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THE EFFECT OF *REMPA KETA* LACTATION MASSAGE ON BREAST MILK PRODUCTION AMONG POSTPARTUM MOTHERS IN THE EARLY PERIOD (0-7 DAYS) AT THE POSTPARTUM ROOM OF BIMA CITY HOSPITAL

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ABSTRACT

Background :The infant mortality rate and stunting are closely related to the feeding patterns during the early stages of a baby's life. Several methods have been researched to increase breast milk production, such as breast care, oxytocin massage, and lactation massage. In Bima, there are many local cultural practices that have been passed down to help address the issue of insufficient breast milk production. However, there is still a lack of research on the subject, which weakens the supporting evidence.

Method : This research used a quasi-experimental design with a control group. It was conducted from April to June 2023. The sample consisted of 30 individuals, with 15 in the intervention group and 15 in the control group, selected through purposive sampling. The research employed the Standard Operating Procedure for Breast Massage and a checklist of the smoothness of breast milk production to assess the smoothness of breast milk production as instruments. The data was analyzed using the chi-square test.

Result : Out of 30 respondents who experienced smooth breastfeeding, the majority received a lactation massage called "RempaKeta." Fourteen respondents (93.33%) reported that this massage helped improve their breast milk production. Only one respondent (6.67%) had difficulty producing breast milk, while 15 respondents were part of the control group. Out of these 15 respondents, only five (33.33%) experienced smooth breastfeeding, while the remaining 10 (66.67%) had difficulty producing breast milk.

Analysis : To determine whether two variables have a significant influence, with a significance level of 0.05, a Chi-square test was conducted using SPSS software. The results showed that when $p < \alpha = 0.05$, there is an influence of Rempa Keta lactation massage on the smoothness of breast milk production in early postpartum mothers (0-7 days).

Conclusion : The results showed that when $p < \alpha = 0.05$, there is an influence of Rempa Keta lactation massage on the smoothness of breast milk production in early postpartum mothers (0-7 days) in RSUD Kota Bima.

Keywords : Rempa Keta Lactation Massage, Smoothness Of Breast Milk Production.

1. INTRODUCTION

In the past decade, the neonatal mortality rate in Indonesia has decreased and is consistently lower than the global average. However, Indonesia's infant mortality rate is among the highest in the Southeast Asian region, ranking fifth out of ten countries. Compared to Singapore, which had only 0.8 infant deaths per 1,000 live births in 2021, Indonesia's rate is significantly higher, indicating a greater number of infant deaths per 1,000 live births. (Viva Budy Kusnandar 2022). The target of reducing neonatal mortality in Indonesia to 10 per 1,000 live births by 2020-2024 must be met to achieve the SDGs. (Ramadhan, Ulya Qoulan Karima, and Herbawani 2023)

Based on the SDKI data from 2017, the leading causes of neonatal deaths were intrapartum complications (accounting for 28.3% of deaths), respiratory and cardiovascular disorders (21.3%), birth asphyxia, birth trauma, and premature birth (19%), congenital illnesses (14.8%), infections (7.3%), neonatal tetanus (1.2%), and other causes (8.2%). (Windu 2019)

Giving exclusive milk and milk as soon as possible, improving access to good prenatal, birth, and post-natal care; improving nutrition; educating families about signs of danger; and enhancing access to clean water, sanitation, and hygiene can prevent child deaths. In poor and developing countries, many interventions to save lives have not been fully implemented. (Ramadhan, Mochtar Ghaffar, Ulya Qoulan Karima and Herbawani 2023).

An attempt to lower neonatal death rate is to give exclusive breast milk (Prof Cesar G Victora et al. 2016). In addition to serving as a source of nutrients, breast milk can provide protection to the baby through the various immune components contained in it. Experts have carried out various scientific studies on milk ingredients and how they affect the health of babies. One of the messages that can be

conveyed is that breast milk contains enough essential nutrients for babies even in undernourished mothers. Milk is also capable of fighting infection through cell phagocytes and immunoglobulin (antibodies), as well as cytokines, lactopherins, lysozymes, and musins (Kurniati 2013). Every year, more than 136 million babies are born, and about 92 million of them do not receive exclusive formula milk until the age of six months. (Arun Gupta, MD, FIAP, J. P. Dadhich, MD, and Shoba Suri 2013)

In response to the national 80 per cent milk coverage target, the proportion of 0-5-month-olds receiving exclusive milk is 37.3%, partial milk 9.3%, and predominant milk 3.3 percent. The percentage of babies starting premature breastfeeding is 58.2%. According to data collected by the World Breastfeeding Trends Initiative (WBTI) in 2018 on breastfeeding conditions in 51 countries based on 10 indicators, Indonesia ranks 65th out of 97 countries with a score of 51.5. (IBFAN, 2018). This is surprising because Indonesia has an excellent milk policy and many acceleration program efforts to exclusive milk, carried out by government, private, and public institutions.

The World Health Organization has investigated more than 3,000 studies and found that exclusive breastfeeding for six months is the best time. Although milk is the baby's primary food and is vital for her health, breastfeeding can't always go well. Many mothers complain about the swelling of the breasts due to the accumulation of milk due to improper baby production or poor baby sucking. Worldwide, the average exclusive milk coverage is around 38%, according to UNICEF. (Zainiyah and Fitri 2023)

Some mothers believe that their milk production is poor, not enough nutrients for mothers, and lack of family support for exclusive milk. Two factors that affect the production of milk are the hormone prolactin and the oxytocin hormone. The hormone oxytocin is

released by stimulation into the nipple through the infusion of the baby's mouth or a massage on the mother's spine. Doing this makes the mother calm, relax, lower the pain threshold, and love her baby more. Thus, the hormone oxytocin is released through stimulation into the nipple. (Dian Priharja Putri 2023).

A 2019 study by Nani Jahriani on the Impact of Lactation Massage on Breast Milk Production in Sendang Sari district of Asahan found that lactation massage stimulates the blood vessels and breast muscles to produce more milk, which in turn increases the volume of milk produced by the mother during breastfeeding. (Nani Jahriani 2019)

Dealing with milk intolerance can be done by massaging different parts of the body such as the head, neck, back, spine, and breast. This massage helps to stimulate the hormones prolactin and oxytocin, which play a crucial role in milk production. The contraction of the alveoli cells in the breast glands is triggered by these hormones, resulting in the release of breast milk. (Dary and Sulistyarningsih 2019).

The hormone prolactin plays an important role in the formation and maintenance of breast production by regulating milk production through prolactin receptors. Based on research evidence, the "Prolactin Receptor Theory" suggests that the number of active prolactin receptors increases when milk is frequently consumed during the early days of postpartum. This increase in active receptors leads to an increase in breast milk production. (Septi Indah Permata Sari, Juraida Roito Harahap 2021).

This is in line with the government's proposal for environmental exploitation or "Back to Nature", (Hesti, 2013), the culture of postpartum massage has been known to mothers in particular in the Bima community, but it has not been studied and focused on the benefits of lactation massage.

RempaKeta is a local culture and wisdom given to mothers after childbirth or at the time of postpartum. This process is similar to a lactation massage and is performed on the back of the breast of the breathing mother, starting from the neck, neck and shoulder, and the last back. Mina lowi, the coconut oil made by the Bima community naturally without a mixture, is used by its massagers. The Bima community believes that the rempa keta is the right time to take a shower for the nifas, that is, between 7:00 and 9:00 in the morning. The Rempa Keta is performed from the first day to the seventh day after delivery, once a day with a duration of approximately an hour. (Windiarti 2022)

Based on the preliminary survey conducted by the researchers by taking data of the breastfeeding mother at the Bima City Hospital in 2023, with a direct interview with the postpartum women. From the results of the interview then obtained from 10 mothers only 3 mothers said their milk came out and did not give formula milk and 7 mothers say they will give formula milk to their baby since birth because milk production is very less and mothers feel that their milk is not enough, then to overcome the problem need to be given lactation massage to be able to launch the production of breastmilk. The aim of this study is to know the effect of the "Rempa Keta" lactation massage on the breast milk production among postpartum mothers in the early phase (0-7 days) in the medical city center of Bima.

2. METHODS

The study is designed as a quasi-experimental one, where the control group will be compared to the intervention group, which is the "X" group. The study will involve a total of 30 samples, with 15 samples in the control group "Y" (counseling, information, education, and breast care) and 15 samples in the intervention group "X". The population in this study is all the mothers who gave birth

at the Bima city hospital as many as 40 people. The sample in this research is the mother who gave birth during the early period (0-7 days) with the criteria of inclusion and exclusion.

The sampling method used in this study was non-probability with purposive sampling. A total of 30 participants were

selected, with 15 in the treatment group (Rempa Keta lactation massage) and 15 in the control group (counseling, information, education, and breast care). The researchers evaluated the effectiveness of lactation massages of the Rempa Keta in improving milk production smoothness through a questionnaire after three treatment sessions.

3. RESULTS

Tabel 1. Breastmilk Smoothness of the Respondents

No	Rempa Keta Lactation Massage	Total	%
1.	Smoothness	19	93,33 %
2.	Instability	11	6,67 %
Total		30	100

From table 1 it can be seen that amount of the mothers who have breastmilk smoothness is 19 respondents (63,3%),

while the mothers who have breastmilk instability is 11 respondents (36,7%).

Tabel 2. Pengaruh Pijat Laktasi Rempa Keta terhadap kelancaran produksi ASI

No	Group	Breastmilk Production			p Value
		Smooth	Instable	%	
1.	Rempa Keta lactation massage	14 (93,33%)	1 (6,67%)	15 (100)	0,001
2.	Control Group	5 (33,33%)	10 (66,67%)	15 (100)	
Total		19 (63,33%)	11 (36,67%)	30 (100)	

Bivariate analysis is a statistical analysis carried out to test the hypothesis between two variables, to obtain answers on whether there is an effect of Rempa Keta lactation massage on the smoothness of

breastmilk production. From table 2 also shows the results of the SPSS statistical tests obtained p value 0,001 (< 0,05) so it can be concluded there is a significant effect between the Rempa Keta lactation massage and the smoothness of breastmilk production.

4. DISCUSSION

Smooth Milk Production during the Postpartum Period (0-7 Days)

The results of this study showed that 19 respondents (63.33%) had a smooth milk production, 14 respondents (93.33% of 15 respondents who had a Rempa Keta lactation massage and 5 respondents (33.33%), of 15 who had no Rempa Keta, and had counseling, information, education and breast care (control group).

According to the research carried out by Muawarah 2021 that prior to the

treatment of lactation massage there were 4 mothers (26.7%) who had a smooth milk, 6 mothers (66.7%) with smooth production of milk sufficient, 1 mother (6.7%), whose milk was not smooth and after having undergone treatment of lactation massage, 15 mothers (100%) had smooth Milk production (Muawarah, S., & Sariyani 2021).

Lactation massage is a massage technique performed on the head or neck, back, spine and chest areas aimed at stimulating the hormones prolactin and oxytocin. Lactation massage is beneficial to

relieve pain, tension, stress and anxiety, lift the liver or mood, increase milk production, and encourage caring mothers to prepare mothers physically, emotionally, and mentally to prepare for breathe. There are many factors that can affect milk production such as nutritious food, peace of mind and mind, adequate rest and breast care (Indriani, D. Asmuji. 2016).

Various studies have suggested that the factors that influence breast milk production are both the mother's and the baby's factors. There are many things that can affect breast milk production, breastmilk production and the production of breastmilk are affected by two hormones, namely prolactin and oxytocin (Djama 2018).

According to Pranaja (2013) determinants of milk production are, parity, delivery process, use of contraceptives, pre-lactate feeding, breast care, breastfeeding frequency and maternal nutrition (Pranajaya and Rudiyaniti 2013). Results of research conducted by Masrini (2020). The smoothness of milk production is influenced by the breast care of the mother and the psychological factors of the breast-feeding mother. The more often a person carries out breast care, the more smooth the milk production is. The psychology of the mother in giving milk is also an influence on the smooth production of milk.

Rempa Keta is a process that begins at the back of the postpartum mothers starting from the neck, neck and shoulder and back, and ends at the breast which is the same principle as a lactating massage. The massage uses *mina lowi* which is coconut oil made by the Bima community without any mixture with the aim of making the mother feel relaxed and calm (Sri Windiarti, 2022).

Usman Research (2019) performed a combination of Woolwich massage method and rolling massage. The combination of these methods is done at the time of home visits so that it can increase family participation in efforts to enhance breast milk (Usman 2019). Results of research

Albertina (2015) found there is a significant relationship between lactation massage and smooth milk production in mothers post sectio caesarea day 2-3 (Meity Albertina, Hj. Melly 2015).

Based on the results of research, one that affects the smooth milk production in the breast-feeding mothers is to do a lactation massage to help smooth the production of milk in both the breast and the nursing mothers so that the baby gets exclusive milk and has a strong immune system.

Effect of the Rempa Keta Lactation Massage on the smoothness of milk production in the postpartum mothers in Early Period (0-7 days)

The results of the study showed statistical test results p value 0,001 ($< 0,05$) so it can be concluded there is a significant influence between lactation massage and smooth milk production in postpartum mothers.

According to the theory that lactation massage is one of the solutions to overcome the inactivity of milk production, reduce swelling, reduce milk congestion, stimulate the release of hormone oxytocin, especially in the first days of birth where milk will gradually be produced and released 10-100 ml. Based on this researchers argue that the *Rempa Keta* lactation massage can affect the smoothness of milking production in the postpartum mothers. This lactation massage is one of the forms of effort or support that a health worker and family can do in support of exclusive breastfeeding. As a health care provider or midwife at the time of pregnancy examination, all pregnant mothers, husbands and companions should be taught how to do a lactation massage so that when the postpartum time arrives, mothers and families can do it without the presence of one of the midwives.

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last back of her breast which is the same principle as lactation massage. The massage uses *mina lowi* which is coconut oil made by the Bima community without any mixture with the aim of making the mother feel relaxed and calm (Sri Windiarti,2022).

In order to obtain adequate breastfeeding requirements for the growth and development of the baby, cooperation between mother and family with health officials should be done. One of the ways or methods introduced to prevent and deal with the problem of inactivity of milk production is the lactation massage of the *Rempa Keta*.

Lactation massage is a term that refers to the massage of nursing mothers. The lactation massage is generally done to a mother who has problems with milk production, a mother whose milk generation is not smooth is highly recommended to do a lactating massage. Lactation massage is done in the back and chest areas, massage is performed in the normal, swollen, or irregular state of the chest, and in case the mother wants to relax then assisted by massage on certain parts of the body that have a positive effect on the state of mind and body of the mother, gives a calming effect, normalizes blood circulation, and improves the supply of milk (Permatasari, 2021).(Vitriana Permatasari 2021)

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In accordance with the research carried out by Muawanah,Siti 2021 entitled Impact of Lactation Massage on the smoothness of Asian Production on Mother Breastfeeding

Baby Spa Patients. Independent test results sample t test Based on the output obtained a Sig. (2-tailed) value of $0.002 < 0,05$, then it can be concluded there is a difference in the average milk smoothing outcome between the nursing mothers who perform the laktation massage with the breastfeeding mothers that do not do the lactation massage. This is in line with the study Hanubun, jihanelarif (2022) entitled Impact of lactation massage on breast milk production Nifas with the results of the study showed that the average production of breast milks from 2.45 ml increased by 7.35 ml to 9.80 ml. The statistical test results obtained the Asymp. Sig (2-tailed) value of $0,000 (< \alpha = 0.05)$, then it can be concluded that there is a significant difference then it could be said that there was an effect after the laktation massage to the production of milk.

5. CONCLUSION

The majority of respondents had a smooth milk production of 14 respondents (93.33%) and in the control group most respondents did not have smooth breast production of 10 respondents (66.67%). The statistical test results of SPSS obtained p value $0,001 (< 0,05)$ so it can be concluded there is a significant effect of *Rempa Keta* lactation massage on breast milk production among postpartum mothers in the early period (0-7 days) at the postpartum room of Bima city hospital.

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