

THE EFFECT OF OXYTOCIN MASSAGE ON BREAST MILK PRODUCTION IN BREASTFEEDING MOTHERS IN THE WORKING AREA OF PUSKESMAS SUNGAI BULIAN IN 2024

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ABSTRACT

Background: Infants who receive optimal breastfeeding can avoid mortality, with approximately 800,000 children under five avoiding death each year. Proper breastfeeding can help maintain milk production. It is recommended that mothers breastfeed within one hour after birth. However, not all postpartum mothers are able to produce milk immediately due to the process being influenced by various hormones, stimuli, and nerves impacting oxytocin release. In Indonesia, only 37.3% of infants aged 0-5 months are exclusively breastfed, which is significantly lower than the national target of 80%.

Method: This study is a quantitative research with a pre-experimental design, using one group pretest-posttest with a paired t-test. The aim of this study is to compare the differences before and after the intervention on breastfeeding mothers aged 7 days to 1 month, in order to explain the effect of oxytocin massage on increasing breast milk production in breastfeeding mothers.

Result: Based on the distribution of the amount of breast milk production before oxytocin massage, the average milk production of the respondents was 5.07 ml with a minimum of 2 ml and a maximum of 10 ml. After the oxytocin massage, the average milk production was 20.67 ml with a minimum of 10 ml and a maximum of 28 ml. The analysis results conclude that performing oxytocin massage on breastfeeding mothers can increase breast milk production, with an increase of 15.6 ml. The statistical test results show a p-value of 0.000.

Conclusion: Breast milk production in breastfeeding mothers before receiving oxytocin massage averaged 5.07 ml in the working area of Puskesmas Sungai Bulian in 2024. Breast milk production in breastfeeding mothers after receiving oxytocin massage averaged 20.67 ml in the working area of Puskesmas Sungai Bulian in 2024. Statistically, it is proven that oxytocin massage has a significant effect on increasing breast milk production in breastfeeding mothers of infants aged 7 days to 1 month in the working area of Puskesmas Sungai Bulian in 2024.

Keywords: oxytocin massage; breast milk production; breastfeeding mothers.

INTRODUCTION

Infants who receive optimal breastfeeding significantly reduce the risk of mortality, preventing approximately 800,000 deaths annually among children under five. Early breastfeeding, within one hour after birth, is crucial for maintaining milk production. However, not all postpartum mothers can produce milk immediately due to hormonal, neural, and stimulus-related factors influencing oxytocin release. In Indonesia, only 37.3% of infants aged 0-5 months are exclusively

breastfed, falling far short of the 80% national target (Riskseddas, 2018).

In 2022, the exclusive breastfeeding rate was 27.14%, below the program target of 50%. District-level variations ranged from 8.08% in Kerinci District to 72.04% in Tanjung Jabung Barat, with only the latter meeting the target (Jambi Provincial Health Office, 2022). Breastfeeding challenges often stem from issues within the mothers themselves, including problems with milk production before and after childbirth.

Oxytocin massage is a proven solution for improving milk production. This massage,

performed twice daily during the first two postpartum days, targets the spine along the costae (fifth and sixth ribs) to the scapula, stimulating parasympathetic nerves and oxytocin hormone release. This process enhances the contractility of breast myoepithelial cells, increasing milk volume (Mintaningtyas and Isnaini, 2022).

Studies, including those by Indriyani and Triyana (2022), demonstrate significant increases in milk production post-massage. Similarly, Rifa and Fifi (2021) and Azizah (2020) confirm the effectiveness of oxytocin massage. Addressing psychological and hormonal changes postpartum through techniques like oxytocin massage, nutritious diets, proper rest, and breast care can improve breastfeeding outcomes.

METHODS

This study is a quantitative research with a pre-experimental design, using one group pretest-posttest with a paired t-test. The aim of this study is to compare the differences before and after the intervention on breastfeeding mothers aged 7 days to 1 month in order to explain the effect of oxytocin massage on increasing breast milk production in breastfeeding mothers.

A sample is a portion of the characteristics possessed by the population (Sugiyono, 2013). In this study, the technique used for sampling was “random sampling,” which is a method to determine samples from a population with certain characteristics until the desired quota is reached, totaling 30 breastfeeding mothers. The inclusion criteria are the characteristics that need to be met by every member of the population who can be taken as a sample. Meanwhile, the exclusion criteria are the characteristics of the population members who cannot be taken as samples.

Univariate analysis was conducted using frequency distribution and descriptive statistics

to observe breast milk production in breastfeeding mothers who received and did not receive oxytocin massage. Bivariate analysis using paired t-test was employed because the data distribution before and after the intervention was normal (Shapiro-Wilk test $P > 0.05$).

RESULTS AND DISCUSSION

Before the oxytocin massage, the respondents' average breast milk production was 5.07 ml, ranging from 2 ml to 10 ml. After the massage, the average increased to 20.67 ml, with a range of 10 ml to 28 ml (Table 1).

Table 1. Frequency Distribution of Breast Milk Production of Breastfeeding Mothers (n=30)

Breast Milk Production	Average (mL)	Min	Max
Before Oxytocin Massage	5.07	2	10
After Oxytocin Massage	20.67	10	28

Table 2. Breast milk production in relation to oxytocin massage (n=30)

Breast Milk Production	Average	Dif.	95% CI	p-value
Before Oxytocin Massage	5.07	15.6	17.222-	0.0
After Oxytocin Massage	20.67		13.978	00*

The analysis found that oxytocin massage significantly increases breast milk production, with an average increase of 15.6 ml. Statistical tests showed a p-value of $0.000 < 0.005$ (table 2), confirming a significant effect of oxytocin massage on breast milk production among breastfeeding mothers with infants aged 7 days to 1 month in the working area of Puskesmas Sungai Bulian in 2024.

Before the massage, the average milk production was 5.07 ml, ranging from 2 ml to 10 ml. Low milk production on the first day is common, as colostrum is typically produced during the first 1–5 days after birth (IDAI, 2021).

Several factors influence breast milk production, including food intake (47.5%), rest patterns (69.5%), breastfeeding frequency (94.9%), and breast care (100%) (Vemelya,

2014). Among these, breast care, breastfeeding frequency, and sufficient rest are critical.

Cultural myths about specific foods can lead to inadequate nutrition for breastfeeding mothers. Smooth breast milk production requires a balanced, nutrient-rich diet accompanied by regular eating habits (Maritalia, 2017). Proper care and attention to these factors are essential to support breastfeeding mothers and ensure adequate milk supply.

CONCLUSION

Breast milk production in breastfeeding mothers averaged 5.07 ml before receiving an oxytocin massage. After the massage, the average production increased significantly to 20.67 ml. Statistical analysis confirmed that oxytocin massage has a significant effect on enhancing breast milk production in mothers of infants aged 7 days to 1 month.

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REFERENCES

- Azizah, N., Rosyidah, R. 2019. Asuhan Kebidanan Nifas dan Menyusui. Sidoarjo. UMSIDA Pers
- Dinas Kesehatan provinsi Jambi, 2022. Profil Dinas Kesehatan Provinsi Jambi
- Indrayani, 2022. Literature Review : Penerapan Pijat Oksitosin Dalam Upaya Memperbanyak Asi
- Muawanah, S., Sariyani, D. 2021. Pengaruh Pijat Laktasi Terhadap Kelancaran Produksi ASI Pada Ibu Menyusui Baby

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Riskesdas 2018, Laporan Nasional Riskesdas tahun 2018

Purwanti, Y. 2020. Penerapan Pijat Oksitosin Dengan Minyak Aromaterapi Lavener Untuk Pelancar Asi Ibu Post Partum Di Desa Pengabean Losari Brebes. Karya Tulis Ilmiah. Purwokerto: Fakultas Ilmu Kesehatan, Universitas Muhammadiyah Purwokerto.