

## EFFECTIVENESS OF OXYTOCIN MASSAGE AND BREAST TREATMENT ABOUT THE ADEQUACY OF BREAST MILK IN POST PARTUM

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### ABSTRACT

**Background** :Inadequacy of breast milk after delivery can be caused by the ineffectiveness of milk production and ejection. One way that can be done is oxytocin massage and breast care. **Purpose** :The purpose of this study was to determine the effectiveness of oxytocin massage and breast care for the adequacy of breast milk in Post Partum mothers.

**Method** :This research uses a comparative design. The study was conducted on April 7 - May 7, 2020. The study population was post partum mothers with a purposive sampling technique obtained a sample of 24 respondents. The independent variable is oxytocin massage and breast care while the dependent variable is the adequacy of breast milk. Data collection uses observation sheets. Data analysis using Wilcoxon and Mann-Whitney test with  $\alpha = 0.05$ .

**Results** :The results of this study indicate that the adequacy of breast milk before and after being given oxytocin massage using the Wilcoxon test obtained p value =  $0.025 \leq \alpha = 0.05$ , the adequacy of breast milk before and after being given breast care using the Wilcoxon test obtained p value =  $0.005 \alpha = 0, 05$ , the effectiveness of oxytocin massage and breast care using the mann-whitney test obtained p value =  $0.020 \alpha = 0.05$  so that  $H_a$  is accepted.

**Conclusion** :There is a difference in the effectiveness of oxytocin massage and breast care on the adequacy of breast milk in post partum mothers. So that breast care is more recommended to increase the adequacy of breast milk in post partum mothers.

**Keywords:** Oxytocin Massage and Breast Care, Adequacy of ASI, Post Partum Mother.

### BACKGROUND

Post Partum is the period after delivery is completed up to 6 weeks or 42 days (Martalia, 2014). When post partum or after delivery is over, every mother must immediately prepare to breastfeed her newborn baby. This is because the digestive system of newborns before the age of 6 months is not yet mature. Therefore, newborns can only be given breast milk (Nisman et al, 2011). However, what often happens, many mothers experience the ineffectiveness of the breastfeeding process due to the production and ejection of breast milk in the first few days (Widiastuti et al, 2015). According to Pranajaya&Rudianti (2013) in Fatmawati (2018) multiparous mothers are able to produce more breast milk than primiparous

mothers. Primiparous mothers have less knowledge and experience in terms of breastfeeding, while multiparous mothers certainly already have experience in breastfeeding so that lactation management will be carried out properly. According to Nugroho (2011), breastmilk production and production begins about 30-40 hours after delivery, but usually new mothers feel full breasts about 50-73 hours (2-3 days) after giving birth.

Based on the results of interviews conducted by researchers on April 1, 2020 with post partum mothers, it was found that 4 out of 6 post partum mothers experienced lactation and breastfeeding problems. The problem experienced by the mother was that the milk did not come out on the first to the fourth day after delivery.

The prevalence of exclusive breastfeeding in the world is still relatively low. According to UNICEF (2012) in Muliani et al. (2018) based on data from the United Nations International Children's Emergency Fund (UNICEF) in 2012, only 39% of babies under 6 months of age are exclusively breastfed worldwide. According to WHO (2015) in Taqiyah et al (2019), in the United States the percentage of breastfeeding women who experience breast milk dams reaches an average of 87.05% or as many as 8,242 post partum mothers out of 12,765 people. According to ASEAN (2014) in Taqiyah et al (2019) it is concluded that the percentage of breast milk dam cases in post partum mothers was recorded as 107,654 post partum mothers, in 2014 there were post partum mothers who experienced ASI dams as many as 95,698 people, and in 2015 mothers who experienced ASI dam as many as 76,548. According to the Ministry of Health (2008) in Taqiyah (2019) in Indonesia, mothers who experience ASI dams are estimated to be 876,665 people. While the national target for exclusive breastfeeding is 80%, but from the data obtained, mothers who successfully breastfed exclusively were recorded at 61.5% in 2010. According to the Indonesian Ministry of Health (2017) in Iswari (2018) in 2016 in Indonesia It is known that the percentage of babies who are exclusively breastfed until the age of 6 months is 29.5% and babies who are breastfed aged 0-5 months are 54.0%. According to the Nutrition Section of the East Java Provincial Health Office (2013) in Rahayu et al (2015) while in East Java, mothers who gave ASI were 64.8% in 2012. Based on the results of data obtained from Midwives it was found that the number of mothers post partum in the village in 2018 was 38 and in 2019 was 40 post partum mothers. So, the average mother who gives birth, every month is around 3 post partum mothers.

There are several factors that can cause the amount of breastmilk released by the breast to be insufficient for the milk requirement of the baby, namely food factors, peace of mind and mind, use of contraceptives, breast care, massage techniques, breast anatomy, physiological factors, rest patterns, baby suction factors, weight. babies born, gestational age at delivery, cigarette and alcohol consumption (Riksani, 2012; Waramontri, 2020; Wiyani et al., 2020; Wulansari et al., 2020; Zbrueva&Bogomolov, 2020). According to Takasihaeng (2005) in Hardiani (2017) insufficient breast milk caused by these factors can affect babies due to lack of breast milk intake so that babies can experience malnutrition, increased risk of respiratory infections, gastrointestinal infections, disrupt growth and development and poor body defense.

To overcome the problem of breastfeeding in mothers, an effort is needed that can facilitate breastfeeding so that the baby can meet its nutritional needs early in life and the adequacy of breast milk is fulfilled. Various efforts can be made to increase the adequacy of breast milk, namely by using the marmet technique, warm compresses, massase rolling techniques, endorphin massage, suggestive, oxytocin massage, breast care (Mas'adah, 2015). According to the research of Delima et al (2016) oxytocin massage is an alternative that can help stimulate the process of breastfeeding because of its effect that makes the mother feel comfortable so that it will help excrete oxytocin and it is evident from the results of research

that mothers whose breast milk is not smooth, after massage the milk production increases and Breast milk more and the baby gets enough milk. Oxytocin massage is carried out along the spine (vertebrae) to the fifth-sixth rib. The mechanism of action in the implementation of oxytocin massage stimulates the parasympathetic nerves to be sent to the brain so that the oxytocin hormone can be released and flows into the blood and then enters the breast and causes the muscles around the alveoli to contract and make milk flow smoothly and adequate milk is fulfilled (Lestari, 2017). The effect of the oxytocin massage itself can be seen in the reaction after 6-12 hours of massage (Jannah et al, 2019). So it is hoped that with this massage the mother will feel relaxed and the fatigue after giving birth will disappear. If the mother feels comfortable, relaxed, and not tired, it can help stimulate the release of the hormone oxytocin (Putri &Sumiyati, 2015). According to research by Amelia (2010) in Taqiyah et al. (2019) that breast care has a positive impact in increasing breast milk production by stimulating the glands and the hormones prolactin and oxytocin to increase milk production smoothly and breast milk adequacy is met. The breast care interventions are carried out by stimulating or massaging the breasts, cleaning the nipples and compressing the breasts using alternately warm and cold water which can affect the pituitary to release progesterone and estrogen hormones to produce the hormone oxytocin. Breast care in the first days of the post-partum period improves blood flow to the breasts, and reduces the intraductal pressure caused by milk accumulating in the lactiferous ducts so that this stimulation is continued to the hypothalamus through the spinal cord and mesencephalon. The hypothalamus will suppress the secretion of factors that trigger prolactin secretion which will stimulate the anterior pituitary to produce milk. Furthermore, the prolactin hormone will stimulate alveoli cells to make milk flow smoothly and breast milk sufficiency is fulfilled (Muliani et al., 2017).

**OBJECTIVE**

Knowing the effectiveness of oxytocin massage and breast care on the adequacy of breast milk in post partum mothers.

**METHOD**

This research uses a comparative design. The study was conducted on April 7 - May 7, 2020. The study population was post partum mothers with a purposive sampling technique obtained a sample of 24 respondents. The independent variable is oxytocin massage and breast care while the dependent variable is the adequacy of breast milk. Data collection uses observation sheets. Data analysis using Wilcoxon and Mann-Whitney test with  $\alpha = 0.05$ .

**RESULTS**

**a. Adequacy of Breastfeeding Before and After Giving Oxytocin Massage Interventions to Post Partum Mothers.**

Table 1 Tabulation of the Adequacy of Breastfeeding Before and After Intervention with Oxytocin Massage

No	Adequacy of breast milk	Before Massage		After Massage	
		<i>Oksitosin</i>		<i>Oksitosin</i>	
		<i>f</i>	%	<i>f</i>	%

1	Enough breast milk	3	25	7	58,33
2	Not Enough breast milk	9	75	5	41,67
Total		12	100	12	100

The results of Wilcoxon in the oxytocin massage group were obtained data  $p$  value =  $0,025 \leq \alpha = 0,05$

Based on table 1, it can be seen from the 12 groups of oxytocin massage that most of the respondents before being given oxytocin massage experienced insufficient breastfeeding, namely 9 respondents (75%), after being given oxytocin massage, experienced sufficient breastfeeding, namely 8 respondents (66.67%). The results of the Wilcoxon statistical test in the oxytocin massage group showed  $p$  value =  $0.025 \leq \alpha = 0.05$  so that  $H_a$  was accepted and  $H_o$  was rejected, it can be concluded that there was an effect of oxytocin massage on the adequacy of breastfeeding in post partum mothers.

**b. Adequacy of breastfeeding before and after being given breast care intervention for post partum mothers.**

Table 2 Tabulation of Breastfeeding Adequacy Before and After Intervention of Breast Care

No	Adequacy of breast milk	Before Breast Care		After Breast Care	
		<i>f</i>	%	<i>f</i>	%
1	Enough breast milk	4	33,33	12	100
2	Not Enough breast milk	8	66,67	0	0
Total		12	100	12	100

The results of Wilcoxon breast care group obtained data  $p$  value =  $0,005 \leq \alpha = 0,05$

Based on table 2, the breast care group, most of the respondents, before being given breast care, experienced insufficient breastfeeding, namely as many as 8 respondents (66.67%), after being given breast care, they experienced sufficient breastfeeding, namely as many as 12 respondents (100%). The results of the Wilcoxon statistical test for the breast care group showed  $p$  value =  $0.005 \leq \alpha = 0.05$  so that  $H_a$  was accepted and  $H_o$  was rejected, it can be concluded that there was an effect of breast care on the adequacy of breastfeeding in post partum mothers.

**CONCLUSION**

1. Adequacy of Breastfeeding Before and After Giving Oxytocin Massage Intervention to Post Partum Mothers.

Based on table 1, it can be seen from the 12 groups of oxytocin massage that most of the respondents before being given oxytocin massage experienced insufficient breastfeeding, namely 9 respondents (75%), after being given oxytocin massage, experienced sufficient breastfeeding, namely 8 respondents (66.67%). The results of the Wilcoxon statistical test for the oxytocin massage group showed  $p$  value =  $0.025 \leq \alpha =$

0.05 so that  $H_a$  was accepted and  $H_0$  was rejected, it can be concluded that there was an effect of oxytocin massage on the adequacy of breastfeeding in post partum mothers.

Oxytocin massage is a reflex that makes the flow of milk from the breasts smooth, so that breastfeeding is smoother and reduces damming of the milk ducts (Astuti et al, 2015). This massage functions to increase the hormone oxytocin which can calm the mother, so that breast milk automatically comes out (Roesli&Yohmi, 2009).

Before giving the intervention, oxytocin massage, the adequacy of post partum mother's milk was in the insufficient category. After being given the oxytocin massage intervention, the mother's milk came out smoothly and the adequacy of breast milk was fulfilled.

2. Adequacy of breastfeeding before and after being given breast care intervention for post partum mothers.

Based on table 2, the majority of respondents who experienced breast care before being given breast care experienced insufficient breastfeeding, as many as 8 respondents (66.67%), after being given breast care, experienced sufficient breastfeeding, namely 12 respondents (100%). The results of the Wilcoxon statistical test for the breast care group showed  $p \text{ value} = 0.005 \leq \alpha = 0.05$  so that  $H_a$  was accepted and  $H_0$  was rejected, it can be concluded that there was an effect of breast care on the adequacy of breastfeeding in post partum mothers.

Breast care is an act of sequencing or providing regular stimulation of the breast muscles to improve blood circulation, caring for the nipples to make them clean and not prone to blisters, and accelerating milk production (Astuti et al., 2015). In addition to making breasts beautiful again, proper and regular breast care will make it easier for babies to breastfeed, stimulate milk production, and prevent breast injury during the breastfeeding process (Riksani, 2012).

Before being given breast care intervention, the adequacy of post partum mother's milk was in the insufficient category. After being given breast care intervention, the mother's milk comes out smoothly and the adequacy of the milk is fulfilled.

3. Effectiveness of Oxytocin Massage and Breast Care on Breastfeeding Adequacy in Post Partum Mothers.

Based on the results of the study, it can be seen from the 12 groups of oxytocin massage that most respondents before being given oxytocin massage experienced insufficient breastfeeding, namely 9 respondents (75%), Post given oxytocin massage experienced sufficient breastfeeding, as many as 8 respondents (66.67%). Most of the respondents in the breast care group before being given oxytocin massage experienced insufficient breastfeeding, namely 8 respondents (66.67%), after being given breast care, they experienced sufficient breastfeeding, namely 12 respondents (100%). The results of the Wilcoxon statistical test in the oxytocin massage group showed  $p \text{ value} = 0.025 \leq \alpha = 0.05$  so that  $H_a$  was accepted and  $H_0$  was rejected, it can be concluded that there was an effect of oxytocin massage on the adequacy of breastfeeding in post partum. The results of the Wilcoxon statistical test for the breast care group obtained data of  $p \text{ value} = 0.005 \leq \alpha = 0.05$  so that  $H_a$  was accepted and  $H_0$  was rejected, it can be concluded that there was an effect of breast care on the adequacy of breastfeeding in post partum mothers. The results of the Mann-Whitney statistical test showed that the data  $p \text{ value} = 0.020 \leq \alpha = 0.05$  so that  $H_a$  was accepted and  $H_0$  was rejected, it can be concluded that there is the effectiveness of oxytocin massage and breast care on the adequacy of post partum mother's breast milk.

Breast care as a first step to maintain cleanliness so that the breasts remain healthy and do not occur after delivery is a continuation of breast care during pregnancy, which aims

to stimulate the milk glands so that milk production is large and smooth and prevent blockage. Most of the respondents who are given breast milk care for 1-2 times per day so that their milk needs are fulfilled. Breast care in the form of breast massage to improve blood circulation, keep the nipples clean and prevent blisters will be useful in smoothing the reflex to expel breast milk. Besides that, it is also an effective way to increase the volume of breast milk and prevent damages in the breast (Meilirianta, 2014).

In oxytocin massage, it can be performed on the mother in a relaxed sitting position while leaning her head forward on the table or bed by folding her arms and placing her head over her arms so that the mother feels more comfortable, this is expected so that negative feelings can be minimized. In addition to providing comfort to the mother, the benefits of oxytocin massage are to stimulate let down reflexes, reduce breast milk obstruction, stimulate the release of the hormone oxytocin and maintain milk production. This massage is carried out along the spine (vertebrae) to the V and VI rib bones to stimulate the hormones prolactin and oxytocin after childbirth. One of the hormones that plays a role in the production of breast milk is the hormone oxytocin, so that when there is stimulation of the hormone oxytocin, the alveoli cells in the breast glands contract. This contraction causes the milk to come out and then flow in the breast ducts so that the milk drops from the nipples (Muliani et al, 2018).

The results showed that the results of either oxytocin massage or breast care influenced the adequacy of breast milk. This is because there is a massage or massage process in both of these things. This stimulates the milk glands so that milk production is abundant and smooth and prevents blockages. Based on the above research, it can be concluded that breast care is more effective than oxytocin massage. This happens because breast care is more complete in stages, not only massages or massage but also maintaining breast hygiene which is useful to prevent infection.

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#### **CONFLICTS OF INTEREST**

Is there a difference between oxytocin massage and breast care on the adequacy of breast milk for postpartum mothers.

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