's health data profile in 2016 shows that the coverage of breastfeeding that occurs in Indonesia is still low compared to Indonesia's health profile data in 2015 with a percentage of 55.7% of infants who breastfeed exclusively 0-6 months to 54% in 2016. This is due public awareness in encouraging an increase in exclusive breastfeeding is still relatively low and this figure has not yet reached the national target of 80% (Ministry of Health, 2016).

The impact that occurs in babies who are not breastfed, babies will be susceptible to disease which will result in growth and development of intelligence will be hampered because babies do not get immune substances and do not get nutritious and quality food obtained from breast milk (Awaliyah, 2015) Causes of low coverage Exclusive breastfeeding for the first 6 months of a baby's life is caused one of which is the mother's lack of confidence that the milk she has can cover her nutritional needs and the problem that is often faced by postpartum mothers is that little milk comes out and even milk does not come out, causing failure in exclusive breastfeeding and mothers must provide formula milk to their babies (Sukriana, 2018).

Causes The process of milk production is not smooth can also be influenced by several factors including nutritional factors, breast care, baby sucking factors, socio-cultural factors, breastfeeding factors and psychological factors. Mothers who experience stress can result in blockade of the letdown reflex which is caused by the release of adrenaline (epinephrine) which causes vasoconstriction of the alveoli blood vessels thereby inhibiting oxytocin from reaching the target myoepithelium (Sri, 2018).

Efforts that can be made to increase milk production by doing massage such as woolwich massage or stimulation given to the mother can cause a sense of relaxation and comfort so that it can increase the hormones prolactin and oxytocin and release oxytocin by the pituitary which plays a role in squeezing milk out of the alveoli (Arkha, 2010). 2018). Woolwich massage has several benefits, including increasing prolactin and oxytocin reflexes (let down reflex), preventing blockages, increasing milk production and preventing inflammation or breast engorgement. (Kusumastutiet al., 2017).

Research conducted (Ahmad Rif'an, Wagiyono, 2016) That in the process of producing breast milk is influenced by the hormone prolactin where if the release of the hormone prolactin is inhibited it will inhibit the breasts in producing breast milk so that it greatly affects the lack of nutrition for the baby (Ahmad Rif'an, Wagiyono, 2016). So that this problem can be overcome in several ways that can be done in stimulating the release of breast milk by making the mother calm, skin contact with her baby, seeing baby photos, hypnobreastfeeding, warm drinks, warming the mother's breasts, stimulating the mother's breasts and doing massage of the mother's breasts (Ahmad Rif 'an, Wagiyono, 2016).

The research above is in accordance with research conducted (Usman Hastuti, 2019) The way that can be done to increase breast milk production in postpartum mothers is by providing a relaxed sensation to the mother to stimulate the hormones prolactin and oxytocin by doing woolwich massage. As for how to do the Woolwich massage, it is carried out in the lactiferous sinus area, more precisely 1-1.5 cm outside the areola of the mother's mother by using both thumbs for 15 minutes.

The massage is carried out to stimulate nerve cells in the breast, forwarded to the hypothalamus and responded by the anterior pituitary which will later secrete the hormone prolactin which will then be circulated by the blood to the myoepithelial cells of the breast so that they can produce milk. Even the benefits of the Woolwich massage method besides increasing milk production also increase secretion ASI and prevent breast inflammation or mastitis (Usman Hastuti, 2019).

Based on the observations of researchers, the effect of woolwich massage given to postpartum mothers is a very significant factor in increasing breast milk production. Therefore, when the woolwich massage intervention is carried out routinely by postpartum mothers, the mother does

not need to worry about the production of breast milk and the adequacy of the nutrients received by the baby, because the milk produced will automatically be abundant.

RESEARCH METHOD

Types of research

The type of research used in this study is a type of pre-experimental design research, which is a research that carries out activities because this is not yet a serious experiment, because there are still external variables that influence the formation of the dependent variable and are not solely influenced by the independent variables. This can happen, because there is no control variable, and the sample is not chosen randomly (Sugiyono, 2018).

Research design

The research design is all about planning to answer the research questions and anticipating some of the possible difficulties that may arise during the research. This study used a One Group pre-test and post-test design without a control group, the subject group was observed before the intervention was carried out, then observed again after the intervention. One group before being given a certain treatment was given a pretest, then after being given treatment, measurements were taken again to find out the cause and effect of the treatment. Causal testing is done by comparing the results of the pretest with the posttest.

Location and Time of Research

a. Location

This research was conducted at the Marbau Health Center, Marbau District, Labuhan Batu Utara Regency. In 2021, many postpartum mothers complained that their breast milk was not even coming out, during interviews with some postpartum mothers said that they were worried that the breastfeeding process did not come out properly. Based on the background described above, the researchers are interested and motivated to discuss further whether there is an effect of Woolwich massage on breast milk production in postpartum mothers at the Marbau District Health Center, Labuhan Batu Utara Regency in 2021, enough respondents.

b. Research time

The research will be carried out starting from April 2021 since the title is in acc by the supervisor and the implementation of the initial survey in May, 2021, starting from the initial survey to data collection and research.

Population and Sample

a. Population

The population is the entire research object or object studied, the population in this study are all postpartum mothers who are at the Marbau District Health Center. The population in the study were all post partum mothers in February, namely 15 people. This study wanted to know the effect of woolwich massage on milk production in postpartum mothers.

b. Sample

The sample is a group or a certain number of members of the set selected by way of representing the population. To determine the sample in a simple experimental research, the number of sample members is 15 people. Sampling in this study was carried out using the total sampling method, namely by taking the entire existing population to be used as a sample, namely as many as 15 people.

Data collection technique

Collecting data in this study using primary data and secondary data.

- a. Primary data
Sources of data that are directly obtained from respondents through the results of observation sheets that have been carried out on respondents.
- b. Secondary Data
Sources of data that are not directly obtained from the object under study. The secondary data in this study was obtained from the register book/record by looking at the number of postpartum mothers in the register book at the Marbau Health Center.

RESULTS AND DISCUSSIONS

Characteristics of Respondents

The characteristics of respondents at the Marbau Health Center, Marbau District, Labuhan Batu Utara Regency in this study were grouped based on age, education, occupation, parity and history of childbirth. The characteristics of the respondents are described in table 4.1 as follows:

Table 1. Characteristics of Respondents at the Marbau Health Center, Marbau District North Labuhan Batu Regency in 2021

No	Category	Amount	Percentage (%)
Age			
1	<25 Years	4	26.7
	>25-35 Years	9	60.0
	>35	2	13.3
	Amount	15	100
Education			
2	JUNIOR HIGH SCHOOL	3	20
	SENIOR HIGH SCHOOL	10	66.7
	College	2	13.3
	Amount	15	100
Work			
	Doesn't work	9	9.0
	Working	6	40.0
	Amount	15	100
parity			
4	Primipara	5	33.3
	Multipara	10	66.7
	Amount	15	100
Childbirth History			
5	Normal Delivery	12	80.0
	Sectio Caesaria	3	20.0
	Amount	15	100

Respondent characteristics based on demographic data based on age are the majority aged 25-35 years as many as 9 people (60%) and minorities > 35 as many as 2 people (13.3%), based on education, the majority were high school students, namely 10 people (66.7%) and a minority, namely universities, 2 people (13.3%), based on work the majority did not work as many as 9 people (60.0%) and the minority that is working 6 people (40.0%) and based on parity the majority is multipara as many as 10 people (66.7%) and the minority primiparous 5 people (33.3%) and the majority of the history of childbirth giving birth normally as much as 12 people (80.0%) and the minority namely Sectio Cesaria 3 people (20.0%).

Breast Milk Production Before Woolwich Massage For Postpartum Mothers

Data on breast milk production before woolwich massage was carried out for postpartum mothers at the Marbau Health Center, Marbau District, North Labuhan Batu Regency in 2021 can be seen in table 4.2 below:

Table 1 2. Data on the Frequency of Milk Production Before Woolwich Massage was performed on Postpartum mother at the Marbau Health Center, Marbau District, District North Labuhan Batu Year 2021

No	Breast Milk Production (Pre)	Frequency	Percent (%)
1	Enough	10	66.7
2	Not enough	5	33.3
	Amount	15	100.0

Based on table 4.3, it shows that the majority of postpartum mothers produce enough milk after woolwich massage, namely 10 respondents (66.7%).

The Effect of Woolwich Massage on Breast Milk Production in Postpartum Mothers at the Marbau Health Center, Marbau District, Labuhan Batu Utara Regency

The results of statistical tests on the effect of woolwich massage on breast milk production in postpartum mothers at the Marbau Health Center, Marbau District, Labuhan Batu Utara Regency in 2021 are shown in table 4.4. as follows:

Table 1 4. The Effect of Woolwich Massage on Breast Milk Production in Mothers Postpartum at the Marbau Health Center, Marbau District, Labuhan Regency North Rock 2021

Breast Milk Production	Before	Percent (%)	Rank Change	Value
	f	Before		
Enough	4	10	Positive Rating	0.014
Not enough	11	5	Negative Rating	

Description: a) Wilcoxon test

Changes in milk production

- Negative rating is the change in breast milk production before and after from the 'low' category to the 'sufficient' category
- Positive Ranking is the change before and after from 'enough' to 'less' category
- Ties means there is no change in milk production before and after

Based on table 4.4, it shows that the milk production of post partum mothers at the Marbau Health Center before and after being given the woolwich massage method has experienced significant changes. Production of breast milk for post partum mothers before being given the Woolwich massage method as many as 11 people still had insufficient milk and 4 people had enough milk. Then after the Woolwich massage method was used, the milk production of post partum mothers increased to 10 people with sufficient breast milk, while those who had less milk production decreased to 5 people.

Based on the results of statistical tests using the Wilcoxon Test it is known that the p value (0.014) < α (0.05) means that H_a is accepted, so there is a significant effect of woolwich massage on milk production in postpartum mothers at the Marbau Health Center, Marbau District, North Labuhan Batu Regency in 2021 These results prove that woolwich massage has a good effect on milk production in postpartum mothers at the Marbau Health Center, Marbau District, Labuhan Batu Utara Regency in 2021.

Discussion

a. Milk Production Before Woolwich Massage for Postpartum Mothers at the Marbau Health Center, Marbau District, North Labuhan Batu Regency in 2021

Based on data analysis, it can be seen that the majority of breast milk production before woolwich massage was performed on postpartum mothers was 11 respondents (73.3%). The lack of breast milk production in this study was seen based on the results of observations of respondents who showed the average observation result was less than a score of 5 out of 8 observed indicators. If the respondent's results are below the minimum, it can be said that the respondent's milk production is not smooth.

The research results from the observation of the breast milk production measuring instrument showed that milk production before the Woolwich massage was obtained by 60% of mothers breastfeeding babies ≥ 8 times in 24 hours, 53.3% of mothers breastfeeding babies ≥ 10 minutes on each breast, 60% of mothers experiencing Tense breasts before breastfeeding, 13.3% breast milk seeps from the nipples, 53.3% babies urinate at least 6 times or more in 24 hours, 40% babies defecate at least 2 times or more in 24 hours 26.7% color The baby's bowel movements are golden yellow, not too runny and not too concentrated, and 26.7% of mothers' babies sleep peacefully for 2 hours or more.

This shows that in general the smooth flow of milk before the Woolwich massage is not good. These results indicate that the lack of milk production is a problem experienced by some mothers because the milk is not smooth. To prevent and treat lactation problems, an intervention is possible, namely breast care using the Woolwich massage method. Woolwich massage is done with the aim of increasing the prolactin reflex and oxytocin reflex (let down reflex). Massage is carried out in the lactiferous sinus area, precisely 1-1.5 cm above the areola mammae with the aim of removing the milk that is in the lactiferous sinus.

The results of this study are in accordance with research conducted by Wahyuni and Noviyanti (2019) that the average expenditure of breast milk for postpartum mothers before being given a woolwich massage is 85.73 ml. Efforts that can be made to increase milk production by doing massages such as woolwich massage or stimulation given to the mother can cause a feeling of relaxation and comfort so that it can increase the hormones prolactin and oxytocin and release oxytocin by the pituitary which plays a role in squeezing milk out of the alveoli (Arkha, 2018).

The results of this study are in accordance with the theory put forward by Barokah (2017) that non-pharmacological management to increase milk production with the Woolwich massage method is an alternative to increase the comfort and relaxation of postpartum mothers during breastfeeding, so as to increase the volume of breast milk. Doing massage will create a sense of confidence in the mother so that there is no perception of insufficient milk supply, besides the effect of breastfeeding massage also provides natural calm.

Researchers assume that woolwich massage greatly contributes to increasing milk production in the early days of birth when the baby is not actively breastfeeding, besides that this massage can also maintain milk production, overcome breastfeeding difficulties and prevent abnormalities in the mother's breasts during the breastfeeding process.

b. Breast Milk Production After Woolwich Massage is Done to Postpartum Mothers at the Marbau Health Center, Marbau District, Labuhan Batu Utara Regency in 2021

Based on data analysis, it can be seen that the majority of breast milk production after woolwich massage on postpartum mothers is sufficient, namely as many as 10 respondents (66.7%). These results indicate that milk production increases after woolwich massage on postpartum mothers.

The results of the observation of the breast milk production measuring instrument showed that milk production before the Woolwich massage was obtained by 86.7% of mothers breastfeeding babies ≥ 8 times in 24 hours, 80.0% of mothers breastfeeding babies ≥ 10 minutes on each breast, 80% of mothers experiencing Tense breasts before breastfeeding, 73.3% breast milk

seeps from the nipples, 73.3% babies urinate at least 6 times or more in 24 hours, 80% babies defecate at least 2 times or more in 24 hours, 53.3% color The baby's bowel movements are golden yellow, not too runny and not too concentrated, and 66.7% of mothers' babies sleep peacefully for 2 hours or more.

Pamuji (2016), post partum mothers who were given the Woolwich massage method had increased levels of the hormone prolactin and breast milk volume compared to post partum mothers who were not given the massage intervention. Moehyi (2008), states that one of the actions to increase milk production is woolwich massage and oxytocin massage. This method of woolwich massage is based on the observation that ejection of milk is more important than secretion of milk by the mammary 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 removing milk. Prolactin is related to maternal nutrition, the better the nutritional intake, the more production will be produced.

In the lactation process, there are two reflexes that play a role, namely the prolactin reflex and the flow reflex that arise due to nipple stimulation due to baby sucking. Prolactin and oxytocin reflexes are also found in the Woolwich massage which aims to prevent blockage, increase milk production and prevent inflammation or engorgement of the breast. If the baby is breastfed, the rhythmic sucking motion will produce nerve stimulation in the posterior pituitary gland, so that the hormone oxytocin is released. This causes the myoepithelial cells around the alveoli to contract and push the milk into the ampulla. Oxytocin release is not only influenced by the baby's suckling, but also by receptors located in the ducts. When the ducts are dilated, oxytocin is reflexively released by the pituitary.

This research is in line with previous research conducted by Wahyuni and Noviyanti (2019) in a journal entitled Utilizing the Woolwich message on breastfeeding in postpartum mothers based on statistical tests obtained p value = 0.000, meaning $p < \alpha$ (0.05) with the conclusion that there is a significant difference between before being given the Woolwich message to postpartum mothers at PMB Wife Utami. Massage is carried out for 7 days 2 times a day with a frequency of 15 minutes in the morning and evening. Weighing was done before feeding and one hour after feeding. Giving woolwich massage intervention will stimulate the release of endorphins. Endorphins are protein molecules produced by cells of the nervous system and some parts of the body that are useful for working with receptors to reduce pain and relieve stress (Liberty Barokah, 2017). In addition to facilitating breastfeeding, Woolwich massage also provides comfort to postpartum mothers, reduces swelling (engorgement), reduces milk blockage, stimulates the release of the hormone oxytocin, maintains milk production when mother and baby are sick (Wulandari, 2014).

These endorphins interact with receptors in the brain thereby reducing the perception of pain, triggering positive feelings which are described as feelings of pleasure and happiness so that these hormones can increase enthusiasm for life, think and provide energy. Endorphins have an analgesic effect, thereby reducing the perception of pain. Receptors for neurons that bind to endorphins are almost similar to pain relievers, but the receptors will not cause addiction or dependence (Hadi, Wijayanti, Devianti, & Rosyanti, 2017).

Based on the researchers' observations, the effect of woolwich massage given to postpartum mothers is a very significant factor in increasing milk production. Therefore, when the woolwich massage intervention is carried out routinely by postpartum mothers, mothers do not need to worry about the release of breast milk and the adequacy of nutrition received by the baby, because the milk produced will automatically be abundant. Woolwich massage therapy is one of the factors leading to increased milk production, in addition to the importance of paying attention to factors during pregnancy. Pregnant women are advised to always be active in carrying out regular antenatal checks and make efforts to prevent anemia and infection during pregnancy (Sulistiyawati

& Khanifah), mothers pregnant women must be able to manage stress during pregnancy and breastfeeding,

c. The Effect of Woolwich Massage on Breast Milk Production in Postpartum Mothers at the Marbau Health Center, Marbau District, Labuhan Batu Utara Regency in 2021

Based on the results of bivariate data analysis, it showed that the milk production of post partum mothers at the Marbau Health Center before and after being given the Woolwich massage method experienced significant changes. Production of breast milk for post partum mothers before being given the Woolwich massage method as many as 11 people still had insufficient milk and 4 people had enough milk. Then after the Woolwich massage method was used, the milk production of post partum mothers increased to 10 people with sufficient breast milk, while those who had less milk production decreased to 5 people.

Based on the results of statistical tests using the Wilcoxon Test it is known that the p value $(0.014) < \alpha (0.05)$ means that H_a is accepted, so there is a significant effect of woolwich massage on milk production in postpartum mothers at the Marbau Health Center, Marbau District, North Labuhan Batu Regency in 2021 These results prove that woolwich massage has a good effect on milk production in postpartum mothers at the Marbau Health Center, Marbau District, Labuhan Batu Utara Regency in 2021.

The results of this study are in accordance with Pamuji et al. (2014) regarding the effect of a combination of the Woolwich massage method with endorphins on prolactin hormone levels and breast milk volume. According to (Pamuji, 2014) stated that one of the efforts that can be made to stimulate the hormones prolactin and oxytocin in the mother after giving birth is to give a relaxing sensation to the mother, namely by doing a Woolwich massage which will stimulate nerve cells in the breast, forwarded to the hypothalamus and responded to by the pituitary. anterior to secrete the hormone prolactin which will be circulated by blood to the myoepithelial cells of the breast to produce milk (Pamuji, 2014).

The results of this study are in line with Badrus, (2018) which states that one effort that can be made to stimulate the hormones prolactin and oxytocin in postpartum mothers is by giving them a relaxing sensation, namely by doing woolwich massage. In addition, the results of his research stated that there was an increase in milk production after being given the woolwich massage intervention.

Other studies that are in line with this study also stated that there was weight gain in infants after being given the woolwich massage intervention (Usman, 2019). The combination of the Woolwich massage method and rolling massage (back) affects the adequacy of breast milk in Post Partum Mothers in the Work Area of the Mapane Health Center, Poso Regency. Smart Midwife Journal. Poltekkes Kemenkes Palu (Usman, 2019).

Giving the Woolwich massage intervention will stimulate the release of endorphins. Endorphins are protein molecules produced by cells of the nervous system and some parts of the body that work together with sedative receptors to reduce pain. Endorphins are calming compounds and these hormones produce four keys for the body and mind, including reducing pain and relieving stress (Aprillia, 2010). If the mother feels calm and not stressed, the hormone oxytocin will be more easily produced. The factors that cause the hormone oxytocin to be released are a sense of calm, comfort, the mother is not stressed, the mother is happy with the baby and his condition. For this reason, oxytocin is also known as the love hormone (UNICEF, 2016). In addition to facilitating breastfeeding, Woolwich massage also provides comfort for postpartum mothers,

By doing massage, it will create a sense of confidence in the mother so that there is no perception of insufficient milk supply, besides the effect of breastfeeding massage also provides natural calm (Astutik, 2014). Breast massage also aims to stimulate the release of the hormones oxytocin and prolactin, which play a very important role in increasing breast milk production and breast milk quality in nursing mothers. Several studies have proven that breast massage greatly contributes to increasing colostrum production in the early days of birth when the baby is not yet

actively breastfeeding, besides that this massage can also maintain milk production, overcome breastfeeding difficulties and prevent abnormalities in the mother's breast during the breastfeeding process.

The researchers assumed that woolwich massage had an effect on breast milk adequacy because the results of this study showed that mothers who before being given woolwich massage had more milk production than after being given woolwich massage. The cause of poor breastfeeding is because the mother feels tired and worried and is not ready to breastfeed because her milk has not come out yet. Therefore, mothers who will breastfeed their babies must be calm, relaxed, and comfortable. So that milk production is sufficient. Therefore, post partum mothers are given Woolwich massage, so they feel calm and comfortable, so that the hormone prolactin increases and maintains milk production. smooth milk production

CONCLUSION

Based on the description of the results of the research and discussion, it can be concluded as follows: The production of breast milk before the woolwich massage was carried out on postpartum mothers at the Marbau Health Center, Marbau District, Labuhan Batu Utara Regency in 2021 was less than 11 respondents (73.3%). Breast milk production after the woolwich massage was carried out on postpartum mothers at the Marbau Health Center, Marbau District, Labuhan Batu Utara Regency in 2021, the majority was sufficient, as many as 10 respondents (66.7%). There is a significant effect between woolwich massage on breast milk production in postpartum mothers at the Marbau Health Center, Marbau District, Labuhan Batu Utara Regency in 2021, with a p value of 0.014 ($p < 0.05$).

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