

Original Research Article

The effectiveness of back rolling massage on the speed of breastfeeding in post-partum mothers in the independent practice of midwives in Baturaja city

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ABSTRACT

Background: Exclusive breastfeeding during the first 0-6 months has a role for optimal growth and motor development of children. Indonesia has an exclusive breastfeeding target of 80%, but the achievement target of the exclusive breastfeeding program in South Sumatra is 47%. One of the factors causing the low coverage of exclusive breastfeeding is due to the insufficient volume of breast milk for the baby's intake so that the mother provides additional formula milk to her baby. Back rolling massage, one of the non-pharmacological efforts to help the production of breast milk. This study aimed to determine the effectiveness of back rolling massage on the rate of expenditure of breast milk in postpartum mothers in independent practice midwife Baturaja.

Methods: It was quantitative research with cross sectional design. The study was conducted from August to September 2022 in the independent midwife practice of Baturaja city. A total of 60 samples were used in this study with purposive sampling technique. Data were analysed in univariate and bivariate. The chi-square test was used in this study.

Results: The results showed, as many as 47 people (78.3%) who did back rolling massage, there were 42 mothers (89.4%) who experienced accelerated breastfeeding. Based on statistical tests obtained p value of 0.000 ($p < 0.05$) with the value of odds ratio (OR) of 2.106.

Conclusions: Back rolling massage is effective in accelerating the expulsion of breast milk for post partum mothers.

Keywords: Back rolling massage, Mother's milk

INTRODUCTION

Breast milk is the main food to meet the nutritional needs that can be received by the baby's digestive system. Exclusive breastfeeding during the first 0-6 months has a role for optimal growth and motor development of children.¹

Breast milk is the main and perfect source of baby food, because it has all the nutritional components until the baby is 6 months old, so babies who lack breast milk can result in less than optimal baby growth and development

can even cause health problems such as malnutrition, anemia, and stunting.² In addition, breast milk can also reduce the risk of acute infections such as diarrhea, pneumonia in children, ear infections, haemophilus influenza, meningitis in infants that result in infection. Infants and toddlers who are not breastfed will be susceptible to infection and can lead to malnutrition¹.

Breast milk is the most complete source of nutrition that can meet all the needs of infants aged 0-6 months, but the scope of breastfeeding is still not reaching the national target of 37.3%. Indicators of successful lactation

management seen from the sign of adequacy of breast milk, the volume of breast milk produced by the mother every day to meet the needs of the baby, the total needs of macro and micro nutrients in infants per day is 550 kcal which includes energy, carbohydrates, proteins, fats, vitamins and minerals.³ The government continues to increase the scope of breastfeeding and evidenced by the issuance of Government regulation number 33 of 2012 concerning breastfeeding.⁴ Indonesia itself has an exclusive breastfeeding target of 80%, the achievement target of the exclusive breastfeeding program in South Sumatra of 47% in 2018.⁵

Problems that arise regarding exclusive breastfeeding to stop milk production caused by low knowledge of how to breastfeed is a factor that indirectly affects the lactation process. This is related to the mother's ability to receive information that directly affects the process of expressing breast milk.⁶ Anxiety can also affect the production of breast milk, this is because the release of the hormone adrenaline which causes vasoconstriction of the virgin vessels of the alveoli, so that oxytocin is able to reach the target organ of the mammary gland myoepithelium only slightly. This affects the expenditure of nonadrenaline hormones in the central nervous system so that in accordance with the mechanism of action of both chemical substances will cause inhibition of the milk ejection reflex which results in a decrease in milk production.⁷

Efforts to increase the coverage of breast milk can be done by several methods, namely pharmacological and non-pharmacological methods. Pharmacological methods tend to be expensive, while non-pharmacological methods to increase breast milk production can be obtained from growing plants and methods that are relatively easy to do: acupressure, acupuncture, massage or massage.⁸ Massage is an effective complementary therapy to reduce physical discomfort and mood disorders. Reduction of discomfort in nursing mothers will help the smooth discharge of breast milk, one of which massages used is rolling massage. 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.⁹

Back rolling massage is one of the new ways to stimulate breast milk production. By making the mother more comfortable it is expected that the oxytocin reflex can increase. massage is done regularly also affect the smoothness of breast milk, the more often mothers do massage, the increased hormone oxytocin so that milk production increases smoothly.^{10,11}

The results of research conducted by Fitrah and Putra et al on the effectiveness of rolling massage (back) and warm compresses to increase milk production showed that both were quite effective in launching milk production.^{12,13}

This study aimed to assess the effectiveness of back rolling massage on the speed of breast milk in postpartum mothers in the practice of midwives Baturaja.

METHODS

Research design, place, time and population

This type of research was quantitative with cross sectional approach. The research was conducted in 4 independent practice midwives (BPM) of Baturaja city. Held from August to September 2022, the study population was all mothers in midwives independent practice Baturaja. A total of 60 postpartum mothers were selected using purposive sampling techniques that meet the inclusion and exclusion criteria.

Inclusion and exclusion criteria

Inclusion criteria for the study were the mother's gestational age full-term, the type of childbirth was spontaneous, had no complications of childbirth. Exclusion criteria of this study were mothers were not willing to be respondents, mothers living outside the city of Baturaja and mothers with a history of breast milk expenditure disorders.

Data analysis

Data were obtained using observation sheets. Data entered into a computer-based system and then analysed using SPSS version 15. Statistical analysis using chi-square test.

RESULTS

Univariate analysis

Based on Table 1, it can be seen that of the 60 respondents, 47 (78.3%) respondents did back rolling massage, while 13 (21.7%) respondents didn't.

Table 1: Frequency distribution of back rolling massage on mother post partum in practice independent midwife Baturaja city.

Back rolling massage	Frequency	Percent
No	13	21.7
Yes	47	78.3
Total	60	100

Table 2: Frequency distribution of back rolling massage on mother post partum in practice independent midwife Baturaja city.

Breastmilk volume	Frequency	Percent
Not increase	18	30
Increase	42	70
Total	60	100

Table 3: Connection back rolling massage with an increase in the volume of breast milk for post partum mothers at the midwife's independent practice Baturaja city.

Back rolling massage	Increase in breast milk volume				Total		P value	OR
	Not increase		Increase					
	N	%	N	%	N	%		
Not	11	84.6	2	15.4	13	21.7	0.000	2.106
Yes	5	10.6	42	89.4	47	78.3		
Total	16	30	44	70	60	100		

Based on the Table 2, it can be seen that from 60 respondents, the volume of breast milk increased as many as 42 (70%) respondents, while the volume of breast milk that did not increase was 8 (30%) respondents.

Bivariate analysis

Based on the Table 3, it is known that of the 47 respondents who doing back rolling massage, there were 42 (89.4%) respondents who experienced an increase in the volume of breast milk, while from 13 respondents who did not do back rolling massage there were 2 (15.4%) respondents who experienced an increase in the volume of breast milk

The results of the chi square test obtained p value =0.0 00 ($p<0.05$) which showed that there was a statistically significant relationship between giving back rolling massage and increasing breast milk volume in post-partum mothers. The value of the odds ratio (OR) was 2.106 meaning that respondents who do back rolling massage have 2.106 times the opportunity for an increase in breast milk volume.

DISCUSSION

Back rolling massage relationship with increased breast milk volume in postpartum mothers in independent practice midwife Baturaja

Based on the results of the study showed that of the 47 respondents who did back rolling massage there were 42 (89.4%) respondents who experienced an increase in breast milk volume, while from 13 respondents who did not do back rolling massage there were 2 (15.4%) respondents who experienced an increase in breast milk volume. Chi square test results obtained p value =0.000 ($p<0.05$) which shows there was a significant relationship between giving back rolling massage with increased breast milk volume in post-partum mothers statistically. The odds ratio (OR) was 2.106.

The results of this study are in line with the research of Windasari et al with the title "rolling back massage has an effect on breast milk expenditure in breastfeeding mothers" showed that the rolling back massage technique has an effect on breast milk expenditure time. The results obtained by the group who were given the technique of

rolling back massage mean value obtained was 11 while the group who were not given rolling back massage with mean value obtained was 19. Mann Whitney test produces significance value p value of 0.02 means $p<0.05$ so that H_0 was rejected and H_a was accepted this showed that statistically there was an influence of rolling back massage on breast milk production time.¹⁴

This study showed that the technique of rolling back massage has an effect on the time of milk release. Where the condition of each nursing mother is different, with certain methods that help the release of breast milk such as one rolling back massage can help mothers to feel relaxed, so that mothers are comfortable. With a comfortable mother's condition, it is hoped that the mother is not anxious about her own condition, so she can focus on her baby. So that it can try to provide comfort to the baby and give breast milk. The feeling of happiness felt by the mother is supported by the suction of the baby resulting in breast milk will come out faster. Because milk production is strongly influenced by psychiatric factors because maternal feelings can inhibit or increase oxytocin expenditure, when the mother is depressed, sad, lack of confidence and various forms of emotional tension can reduce milk production.¹⁵

From the review of the theory, it can be seen that breast milk is the most important food because it has a complete and beneficial content for babies, especially in their early life. Breast milk production can be pursued since the days of pregnancy with the consumption of food and breast care. For the expenditure is also needed to quickly get out so that it can immediately meet the needs of the baby from the beginning. Rolling back massage is one method that is proven to help mothers so that milk can come out early. Rolling back massage can relax the muscles, with the condition of the mother is good then the mother happily taking care of her baby, because it reduces fatigue and raises self-confidence. With the presence of the baby adds a sense of happiness and the more out of the hormone oxytocin which is active can encourage the expenditure of breast milk. In accordance with the data obtained in this study that the technique of rolling back massage is influential or effective in the expenditure of breast milk is the mother who is given rolling back massage her breast milk expenditure on average faster than the mother who is not given rolling back massage.

In line with Shanti's research with the title effectiveness of breast milk production in postpartum mothers with rolling massage (back) showed that based on the results of the t-test sample shows that there was a significant difference ($p=0.023<0.05$) milk production (baby weight) before and after rolling massage.⁹

According to the theory that massage is one of the effective supporting therapies to reduce physical discomfort and improve mood disorders. Reduction of discomfort in nursing mothers will help the smooth discharge of milk. Non-pharmacological management to increase milk production by rolling massage method is one alternative to improve comfort and relaxation of postpartum mothers during breastfeeding so as to increase the volume of breast milk. Rolling massage method provides reflex stimulation of milk formation (prolactin reflex) and milk ejection (let down reflex).¹⁶

CONCLUSION

Back rolling massage has effectiveness in increasing the volume of breast milk for postpartum mothers. Mothers who did back rolling massage had 2.106 opportunities in the speed of expulsion of breast milk compared to mothers who did not do back rolling massage.

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