

## The Effectiveness of Combination of The Bomb Method and Rolling Massage to Speed the Expenditure of Breast Milk

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### ABSTRACT

**Background:** Breastmilk is the most important baby food, especially in the first months of a baby's life. The basic problem that often makes mothers feel confused and finally chooses other alternatives to meet the baby's needs. The issue of early breastfeeding has a negative impact on the life of the baby. The problem of expressing breastmilk on the first day after delivery can be caused by reduced stimulation of the hormone oxytocin and psychological factors. To help postpartum mothers with breastfeeding issues, considering that the success of exclusive breastfeeding is very much determined in the first days after delivery by developing a combination of the BOM Method and Rolling Massage to facilitate breastfeeding. **Methods:** The research design used was a quasi-experimental study with a post test only design with a control group. The study population of postpartum mothers in the Puskesmas Lembeyan area used consecutive sampling technique with independent variables. Combination of BOM and Rolling Massage methods, the dependent variable was the release of breast milk in postpartum mothers. **Results:** The results showed that the combination of the BOM method and the rolling massage technique was effective in increasing breastfeeding with a significant value of the Manova test of 0.000. The BOM method by massaging the breasts and expressing milk so that the reflex for the release of breast milk can be optimal. Combining the Rolling Massage method will stimulate milk production to help postpartum mothers expedite breastfeeding. **Conclusion:** The combination of the BOM method and the rolling massage method is very effective in accelerating breastfeeding, so it is necessary to apply this method to accelerate milk production, especially in the first days of post partum so that optimal breastfeeding can support the exclusive breastfeeding program.

**Keywords:** combination of BOM method and rolling massage; breastfeeding expression

### INTRODUCTION

#### Background

Breastmilk is the most important baby food, especially in the first 6 months of a baby's life. Many problems arise in the first days of breastfeeding which often make mothers feel confused and end up choosing other alternatives to meet the baby's needs. The most basic problem is that the milk does not come out.

Basic Health Research 2013 data shows the coverage of breast milk in Indonesia is only 42 percent<sup>(1)</sup>. This figure is clearly below the WHO target which requires breast milk coverage to be up to 50 percent. Data from the Magetan Health Office shows that the achievement of exclusive breastfeeding is 67.27% in 2017. This figure is still below the target (95%).

The importance of giving breast milk to babies is reflected in the recommendations of the World Health Organization (WHO), which urges every mother to provide exclusive breastfeeding until the baby is six months old. According to data from UNICEF, children who are exclusively breastfed are 14 times more likely to survive the first six months of life than children who are not breastfed. Starting breastfeeding on the first day after birth can reduce the risk of newborn death by up to 45%. Research conducted by Melina Mongan et al., (2013) in Kilimanjaro Tanzania shows that EBF (Exclusive Breastfeeding) is effective in preventing infant mortality by up to 13% - 15%<sup>(2)</sup>.

Failure in the breastfeeding process is often caused by the emergence of several factors, including maternal factors, infant factors, psychological factors, health worker factors, and socio-cultural factors. The mother's factor that becomes a problem in breastfeeding is the release of breast milk on the first day after giving birth. Failure to breastfeed in the first days can result in failure of exclusive breastfeeding<sup>(3)</sup>.

Several methods can be developed to accelerate the release of breast milk in the first days of a baby's life, namely the BOM Method and the Rolling Massage. The combination method is carried out by combining Breast

Care, Oxytocin Massage and Marmet Massage and Rolling Massage. The purpose of this method is to help postpartum (breastfeeding) mothers facilitate breastfeeding by stimulating the hormone oxytocin so that milk production will run smoothly which will support the success program of exclusive breastfeeding <sup>(4)</sup>.

To help postpartum mothers with problems on the first day of breastfeeding, researchers are interested in developing and proving research on the effectiveness of the combination of the "BOM" and Rolling Massage method to accelerate the production of breastmilk in postpartum mothers in the Parang district.

**Formulation of the Problem**

How is the effectiveness of the combination of the BOM and Rolling Massage methods to accelerate the release of breast milk in postpartum mothers?

**Purpose**

Analyzing the effectiveness of a combination of the BOM and Rolling Massage methods to accelerate the release of breast milk in postpartum mothers.

**METHODS**

The research design used was a quasi-experimental study with a post test only design with a control group. The research was conducted from April to September 2019. The study population of postpartum mothers in the Parang Health Center area using consecutive sampling technique. Sample size was 40 post-partum mothers as respondents in the work area of the Parang Community Health Center, Magetan Regency, Indonesia.

Independent variable was combination of BOM and Rolling Massage methods, while dependent variable was breastfeeding in postpartum mothers. All respondents collected data on the characteristics of the respondents and treated them to streamline breastfeeding using a checklist. All respondents followed a series of research activities. Data were analyzed using Manova. The methods was taken to ensure the research ethics fulfilled by the researcher

**RESULTS**

Table 1. Distribution of respondent characteristics

No	Respondent characteristics	Frequency	Percentage
1	Age		
	20-35 year	32	80.0
	> 36 year	8	20.0
	Total	40	100
2	Paritas		
	Primipara	15	37.5
	Multipara	25	62.5
	Total	40	100
3	Education		
	Basic	18	45.0
	Middle	22	55.0
	College	-	-
	Total	40	100

The characteristics of the respondents were mostly 20-35 years old (80.0%), with a primiparous parity of 15 respondents (37.5%) and multiparous 25 respondents (62.5%) and 22 respondents (55%).

The results of the normality test with the One-Sample Kolmogorv-Smirnov Test showed that value >0.05 (0.072 and 0.035), meaning that the data were normally distributed

Table 2. Analysis of the BOM method on breastfeeding expenditure

Variable	n	Mean	SD	T	p
BOM pre-post	10	-4.900	2.470	-6.274	0.000

Based on the research, the results of the analysis of the BOM method on breast milk expenditure obtained a significance value of 0.000. The p-value <0.05, so it can be concluded that there is an effect of the BOM method on breastfeeding expenditure.

Table 3. Analysis of the Marmet method on breastfeeding expenditure and weight gain

Variable	n	Mean	SD	T	p
Rolling pre-post	10	-3.700	2.111	-5.543	0.000

Based on the research, the results of the analysis of the Rolling Massage method on breast milk expenditure obtained a significance value of 0.000, a significance value of breastfeeding expenditure <0.05, so it can be concluded that there is an effect of the Rolling Massage method on breastfeeding expenditure.

Table 4. Analysis of the combination of BOM and Rolling Massage methods on breast milk expenditure

Variable	n	Mean	SD	T	p
Combination, pre-post	10	-6.200	1.033	-18.948	0.000

Based on the research, the results of the analysis of the combination of the BOM and Rolling Massage methods on breast milk expenditure obtained a significance value of 0.000.

The significance value was <0.05, so it can be concluded that the combination of the BOM method and the rolling massage has an influence on breastfeeding expenditure.

Table 5. The Results of the Manova test

Variabel Dependent	Intervention								Levene's test	Manova
	BOM		Rolling massage		Combination		Control			
	Pre	Post	Pre	Post	Pre	Post	Pre	Post		
Expenditures of breast milk	0.039	0.000	0.039	0.000	0.095	0.000	0.095	0.000	0.027	0.000

Analysis of the effectiveness of the combination of the BOM and Rolling Massage methods on breastfeeding using the Manova test, all of p-values were <0.05, so there is a significant difference on average in the BOM, Rolling Massage and BOM combination methods Rolling Massage

## DISCUSSION

### Expression of Breastmilk to Postpartum Mothers with the BOM

The administration of the BOM method is very effective for increasing breast milk production in postpartum mothers. In accordance with Tauriska (2014) research, there are many sensory nerve endings in the nipples. When stimulated, an impulse appears to the hypothalamus then to the anterior pituitary gland (front part) so that this gland produces the hormone prolactin. Nipple stimulation is not only transmitted to the anterior pituitary gland, but also to the posterior (back) pituitary gland, which produces the hormone oxytocin.

Breastmilk production refers to the volume of milk released by the breasts. The intervention of the BOM method is principally aimed at making the myoepithel muscles contract, relaxing the mind and expediting breastfeeding. This excretion of breast milk occurs because the smooth muscle cells around the breast glands constrict so that the milk is squeezed out. The milk can come out of the breast due to the shrinking muscles which can be stimulated by a hormone called oxytocin (5).

Through stimulation or breast massage stimulation of the spine will relax tension and relieve stress, assisted by the baby's suction on the nipple immediately

After the baby is born with a normal baby, neurotransmitters will stimulate the medulla oblongata to send messages to the hypothalamus in the posterior hypofise to release oxytocin, which causes the breasts to secrete milk.

### Expression of Breastmilk in Postpartum Mothers with Rolling Massage

Based on the results of the study, it can be concluded that the expenditure of breast milk in postpartum mothers who get rolling back massage, namely on the first to the third day, almost all tend to increase every day

(6). Back rolling massage is one solution to overcome the improper production of breast milk. Back rolling massage is a massage along the spine (vertebrae) to the sixth rib and is an attempt to stimulate the hormones prolactin and oxytocin after childbirth. This back rolling massage is done to stimulate the let down reflex. In addition to stimulating the let down reflex, the benefits of rolling back massage are to provide comfort to the mother, reduce swelling, reduce milk blockage, stimulate the release of the hormone oxytocin, maintain milk production when mother and baby are sick (7).

In this study with giving rolling back massage can provide a relaxing sensation to the mother and smooth the flow of nerves and the milk ducts of both breasts.

Back rolling massage will provide comfort and relax because massage can stimulate the release of endorphin hormones and can stimulate the oxytocin reflex. Massage techniques at certain points can remove blockages in the blood and the energy in the body will return smoothly. Thus the mother who gets rolling

Back massage has relatively more milk production than those who don't get a rolling back massage. From the facts above, there are differences in the effect of rolling back massage on increasing breast milk production in postpartum mothers, where milk production in postpartum mothers who received rolling back massage had more milk production than the control group who did not get a rolling back massage. Apart from rolling back massage, other factors can also affect breast milk production such as 1) the age of the mother, younger mothers produce more breast milk than older mothers. 2) Education, education can affect the ability and efforts of parents in caring for and maintaining the health of their children. 3) Parity, a mother who gives birth to a second child or so on has more milk production than the birth of the first child.

#### **Expression of Breastmilk in Postpartum Mothers with Combination Treatment of the BOM and Rolling Massage**

Based on the results of the study, it can be concluded that the expenditure of breastmilk in postpartum mothers who received a combination treatment of the BOM method and rolling massage, namely on the first to the third day, almost entirely increased. Through breast massage or stimulation of the spine will relax tension and relieve stress, assisted by immediate baby suction (8)

After the baby is born with a normal baby condition, it will stimulate the medulla oblongata to send a message to the hypothalamus in the posterior hypofise to release oxytocin so that the breasts release milk, coupled with back rolling massage will provide comfort and relax because massage can stimulate the release of endorphin hormones and can stimulate hormones oxytocin (9)

### **CONCLUSIONS**

#### **Conclusion**

1. The BOM method is effective for accelerating breastfeeding in postpartum mothers
2. Rolling Massage technique is effective for accelerating the release of breast milk in postpartum mothers
3. The combination of the BOM method and the rolling massage method is very effective in accelerating breastfeeding in postpartum mothers

#### **Recommendation**

1. The results of this study are expected to be used as an improvement in the quality of postpartum services by paying attention to the production of breastmilk which can have an impact on the breastfeeding process, for example by socializing the combination of the SPEOS method and the marmet technique to mothers during ANC / pregnancy and training in this method.
2. For further research, observations should be made up to one week post partum in order to determine its effectiveness in weight gain

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