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THE EFFECTIVENESS OF OKETANI MASSAGE ON BREAST MILK VOLUME IN POSTPARTUM MOTHERS

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ABSTRACT
Breastfeeding serves as a vital means of fostering a psychological connection between mother and baby, contributing to the attainment of Sustainable Development Goals (SDGs). One common challenge in the postpartum period is insufficient breast milk production. Oketani massage emerges as a breast care technique capable of enhancing pectoralis muscle strength to boost breast milk production. Objective: This study aimed to assess the effectiveness of Oketani massage on breast milk volume in postpartum mothers. Method: This study employed a quasi-experimental design with a before-and-after treatment approach. The sample comprises 30 mother respondents, with 15 mothers in the postpartum experimental group and 15 in the postpartum control group. Purposive sampling was utilized as the sampling technique. The instrument involved direct observation and a breast pump. Data analysis included descriptive statistics and inferential statistics, specifically paired t-test. Results: The results of this study reveal a significant different in the volume of breast milk before and after the application of Oketani massage in both the experimental and control groups. Conclusions and Recommendations: The study concludes that Oketani massage is effective in increasing breast milk volume.

Keywords: breast milk volume; oketani massage; postpartum mothers

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INTRODUCTION

Breastfeeding serves as a vital means of fostering a psychological connection between mother and baby, contributing to the attainment of Sustainable Development Goals (SDGs) third target by 2030 (Nababan et al., 2020). The World Health Organization (WHO) and government policies regulate early initiation and exclusive breastfeeding. WHO recommends initiating breastfeeding within 1 hour of birth, exclusively continuing for the first 6 months, and complementing with complementary foods up to 2 years of age (Meilia, 2021). Similarly, the regulation of Indonesian Ministry of Health No.36 of 2009 article 3 also supports early initiation and exclusive breastfeeding programs through national empowerment movements to enhance breast milk utilization. Breast milk, recognized as the best natural food for neonates, provides essential energy and immunity for the baby's survival and growth (Kartika et al., 2021).

Factors influencing breast milk volume include maternal diet, psychological well-being, breast care, breastfeeding frequency, and contraception (Lilik et al., 2019). Various treatments, both pharmacological, such as vitamin moloco B12 (Karima et al., 2019), Lactaman (Triana & Anggita, 2019), Asifit (Triana, 2020), Lancar ASI, BlackMores

Pregnancy, and Breastfeeding Gold and non-pharmacological, such as katuk leaves (Syahdad & Nurelilasari, 2020), bangun-bangun tea (Mariene et al., 2021), black sticky rice (Fatimah, 2021), oxytocin massage (Triana & Anggita, 2019), acupressure (A. Wulandari et al., 2019), and the combination of endorphin, oxytocin, and suggestive massage (SPEOS) (Melyansari et al., 2018), aim to enhance breast milk production. Difficulty in breast milk flow may lead to resorting to formula milk for babies (Cahyani & Ita Herawati, 2023).

Oketani massage stands out as a method that stimulates the pectoralis muscles, promoting increased breast milk production while ensuring softer and more elastic breasts. The massage also offers overall relief and comfort, improves the quality of breast milk, prevents sore nipples and mastitis, and addresses lactation problems associated with flat or inverted nipples (Sari et al., 2021). Moreover, it contributes to increased baby weight (Dehghani et al., 2018), and studies indicate a significant improvement in lipid composition, calories, and crematocrit in breast milk after the second Oketani massage program ($p<0.05$) (Kim & Kim, 2012) A study by Setiani further supports the benefits of Oketani massage, emphasizing its role in facilitating breast milk production, overcoming breast milk dams (Setiani, 2021), and promoting relaxation in mothers (T. Wulandari, 2020). Given the aforementioned context, the researchers aimed to assess the effectiveness of Oketani massage on breast milk volume in postpartum mothers.

METHOD

This study employed a quasi-experimental time series control design. This study aimed to assess differences in breast milk volume among 15 respondents in the postpartum experimental group and 15 respondents in the postpartum control group, utilizing purposive sampling as the sampling technique. Data were tabulated and statistically analyzed using the paired paired t-test and independent t-test. data was collected through observation sheets. This study was conducted in April 2023 at TPMB (the Midwife Independent Practice Center) R Depok. The intervention involved performing Oketani massage on postpartum mothers in the postpartum experimental group, while the control group was instructed only on how to perform Oketani massage. Oketani massage commenced on the first day after giving birth and continued until the 3rd day, performed consecutively for 10-15 minutes each session.

RESULTS

Table 1.
Data on Respondent Characteristics (n=30)

Mother's Characteristics	f	%
Age		
20-35 years old	23	77
>35 years old	7	23
Parity		
Primipara	6	20
Multipara	24	80

Table 1 of the 30 respondents, the majority are in the age range of 20-35 years, accounting for 77%, and have a multiparous status, accounting for 80%.

Table 2.
Volume of breast milk volume before the application of Oketani massage on the experimental and control groups (n=30)

Group	Mean	Median	Std.Deviation	Minimum	Maximum
Experiment	5.47	5.70	2.282	0	10
Control	5.89	5.70	1.768	3	10

Table 2 the total breast milk volume was 5.47 ± 2.282 mL for the experimental group, and 5.89 ± 1.768 mL for the control group.

Table 3.
Differences in breast milk volume before and after the application of oketani massage on the experimental group (n=30)

Experimental Group	Breast milk volume			*p-value*
	Mean	SD	f	
Before	5.473	2.281		0.000
After	327.927	26.595	15	

Table 3 there are significant differences in breast milk volume before Oketani massage was performed in the experimental group, with a p-value of 0.000. The breast milk volume increased by 322.454.

Table 4.
Differences in breast milk volume before and after the application of oketani massage on the control group (n=30)

Control Group	Breast milk volume			*p-value*
	Mean	SD	f	
Before	5.893	1.768		0.000
After	198.570	24.860	15	

Table 4 there are significant differences in breast milk volume before Oketani massage was performed in the control group, with a p-value of 0.000. The breast milk volume increased by 192,677.

DISCUSSION

The data indicates that the majority of respondents are in the age range of 20-35 years, comprising 23 mothers (77%), while a smaller proportion of respondents are in the age group exceeding 35 years, comprising 7 mothers (23%). Furthermore, the majority of respondents belonged to the multipara group, comprising 24 mothers (80%), while a smaller proportion of respondents belonged to the primipara group, comprising 6 mothers (20%). According to Hidayati (2012), the age range of 20-35 years is considered a healthy reproductive period for pregnancy, childbirth, and breastfeeding, providing optimal support for exclusive breastfeeding. Conversely, mothers below 20 years are regarded as physically, mentally, and psychologically immature in facing childbirth, pregnancy, and breastfeeding. Based on Tables 3 and 4, it can be concluded that the breast milk volume for mothers performed with Oketani massage was consistent between the experimental and control groups. The results indicate 5.47 ± 2.282 mL with a range of 0-10 for the experimental group, and 5.89 ± 1.768 mL with a range of 3-10 for the control group.

Breast milk production is influenced by the hormones prolactin, oxytocin, and endorphins. The method that can be used to release these hormones is by doing oketani massage (Yanti, 2022). Oketani massage, a painless breast care method, is employed to stimulate pectoralis muscle strength, enhancing breast milk production and rendering the breasts softer and more elastic. This facilitates easier breastfeeding for the baby (Prastiwi & Rahayuningsih, 2023). Oketani massage proves beneficial in addressing breast milk dam issues (Permatasari et al., 2021), reducing pain in swollen breasts, and increasing the pH of breast milk and the sucking speed of neonates (Cho et al., 2012).Massage is a type of breast massage that concentrates on the mother's areola and nipples. The method of massage developed by Japanese midwife Sotomi Oketani is one one of the special massage methods and is dubbed Oketani Lactation

Control. Through Performing this massage, the bond between Mother and child have a relationship both psychologically and physically (Rauzah et al., 2023).

The Oketani Method originally formalized by a midwife Ms. Sotomi Oketani in 1981 and the Self Mamma Control (SMC) Method developed by an obstetrician, Dr. Yahiro Nezu, in 1986 (Kishi, 2010). Both methods aim at the galactopoietic effect (facilitation of breastmilk production) of using unique breast massages techniques. The Oketani Method, which is performed by specially trained midwives, manages breastfeeding trouble such as induration and inflammation in the breasts through a specific breast massage technique and nutritional regimen, while the SMC Method promotes breastfeeding women's regular self-massage of breasts and nipples for breastfeeding (Hashimoto & Christin, 2009). Oketani massage, being a painless breast care method, stimulates pectoralis muscle strength to increase breast milk production and improve breast elasticity, easing breastfeeding for the baby. This massage, taking one minute and repeated for 15-20 minutes, establishes a physical and mental connection between mother and baby (Indah & Ulfah, 2021). Studies indicate that Oketani massage is effective in facilitating the release of breast milk in postpartum mothers (p-value 0.000) (Yasni et al., 2020), similar findings were observed in a study by Triana (2022). Thus, it is proven that Oketani massage is effective in facilitating the release of breast milk (Indrayani et al., 2022).

CONCLUSION

The respondents are mostly in the age range of 20-35 years and have a multiparous status, with a prevalence of 77% and 80%. The breast milk volume in post-Caesarean section (SC) mothers mothers who were performed with Oketani massage increased significantly compared to those who were not. There is a significant difference between the breast milk volume of mothers who were performed with Oketani massage and those who were not, with a p-value of 0.000.

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