



THE EFFECT OF THE MARMET TECHNIQUE ON BREAST MILK EXPRESSION IN POSTPARTUM MOTHERS: A STUDY AT PMB SYAFLINA FITRI

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A B S T R A C T

Postpartum care is an essential aspect of maternity midwifery, focusing on providing high-quality and professional health services. It involves identifying and adapting to the needs of breastfeeding, as breast milk is the optimal nutrition for infants. Breast milk plays a crucial role in supporting the growth and development of babies. The content of breast milk is rich in immune substances (immunoglobulin) which can protect babies from various infections. This study aims to evaluate the effectiveness of the Marmet technique in enhancing breast milk expression in postpartum mothers from the first to the third day after delivery at the Syaflina Fitri Midwife Practice. This research method is quantitative research using a design using a one-group design. In this design, there are pre-tests and post-tests before and after being carried out. The sampling technique in this study is the saturated sampling technique which is part of the population selected in a certain way so that it is considered capable of representing the population. The sample of this study was postpartum mothers at the Syaflina Fitri Pasir Pengaraian Midwife Practice as many as 15 respondents where the populations in this study were used as samples, namely 15 respondents. For data analysis using the T-Dependent statistical test, the p -value = 0.000 was obtained, thus, the p -value (0.000) < 0.05 , indicates that there is an effect of the Marmet technique on the smoothness of breast milk in postpartum mothers. It is expected to be useful and add information and input in efforts to improve information and the quality of health services and to motivate postpartum mothers to apply the Marmet technique for smooth breast milk.

INTRODUCTION

Smooth breast milk on the first day after giving birth can be caused by a lack of stimulation of the hormones prolactin and oxytocin which play a very important role in smooth breast milk production. Various ways can be done at home to stimulate breast milk, such as consuming foods that facilitate breast milk, expressing while giving breast milk, using the power pumping technique and massaging the breasts using the marmet technique. The Marmet technique is a way to express breast milk manually and prioritizes the Let Down Reflex (LDR). The marmet technique stimulates the LDR at the beginning of the expression process and can produce 2-3 times more breast milk than without using this LDR technique. The let-down reflex (LDR) is the same as the stimulation that occurs when the nipple is sucked by the baby after a while the breasts will suddenly tighten and the breast milk will flow out so that the baby must speed up the rhythm of sucking breast milk, more or less like that if we get the LDR effect. The marmet technique is a combination of how to express breast milk and massage the breasts so that the reflex of breast milk release can be optimal. The technique of expressing breast milk using the marmet method in principle aims to empty breast milk from the lactiferous sinus which is located under the areola so that emptying breast milk in the lactiferous sinus area will stimulate the release of the hormone prolactin.

METHODS

This research is quantitative research using a design using one-group design. In this design, there is a pre-test and post-test before and after it is carried out. In this study, the sampling technique is Purposive sampling. The statistical test used in this study is the Paired T-test. The sampling technique in this study is the saturated sampling technique which is part of the population selected in a certain way so that it is considered capable of representing the population. The sample of this study was postpartum mothers at the PMB Syaflina Fitri Pasir Pengaraian Midwife Practice as many as 15 respondents where all the populations in this study were used as samples, namely 15 respondents.

RESULT

In this study, the results of univariate and bivariate analyses were obtained.

1. Univariate Analysis

a. Average Breast Milk Output Before Marmet Tschnigue Intervention

Table 1. Smooth Distribution of Breast Milk Expression for Post Partum Mothers Before (Pre-test) Marmet Technique is carried out in the PMB Syaflina Fitri Work Area

<i>Variable</i>	<i>N</i>	<i>Mean</i>	<i>Std. Deviation</i>
<i>Pre-test</i>	15	5,67	1,877

Based on Table 1, the analysis results indicate that the average smooth flow of breast milk before the implementation of the Marmet Technique was **5.67**, with a standard deviation of **1.877**. The smoothness of breast milk flow ranged from **2 to 9**, categorized as "not dense."

b. Average breast milk production after using the Marmet Technique

Table 2. Distribution of smooth breast milk production in postpartum mothers after (post-test) the Marmet technique was carried out in the PMB Syaflina Fitri work area.

<i>Variable</i>	<i>N</i>	<i>Mean</i>	<i>Std. Deviation</i>
<i>Post-test</i>	15	23,33	2,610

Based on table 2, shows that the analysis results obtained an average smoothness of breast milk production after the Marmet Technique intervention was 23.33 with a standard deviation of 2.610.

2. Bivariate Analysis

Table 3. Distribution of smooth breast milk production for post-partum mothers before and after carrying out the marmet technique in the PMB Syaflina Fitri work area

Variable	Mean	St Deviation	St. Error	P Value
Pre - Post	-17,667	3,200	,826	0,000

Based on Table 3, it shows that there was a smooth flow of breast milk for 15 respondents. The average value obtained was 17.667, before and after with SD 3.200 and SE,826. The results of the statistical test obtained a p-value of $0.000 < 0.05$. These results indicate that H_0 is rejected and H_a is accepted, so it can be concluded that there is an influence of the Marmet Technique on the smooth flow of breast milk in Postpartum Mothers in the PMB Syaflina Fitri Work Area.

3. Figures

The following is an illustration of the average breast milk output before and after the marble technique.

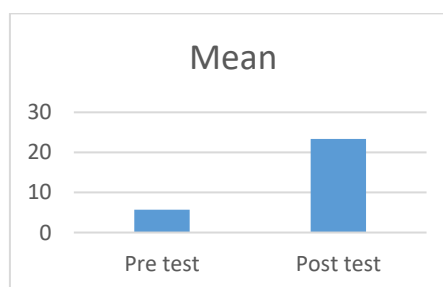


Fig 1: Average breast milk output before and after

DISCUSSION

The results of this study show the actual condition of the influence of the Marmet Technique on the smoothness of breast milk in postpartum mothers in the work area of PMB Syaflina Fitri. Data were collected from 15 participants. Based on the analysis conducted with the dependent t-test to measure the difference in breast milk smoothness before and after the application of the Marmet Method, the p value is 0.000. These results indicate that the Marmet method can increase the smoothness of breast milk.

Postpartum mothers often experience difficulty in producing breast milk so they will have difficulty in providing breast milk to their babies because of breast milk. One thing that can be done for postpartum mothers who experience problems in producing breast milk is to do the marmet technique. The marmet technique is a combination of massaging and pumping the breasts which can increase the release of the hormones prolactin and oxytocin. The marmet technique is a combination of massaging and pumping the breasts which can increase the release of the hormones prolactin and oxytocin. Breast massage accompanied by emptying the contents of the breast will activate the prolactin hormone which produces breast milk and the oxytocin hormone which functions to make the breasts contract so that breast milk can come out smoothly. While breast massage only releases breast milk that has been stored in the mother's breast sinuses it is very effective if it facilitates breast milk, massage is given accompanied by the process of emptying breast milk to stimulate the two hormones that work in the breastfeeding process. The release of this prolactin hormone will then stimulate the mammary alveoli to produce breast milk (Trisnawati & Widyastutik, 2018).

The marmet technique was given for 3 days, and the results obtained showed that the smoothness of breast milk had a significant value of 0.001, which means that the provision of the marmet technique affected the smoothness of breast milk in postpartum mothers. (Fifi Ria Ningsih Safari et al., 2023)

This study is in line with the study conducted by Mutiah et al., 2023 before the marmet technique was carried out, the mother experienced irregular breast milk and after the marmet technique was given, the mother's AI output became smooth. From the results of the statistical test, it was found that there was an effect of the marmet technique on the smoothness of breast milk in postpartum mothers with a p-value <0.05

CONCLUSION

In this study, a significant effect was found on the average breast milk output before the marmet technique and after the marmet technique, with a p-value <0.05. In this study, the marmet technique was carried out for 3 days, from the first postpartum day to the third day. It is recommended that further research be carried out by comparing the control group with the strengthening group.

REFERENCES

- Adianingrum, D. O. (2021). *Laktogenesis adalah mulainya produksi susu. Ada tiga fase laktogenesis. Dua fase awal dipicu oleh hormon atau respon neuroendokrin, yaitu interaksi antara sistem saraf dan sistem endokrin (neuroendocrine responses) dan terjadi ketika ibu ingin menyusui at.*
- ANGGARA, M. O. (2020). *HUBUNGAN TEKNIK MENYUSUI DENGAN RISIKO TERJADINYA MASTITIS PADA IBU MENYUSUI.* 1–23.
- Arent, E., Nasution, Thesalonika, E., Azis, F., Shofiyah, S., Jakob, J. C., Amzana, N., Trisnawati,

- S. N. I., Alam, S., Santoso, R., & Marlana, R. (2023). *Tahta Media Group*.
- Biahimo, N. U. I., & Retni, A. (2022). Faktor yang mempengaruhi pemberian ASI eksklusif pada ibu menyusui di wilayah kerja Puskesmas Ibu dengan work area. *Jurnal Zaitun*, 10(1), 1109–1119.
- Dwi Yulianai Adnan. (2023). *the Effect of Exclusive Breastfeeding Audio Visual Media Education on Pregnant Mother Knowledge and Skills in Lactation During the Era of Covid-19*.
- Elly Dwi Wahyuni, SST, M. K. (2018). *ASUHAN KEBIDANAN NIFAS DAN MENYUSUI*. 282.
- Fifi Ria Ningsih Safari, Eliza Bestari Sinaga, & Khairani Purba. (2023). Pengaruh Teknik Marmet terhadap Kelancaran Asi pada Ibu Nifas di Uptd Puskesmas Sidodadi. *Health Care: Jurnal Kesehatan*, 12(1), 112–118. <https://doi.org/10.36763/healthcare.v12i1.353>
- Halimatus Saidah, Dewi Kartika Sari, Sutrisni, Sudirman, M. Z. (2022). *PERBEDAAN EFEKTIFITAS TEKNIK MARMET DAN TEKNIK BREASTPUMP TERHADAP PENGELUARAN ASI PADA IBU MENYUSUI*. 124–135.
- Irmawati, Rotua Lenawati Tindaon, Haswani, H. (2023). *PENGARUH TEHNIK MARMET TERHADAP KELANCARAN ASI PADA IBU POSTPARTUM DI PUSKESMAS SEBEROMBANG KECAMATAN PANAIHILIR*. 01, 1–23.
- Mutiah, C., Kebidanan, J., Aceh, P. K., Farmasi, J., & Aceh, P. K. (2023). *Pemberian Teknik Marmet Terhadap Kelancaran Asi Pada Ibu Postpartum Intervention of Marmet Techniques To Smoothness*. 3(1), 171–176.
- Notoatmodjo, S. (2021). *Metodologi Penelitian Kesehatan*.
- Noviyanti Saputri, D. (2019). *Studi Kasus Asuhan Keperawatan pada Ibu Post Partum di Wilayah Kerja PUSKESMAS Bantuas*. 7–54.
- Nur, A. (2023). *PENGARUH PEMBERIAN ASI EKSKLUSIF TERHADAP PERKEMBANGAN MOTORIK KASAR BAYI*. 1–36.
- Pratiwi, T., Winarsih, B. D., Hartini, S., Widyaningsih, H., & Purwandari, N. P. (2022). Hubungan Pengetahuan Ibu Tentang Asi Dengan Perilaku Pemberian Asi Pada Bayi Baru Lahir Di Ruang Eva Rumah Sakit Mardi Rahayu Kudus. *Jurnal Keperawatan Dan Kesehatan Masyarakat Cendekia Utama*, 11(3), 269. <https://doi.org/10.31596/jcu.v11i3.903>
- Rahmadhani, N., Novayelinda, R., & Utami, G. T. (2018). Hubungan Pemberian ASI Eksklusif dengan Perkembangan Bahasa Awal Anak Usia 6 Bulan. *JOM FKp*, 5(2), 527–534.
- Rahmawati, S. D., & Saidah, H. (2020). Hubungan Antara Status Gizi Dan Paritas Dengan Kelancaran Produksi Asi Pada Ibu Post Partum Di Wilayah Kerja Puskesmas Cipanas Kabupaten Garut. *Corporate Governance (Bingley)*, 10(1), 54–75.
- Ramdanis, L. G. (2022). Hubungan Pemberian Asi Eksklusif, Pola Asuh Ibu dan Peran Bidan dengan Pertumbuhan Bayi 6-24 Bulan. *Jurnal Interprofesi Kesehatan Indonesia*, 1(4), 149–155. <https://doi.org/10.53801/jipki.v1i4.29>
- Rimelda Masombe, D. J., Etika, R., & Purwanto, B. (2021). The Description of Exclusive Breastfeeding As Lactation Amenorrhea Method Contraception). *Indonesian Midwifery and Health Sciences Journal*, 4(3), 230–240. <https://doi.org/10.20473/imhsj.v4i3.2020.230-240>
- SARI, N. (2021). *PENGARUH KONSUMSI MINUMAN DAUN KATUK TERHADAP PRODUKSI ASI PADA IBU MENYUSUI DI PMB IVA DWI KUSTIANINGRUM RANTAU FAJAR LAMPUNG TIMUR TAHUN 2021*. 1(69), 5–24.
- Trisnawati, E., & Widyastutik, O. (2018). Kegagalan Asi Eksklusif: Manajemen Laktasi Dan Dukungan Keluarga. *Jurnal Formil (Forum Ilmiah) Kesmas Respati*, 3(2), 89. <https://doi.org/10.35842/formil.v3i2.177>
- Utami, P. (2022). *Pendampingan Ibu Menyusui Terhadap Keberhasilan Pemberian Asi Pada Ny. S Di PMB Zubaedah Syah, SST., M.Kes*. 01, 1–23.

- Widiya Ningrum, N., Yuandari, E., Studi Sarjana Kebidanan, P., Kesehatan, F., Sari Mulia, U., & Studi Sarjana Terapan Promosi Kesehatan, P. (2023). Pengaruh Teknik Marmet Terhadap Kelancaran ASI Pada Ibu Postpartum di RSUD Pambalah Batung Amuntai. *Health Research Journal of Indonesia (HRJI)*, 1(5), 201–207.
- Wijaya, F. A. (2019). ASI Eksklusif: Nutrisi Ideal untuk Bayi 0-6 Bulan. *Cermin Dunia Kedokteran*, 46(4), 296–300.
- Winda, & Nurhapipah. (2022). Analisis Implementasi Kebijakan Program Pemberian Air Susu Ibu (ASI) Eksklusif di UPT. Puskesmas Kunto Darussalam Tahun 2022. *Prosiding Forum Ilmiah Tahunan IAKMI (Ikatan Ahli Kesehatan Masyarakat Indonesia)*, November, 1–6.
- Yulianto, A., Safitri, N. S., Septiasari, Y., & Sari, S. A. (2022). *Frekuensi Menyusui Dengan Kelancaran Produksi Air Susu Ibu*. 7(2), 68–76. <https://doi.org/10.52822/jwk.v7i2.416>
- Yushida, Y., & Zahara, E. (2021). Efektifitas pijat oksitosin dengan penyuluhan teknik menyusui menggunakan leaflet terhadap produksi ASI pada ibu post partum primipara. *Jurnal SAGO Gizi Dan Kesehatan*, 2(2), 136. <https://doi.org/10.30867/gikes.v2i2.661>

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