



Marmet technique and oxytocin massage increase the smoothness of breastfeeding

Rialike Burhan¹, Afrina Mizawati^{1*}, Mariati Mariati¹, Asmariyah Asmariyah², Lia Nurcahyani³

¹Department of Midwery, Poltekkes Kemenkes Bengkulu
Jalan Indra Giri No.03 Padang Harapan, Bengkulu 38225, Indonesia

²Department of Midwery, University of Bengkulu
Jalan Indra Giri No.04 Padang Harapan Bengkulu 38225, Indonesia

³Department of Midwifery, Poltekkes Kemenkes Tasikmalaya
Jalan Pemuda 38 Cirebon City, Tasikmalaya, Jawa Barat, Indonesia

*Corresponding author : afrinamizawati@poltekkesbengkulu.ac.id

ABSTRAK

Latar Belakang: ASI merupakan makanan bayi yang terbaik dan setiap bayi berhak mendapatkan ASI. Berdasarkan data World Health Organization (WHO) pada tahun 2018 diperoleh data cakupan ASI eksklusif beberapa negara yang belum mencapai target. Mengacu pada target nasional yaitu 80 %, pada tahun 2018 secara nasional cakupan bayi mendapat ASI eksklusif yaitu sebesar 68,74%. Sedangkan di provinsi Bengkulu bayi baru lahir yang mendapat ASI eksklusif yaitu sebesar 65,46%. Berdasarkan hasil Riskesdas 2018 proporsi pola pemberian ASI pada bayi umur 0-5 bulan di Indonesia sebanyak 37,3% ASI eksklusif.

Tujuan: Penelitian ini bertujuan untuk mengetahui efektivitas pemberian teknik marmet dan pijat oksitosin terhadap kelancaran ASI.

Metode: Jenis penelitian menggunakan metode kuantitatif dengan rancangan quasi eksperimen two group pretest-posttest design dengan kontrol grup. Kelompok eksperimen diberi teknik marmet sedangkan kelompok kontrol diberi pijat oksitosin selama 7 hari berturut turut. Sampel dalam penelitian ini adalah ibu nifas hari pertama berjumlah 60 orang dengan rincian sampel dimana 30 orang intervensi dan 30 orang kontrol. Tempat penelitian dilakukan di PMB Kota Bengkulu. Instrumen penelitian menggunakan lembar observasi dan analisa data diuji menggunakan uji t-test dan diolah menggunakan komputersasi.

Hasil: Hasil statistik didapatkan bahwa terdapat perbedaan yang signifikan antara kelompok yang diberikan teknik marmet dan pijat oksitosin terhadap kelancaran ASI dimana kelompok teknik marmet memiliki peningkatan lebih baik. Ada hubungan antara pendidikan dan paritas dengan kelancaran ASI tetapi tidak ada hubungan usia dan pekerjaan dengan kelancaran ASI. Variabel Intervensi dan paritas merupakan variabel yang paling efektif dalam meningkatkan kelancaran ASI ibu postpartum di PMB Kota Bengkulu.

Kesimpulan: Ada pengaruh teknik marmet dan pijat oksitosin terhadap kelancaran ASI. Diharapkan Bidan dapat memberikan asuhan kebidanan pada ibu nifas dengan menerapkan teknik marmet dan pijat oksitosin untuk kelancaran produksi ASI dan dapat disosialisasikan kepada masyarakat

KATA KUNCI: teknik marmet; pijat oksitosin; kelancaran asi

ABSTRACT

Background: Breast milk is the best baby food and every baby has the right to get breast milk. Based on data from the World Health Organization (WHO) in 2018, data on the coverage of exclusive breastfeeding in several countries had not yet reached the target.

Referring to the national target of 80%, in 2018 nationally the coverage of babies receiving exclusive breastfeeding is 68.74%. Meanwhile, in Bengkulu province, newborns who received exclusive breastfeeding were 65.46%. Based on the results of the 2018 Riskesdas, the proportion of breastfeeding patterns for infants aged 0-5 months in Indonesia is 37.3% exclusive breastfeeding.

Objectives: This study aimed to determine the effectiveness of the marmet technique and oxytocin massage on the smoothness breastfeeding .

Methods: This research used a quantitative approach with a quasi-experimental design, employing a two-group pretest-posttest design with a control group. The experimental group was administered the marmet technique, while the control group received oxytocin massages for seven consecutive days. The sample for this study consisted of 60 first-day postpartum mothers, with 30 in the intervention group and 30 in the control group. The research was conducted at PMB Bengkulu City. The research instruments used observation sheets, and data analysis was tested using the t-test and processed using computerization.

Results: The statistical results obtained showed that there was a significant difference between the groups given the marmet technique and oxytocin massage regarding the smoothness of breast milk, where the marmet technique group had better improvement. There is a relationship between education and parity with breastfeeding fluency but there is no relationship between age and work with breastfeeding fluency. Intervention and parity variables are the most effective variables in increasing the smooth breastfeeding of postpartum mothers.

Conclusions: There is an effect of the marmet technique and oxytocin massage on the smoothness of breast milk. It is expected that midwives can provide midwifery care for postpartum mothers by applying the marmet technique and oxytocin massage for the smooth production of breast milk and can be disseminated to the community

KEYWORDS: marmet technique; oxytocin massage; smoothness of breastfeeding

Article Info :

Article submitted on August 25, 2023

Article revised on September 30, 2023

Article received on October 20, 2023

INTRODUCTION

Breast milk is the best baby food and every baby has the right to get breast milk, and to promote breastfeeding, the Ministry of Health has issued a Decree of the Minister of Health number: 450/Menkes/SK/IV/2004 concerning exclusive breastfeeding for babies in Indonesia (1). Based on data from the World Health Organization (WHO) in 2018, data on the coverage of exclusive breastfeeding in several countries had not yet reached the strategic plan target of below 50% (2). Data of Kementerian Kesehatan RI In 2020, of the number of babies aged less than 6 months who are recalled, only 66.1% get exclusive breastfeeding(3)

Breast milk is useful for maintaining the baby's immune system because it contains anti-infective substances, namely immune modulators, as well as unique nutrients such as carbohydrates in the form of lactose, lots of fat (polyunsaturated fatty acids), the main protein in the form of lactalbumin which is easy to digest, contains vitamins and minerals which Lots. The impact of not breastfeeding is for babies to increase their susceptibility to disease, breastfeeding can prevent 1/3 of the incidence of respiratory tract infections (ARI), the incidence of diarrhea can decrease by 50%, and severe intestinal disease in premature babies can be reduced by 58% (4).

Based on data from the Bengkulu Provincial Health Office in 2020, the coverage of exclusive breastfeeding in Bengkulu province was 15,977 babies (73.2%) with the highest presentation of exclusive breastfeeding in Rejang Lebong Regency, amounting to 2,100 babies (81.4%) and the coverage of exclusive breastfeeding with the lowest presentation, namely in Bengkulu City with 1,148 babies (60.5%). Health Profile of Bengkulu City in 2020 presentation of the three highest coverage of exclusive breastfeeding at the Bengkulu City Health Center, namely Bentiring Health Center (80.9%), Fish Market Health Center (78.9%) and Kuala Lempuing Health Center (75.6%). While the three lowest presentations were at the Telaga Dewa Health Center (54.8%) at the Lingkar Timur Health Center at (53.3%) and at the Nusa Indah Health Center at (52.2%)(5)

To stimulate the hormone prolactin in the mother after giving birth, the healthcare provider can do the Marmet Technique. The marmet technique is one of the ways to stimulate the breasts so that the milk is secreted more optimally. The marmet technique is a technique for expressing breast milk which is recommended by using hands and fingers because it is practical, effective and efficient compared to using a pump. The way to express breast milk is using the Cloe Marmet method which is called the Marmet Technique which is a combination of milking and massaging techniques. Expressing using the hands and fingers has the advantage that the negative pressure can be adjusted, is more practical and economical(6).

The influence of the frequency of giving oxytocin massage will also affect the

smoothness of breast milk in this study Oxytocin massage by the husband was carried out twice a day in the morning and in the evening. Oxytocin massage is more effective if done in the morning and evening for 15 minutes can affect the smoothness of breast milk (ASI) in postpartum mothers. Oxytocin massage on the mother's back can increase the level of the mother's prolactin hormone(7).

The combination of the Marmet technique and oxytocin massage can be justified as an effort to achieve more optimal outcomes in improving the flow of breast milk in postpartum mothers and reaching the exclusive breastfeeding target. The Marmet technique contributes by physically stimulating breast milk production through more efficient breast emptying, while oxytocin massage provides an additional boost by triggering the release of oxytocin hormone, which plays a crucial role in the breastfeeding process. Thus, the integration of these two techniques can be viewed as a comprehensive approach towards enhancing breastfeeding success and achieving exclusive breastfeeding goals.

The benefits of exclusive breastfeeding and increasing prolactin in postpartum women have been highlighted by earlier research. These studies, however, frequently looked at single therapies, such as the Marmet technique or oxytocin massage, on their own. This research addresses a critical research gap by investigating the combined effects of these techniques, offering a comprehensive strategy to enhance breastfeeding success and advance the achievement of exclusive breastfeeding targets. By integrating the Marmet technique

and oxytocin massage, we aim to maximize milk production and improve the smoothness of breastfeeding, ultimately contributing to healthier outcomes for infants in Indonesia (8).

The government program on Exclusive Breastfeeding through the Decree of the Minister of Health number: 450/Menkes/SK/IV/2004 concerning exclusive breastfeeding, therefore with the marmet technique and oxytocin massage which is one way to stimulate the breasts so that milk is released more optimal and can increase the target of exclusive breastfeeding. Therefore the purpose of this study was to determine the effectiveness of the combination of marmet techniques and oxytocin massage on the milk production of postpartum mothers in Bengkulu City.

MATERIALS AND METHODS

Study design

This research employed a quantitative method with a quasi-experimental design, utilizing a two-group pretest-posttest design with a control group. The study's design aimed to establish a causal relationship by involving both experimental and control groups, with measurements taken before and after the intervention. The experimental group received the Marmet technique, while the control group received oxytocin massage.

Instrument

An instrument from earlier research was employed in this investigation; it was a breastfeeding fluency evaluation questionnaire. The questionnaire was

adopted from a previous research journal, the contents of which are a way to measure signs of smooth breastfeeding using a score consisting of 8 items and each item is filled with a score of 1. The question items are as follows:

- Breast milk can leak out of the nipple
- Before breast feeding, the breast feels tense
- Baby urinates 6-8 times a day
- The color of the urine is clear
- Baby defecates 3-4 times a day
- Babies breastfeed at least 8-10 times a day
- Mother can hear the sound of swallowing breast milk
- Mothers can feel ticklish because of the flow of breast milk every time they breastfeed.

Study population and sample

The population in this study were all postpartum mothers in Bengkulu City in 2023. The sample in this study were postpartum mothers day 1 with inclusion criteria who gave birth to babies normally with normal birth weight as many as 30 people in the intervention group and 30 people in the control group so that the number of samples is 60 postpartum mothers. This study was carried out in the Bengkulu City Independent Midwife Practical Work Area, which has the highest number of placements. PMB "Y", PMB "H", and PMB "O" for postpartum women in the control group and PMB "S", PMB "H", and PMB "F" for postpartum moms in the case group. The sampling technique in this study was taken by *purposive sampling*, which is sampling based on certain

considerations (9).

Purposive sampling was chosen in this quantitative research because it aligns with the study's specific inclusion criteria, enabling a more efficient and relevant selection of postpartum mothers who met the criteria for assessing the impact of the Marmet technique and oxytocin massage on breastfeeding outcomes. This targeted approach enhances the quality of the data collected and ensures that the research objectives are effectively met.

Ethical consideration

Ethical approval for the research was obtained from the research ethics committee of Poltekkes Kemenkes Bengkulu with reference number No.KEPK.BKL/085/03/2023.

Intervention

The intervention consisted of two approaches: the Marmet technique and oxytocin massage. The Marmet technique was applied to the experimental group, while the control group received oxytocin massage. The research officially commenced on January 20, 2023, with 30 participants receiving the Marmet technique intervention. In March, 11 more participants received the intervention, followed by 19 participants in April. Post-test assessments of breastfeeding success were conducted 7 days after the intervention in each case. The intervention involving oxytocin massage began in May 2023, with 13 participants, and continued in June with 17 participants. Again, post-test assessments were conducted 7 days after each oxytocin massage intervention. The decision to implement

different intervention schedules within and between the groups was made to mitigate potential biases and confounding variables in the research. By varying the timing of interventions, the study aims to prevent sequential effects, information leakage, and observer bias. Administering interventions simultaneously could introduce order bias and contamination, where participants in the control group may inadvertently learn about the intervention. While this approach does carry some risk related to uncontrolled external factors, it was considered a necessary trade-off to reduce more substantial biases that could result from simultaneous interventions and assessments. Rigorous randomization and data analysis will be applied to address potential external influences and maintain the research's validity.

In the intervention group, postpartum mothers received the Marmet technique, a manual approach involving breast massage and milking to optimize milk secretion, administered by trained healthcare professionals. Meanwhile, the control group underwent oxytocin massage, which entailed stimulating the mother's back to trigger oxytocin release, enhancing milk ejection. These interventions were conducted daily over a specified period to assess their effects on breastfeeding outcomes. Beginning on January 20, 2023, the study included up to 30 respondents who received the marmet technique intervention; in March, up to 11 people received it; and in April, up to 19 people received it. Seven days later, a post-test for breastfeeding fluency was administered. In addition, a total of 13 patients will begin the oxytocin massage

intervention in May 2023, and 17 patients in June. Seven days after the intervention, the post-test for nursing fluency was administered.

Data collection

Data collection was conducted through the administration of questionnaires to the postpartum mothers. The data collected included information on age, education, parity, employment, and the smoothness of breastfeeding.

The variables in this study include the independent variables, namely the marmet technique and oxytocin massage while the dependent variable is the smoothness of breastfeeding and the external variables are age, education, parity and employment. The variables in this study encompass the following: the independent variables - the "marmet technique" and "oxytocin massage", representing distinct interventions provided to different groups; the dependent variable, "smoothness of breastfeeding", which evaluates the ease and effectiveness of postpartum mother's breastfeeding experiences, including latch quality, milk flow, and infant feeding behaviors.

External variables, in this study, serve as additional factors, including age, education, parity, and employment, which may influence the dependent variable, "smoothness of breastfeeding". While not the primary focus, these variables are measured to account for potential confounding effects. By assessing and controlling for these external factors, the study aims to more accurately attribute any observed effects on breastfeeding outcomes to the Marmet technique and oxytocin massage, thereby

enhancing the reliability of the findings.

During data collection, these variables were assessed to encompass age in years, education level in years of formal education, number of previous children (parity), and participants' employment status, providing a holistic understanding of the factors under investigation.

Data analysis

Data analysis involved a range of statistical methods, including univariate and bivariate. Univariate analysis to describe the smoothness of breastfeeding with mean and characteristics of age, parity, education and employment with frequency distribution.

This bivariate analysis was carried out to test the normality of the data first with Kolmogorov Smirnov and the results were <0.05 , indicating that the data was not normally distributed, so the Wilcoxon test was used to test the difference in breast milk flow before and after the treatment of marmet technique and oxytocin massage. To test the comparison of marmet techniques and oxytocin massage on the smoothness of breast milk in postpartum mothers using the Mann Whitney statistical test. On research This data source used are primary data and secondary data processed with use computerization (SPSS).

RESULTS AND DISCUSSION

RESULTS

Univariate analysis

Univariate analysis in this study was to determine the characteristics of age,

education, parity and occupation of postpartum mothers in the case and control groups in Bengkulu City. This analysis was also used to see the average smoothness of

breastfeeding before and after the intervention was given to the respondents, which is presented in the table below:

Table 1. Characteristics of respondents

Variable	Marble technique	Oxytocin massage
Age		
<20 and >35 years	3 (10.0%)	3 (10.0%)
20-35 years	27 (90.0%)	27 (90.0%)
Education		
Low	5 (16.7%)	14 (46.7%)
High	25 (83.3%)	16 (53.3%)
Parity		
Primipara	19 (63.3%)	15 (50.0%)
Multipara	11 (36.7%)	15 (50.0%)
Work		
Work	9 (30.0%)	13 (43.3%)
No work	21 (70.0%)	17 (56.7%)

Based on the results of **Table 1**, it was found that almost all (90%) of the marble technical group were aged 20-35 years, almost all (83.3%) had tertiary education, most of the respondents (63.3%) were primiparas and most were unemployed (60%) Work. Then, almost all (90%) of the oxytocin massage group were aged 20-35 years, most (53.3%) had tertiary education,

most of the respondents (50%) were multiparous and most (56.7%) worked. The homogeneity test results for age, parity, education and occupation in the group that was given the marmet technique intervention and oxytocin massage found that all characteristics were homogeneous because the $p \text{ value} > 0.05$.

Table 2. The average smoothness of breastfeeding in postpartum mothers before and after given marmet technique and oxytocin massage at PMB Bengkulu City

Variable	n	Min	Max	Means	Different means	SD	95% CI
Marble Technique							
Before	30	2	4	3.33	4.2	0.711	3.07-3.60
After	30	6	8	7.53		0.73	7.26-7.81
Massage Oxytocin							
Before	30	2	6	3.73	3.4	1.337	3.23-4.23
After	30	5	8	7.1		1.029	6.72-7.48

From **Table 2** it was found that the average smoothness of breastfeeding in the intervention group that was given the marmet technique, the average smoothness of breastfeeding for postpartum mothers before being given the intervention was 3.33 to 7.53 after being given the intervention. Furthermore, the control group was given oxytocin massage, the average smoothness of breastfeeding in postpartum mothers before being given oxytocin massage was 3.73 to 7.10 after being given oxytocin massage.

Bivariate analysis

Bivariate analysis was used to see the effect of the independent and dependent variables, namely to determine the effect of the marmet technique and oxytocin massage on the smoothness of breastfeeding, differences in the smoothness of breastfeeding in postpartum mothers who were

given the Marmet technique and oxytocin massage. as well as the influence of external variables on the smoothness of breastfeeding in postpartum mothers at PMB Bengkulu City. Prior to analysis, a data normality test was carried out where the result was a *p-value* <0.05, meaning that the data was not normally distributed.

Based on **Table 3**, the Wilcoxon test results obtained a *p-value* of 0.000 (<0.05) means that there is an influence of the marmet technique and oxytocin massage on the smoothness of breastfeeding in postpartum mothers at PMB Bengkulu City.

Based on the results of **Table 4**, the *p-value* is 0.002 (<0.05) means that there is a difference in the fluency of breastfeeding in the group given the marmet technique and oxytocin massage for postpartum mothers at PMB Bengkulu City.

Table 3. The effect of the marmet technique and oxytocin massage on the smoothness of breastfeeding in postpartum mothers at PMB Bengkulu

Variable	N	Means	Different means	SD	Z	<i>p-values</i>
Marble Technique						
Before	30	3.33	4.2	0.516	-5.108	0.000
After	30	7.53		0.724		
Massage Oxytocin						
Before	30	3.73	3.4	0.488	-4.826	0.000
After	30	7.1		0.834		

*Wilcoxon

Table 4 . Differences in the smoothness of breastfeeding in the group given the marmet technique and oxytocin massage for postpartum mothers at PMB Bengkulu City

Variable	N	Different means	Z	<i>p-values</i>
Marble Technique	30	4.2	-3.039	0.002
Massage Oxytocin	30	3.4		

* Mann Whitney

DISCUSSION

Characteristics of postpartum mothers and average fluency of breastfeeding in postpartum mothers before and after being given the marmet technique and oxytocin massage at PMB Bengkulu City

Based on the research, it was found that almost all of the marble technique group (90%) were aged 20-35 years, almost all (83.3%) had High education, most of the respondents (63.3%) were primiparas and most were unemployed (60%) working. Then, almost all (90%) of the oxytocin massage group were aged 20-35 years, most (53.3%) had tertiary education, most of the respondents (50%) were multiparous and most (56.7%) worked.

The results of the study also found that the average smoothness of breastfeeding in the marmet technique group was 3.33 to 7.53 . The marmet technique, also known as the technique of expressing and massaging breast milk, is a method of manually expressing breast milk and prioritizing the let-down reflex (LDR). The marmet technique, which stimulates the LDR at the beginning of the milking process, can produce 2-3 times as much milk as without using this LDR technique. The let-down reflex (LDR) is the same as the stimulation that occurs when the baby suckles the nipple and after a while suddenly the breast tightens and the milk will come out profusely so the baby has to speed up the rhythm of sucking milk, more or less like that if we get the LDR reflex. Breast milk will suddenly flow profusely without the need for massage or very tight squeezing(10).

The benefits of expressing breast milk with the Marmet technique These include

reducing breast fullness, swelling and/or blockages in the flow of milk, drinking for babies who have difficulty coordinating breastfeeding, safe from an environmental point of view, *portable* (easy to carry anywhere), preventing nipples and areola from becoming dry and chafed, m improve breast hygiene, increase milk production, help mothers psychologically calm down not stress, build self-confidence, help mothers have good thoughts and feelings about their babies, facilitate breastfeeding(11).

The results of the study mean smoothness of breastfeeding in the oxytocin massage group was 3.73 to 7.10 . Oxytocin massage is one solution to overcome the uneven production of breast milk. Oxytocin massage is massage along the spine (*vertebrae*) to the fifth-sixth *costae* and is an attempt to stimulate the hormones prolactin and oxytocin after childbirth. The hormone prolactin plays an important role in the production of breast milk, the level of the hormone prolactin in breastfeeding mothers will be normal after 3 months postpartum. On the second and third day, estrogen and progesterone levels drop dramatically, so that the effect of prolactin is higher and milk secretion occurs. With early breastfeeding, there is stimulation of the nipples to form prolactin by *the anterior pituitary* so that the secretion of breast milk (ASI) increases fluent(12).

Differences in the fluency of breastfeeding before and after being given the marmet technique and oxytocin massage to potsparum mothers at PMB Bengkulu City

The results of *the Wilcoxon test* found that there was a difference between before

and after being given the marmet technique on the smoothness of breast milk as evidenced by the results of the statistical test p value of $0.000 < 0.05$. Likewise there is also a difference between before and after being given oxytocin massage on the smoothness of ASI as evidenced by the results of the statistical test p is $0.000 < 0.05$. This result is supported by research by Rumini, et al (2019) that according to the assumptions of researchers, there are differences in the smoothness of breastfeeding for mothers who do the marmet technique and mothers who do not do the marmet technique. This is because when massaging the breasts, the massage will stimulate the hormone *prolactin* which functions to produce breast milk, and the hormone *oxytocin* to make the breasts contract so that the milk can come out smoothly (13).

The results of Hamidah's research (2016) stated that there was an effect of the marmet technique on milk production in post partum mothers at PKU Muhammadiyah Gamping Hospital (11). Linda's research, et al. (2019) concluded that there was an influence of the marmet technique on the smoothness of breastfeeding in post partum mothers at BPM Dwi Astuti Pringsewu in 2018 (12). This research was also supported by Suwondo in 2015 where the results of the study showed an increase in levels of the hormone prolactin before and after being given oxytocin massage. Machmudah's research in 2017 found that oxytocin massage can effectively increase the smoothness of breast milk (ASI) (13) that the results of research by giving oxytocin massage will further facilitate milk production in postpartum mothers. Anggeni's research

(2021) also showed that there was an effect of oxytocin massage on milk production (14).

The study's findings demonstrate a substantial difference in the smoothness of nursing for postpartum moms in PMB Bengkulu City before and after the Marmet technique and oxytocin massage. The primary advantage of this study's findings is its analysis of differences between pre- and post-intervention using suitable statistical techniques, specifically the Wilcoxon test. The discovery that the p -value for both the marmet and oxytocin massage therapies is below the designated significance threshold ($0.000 < 0.05$) suggests that there is a true variation in the ease of nursing following the intervention. Furthermore, by citing other studies, such as those conducted by Rumini et al. (2019), Hamidah (2016), Linda et al. (2019), Suwondo (2015), Machmudah (2017), and others, this research reinforces its conclusions.

There are a few limitations to be aware of, despite the fact that the study's findings significantly advance our knowledge of the Marmet technique's and oxytocin massage's efficacy in promoting smoother nursing. First off, since the results cannot be directly generalized to other groups with dissimilar features, their generalizability may be restricted to the postpartum mother population in PMB Bengkulu City. Moreover, research has demonstrated that the Marmet technique and oxytocin massage improve breast milk production, which validates the findings of this study. Nevertheless, this study did not thoroughly investigate the possibility of outside influences or the sustainability of these effects over an extended length of time.

CONCLUSION AND RECOMMENDATION

Based on the results of the study, In conclusion, this research demonstrates the effectiveness of the Marmet technique and oxytocin massage in enhancing breast-feeding success among postpartum mothers in PMB Bengkulu City. Both interventions significantly improved breast-feeding rates, highlighting their potential as valuable tools in maternity care. This study's findings have implications for healthcare providers in promoting these interventions and emphasizing the pivotal role of paritas in breast-feeding outcomes.

A suggestion arising from this study is to further integrate the Marmet technique and oxytocin massage into routine maternal care practices, emphasizing their potential in supporting breastfeeding success among postpartum mothers. Additionally, widespread community education initiatives are recommended to raise awareness about the benefits of these techniques, encouraging mothers to seek assistance and guidance from healthcare professionals. Future research should explore more in-depth aspects of exclusive breastfeeding and employ specific methodologies such as cohort studies, building upon the valuable data generated in this study.

REFERENCES

1. Depkes RI. Keputusan Menteri Kesehatan Republik Indonesia Nomor 450/MENKES/SK/IV/2004 Tentang pemberian ASI Eksklusif pada Bayi di Indonesia. Jakarta: Depkes RI; 2004.
2. World Health Organization (WHO). Cakupan ASI Eksklusif. 2018;
3. Dinas Kesehatan Provinsi Bengkulu. cakupan pemberian ASI eksklusif di provinsi Bengkulu. 2020;
4. Nufus H. Efektivitas Pijat Oksitosin Terhadap Produksi ASI. *Jurnal Borneo Cendekia*. 2019;3(2):223–7. <https://doi.org/10.54411/jbc.v3i2.217>
5. Dinas Kesehatan Kota Bengkulu. presentasi cakupan pemberian ASI Eksklusif. 2020;
6. Lestari, Lieni, Melyana Nurul W, and Admini. Peningkatan Pengeluaran ASI Dengan Kombinasi Pijat Oksitosin Dan Teknik Marmet Pada Ibu Post Partum (Literatur Review). *Jurnal Kebidanan*. 2018;8(2). <https://doi.org/10.31983/jkb.v8i2.3741>
7. Doko TM, Aristiati K HS. Pengaruh Pijat Oksitosin Oleh Suami Terhadap Peningkatan Produksi ASI Pada Ibu Nifas. *Jurnal Keperawatan Silampari*. 2019;2(2):66–86. <https://doi.org/10.31539/jks.v2i2.529>
8. Emilda, Juliastuti. The Effectiveness of Oxytocin and Marmet Massage on Increased Prolactin Hormone for Smooth Breastfeeding in Postpartum Mothers in Langsa City Health Office , Indonesia mothers in the Work Area of Langsa City Health Results. *Open Access Macedonian Journal of Medical Sciences*. 2020;8(E):578–81. <https://doi.org/10.3889/oamjms.2020.4739>
9. Sugiyono. Metode penelitian kuantitatif, kualitatif dan kombinasi (mixed methods) Bandung : Alfabeta. 2015.
10. Oktaviani I, Aliyanto W. The Effectiveness of The Marmet Tech-nique Breast Massage is Comparable to Standard Breast Massage Efektivitas Pijat

- Payudara Teknik Marmet Dibandingkan dengan Pijat Payudara Standar. *Jurnal Kesehatan*. 2023;14(1):165–71. <https://doi.org/10.26630/jk.v14i1.3715>
11. Saraswati F. Pengaruh Teknik Marmet Terhadap Kelancaran Asi Pada Ibu Post Partum. 2021. <http://repository.stikesdrsoebandi.ac.id/id/eprint/177>
 12. Rumini, Dewi Sartika, dan Riheny Lia Lovely Saragi. Pengaruh Teknik Marmet Terhadap Kelancaran Air Susu Ibu Di Desa Nag. Pematang Simalungun Kecamatan Siantar Kabupaten Simalungun. *Jurnal Bidan Komunitas*. 2019;III(1):1–8. <https://doi.org/10.33085/jbk.v3i1.4558>
 13. Beggs B, Koshy L, Neiterman E. Women's Perceptions and Experiences of Breastfeeding: a scoping review of the literature. *BMC Public Health*. 2021;21:2169. <https://doi.org/10.1186/s12889-021-12216-3>
 14. Riset Kesehatan Dasar (Riskesdas). Badan Penelitian dan Pengembangan Kesehatan Kementerian RI tahun 2013. 2013;
 15. Feryani, Nursaidah. Faktor-Faktor Yang Berhubungan Dengan Pemberian ASI Eksklusif Di Wilayah Kerja Puskesmas Poasia Kota Kendari Provinsi Sulawesi Tenggara. *Health Information Jurnal Penelitian*. 2018;0(1):15–20. <https://doi.org/10.36990/hijp.v10i1.57>
 16. Usman A. Pengaruh Perawatan Payudara Terhadap Produksi ASI di RSUD Sawerigading Kota Palopo. *INA-Rxiv*. 2018; <https://doi.org/10.31227/osf.io/4xzcb>
 17. Marthalena Simanungkalit. Status Pekerjaan Dan Pengetahuan Ibu Menyusui Terhadap Pemberian ASI Eksklusif. *Jurnal Info Kesehatan [Internet]*. 21 Desember 2018 [dikutip 18 Agustus 2023];16(2):236–44. Tersedia pada: <https://jurnal.poltekeskupang.ac.id/index.php/infokes/article/view/222>
 18. Titisari. Perbandingan Efektivitas Kombinasi Teknik Marmet dan Pijat Oksitosin Dengan Perawatan Payudara Terhadap Produksi ASI Pada Ibu Post Partum. *Jurnal Ilmu Kesehatan*. 2016;5(1):87–95. <https://doi.org/10.32831/jik.v5i1.118>
 19. Maryam B dkk. Pijat Marmet Sebagai Solusi Produksi ASI Ibu Menyusui Di Kecamatan Sikur Kabupaten Lombok Timur. *Jurnal Ilmu Sosial dan Pendidikan*. 2020;4(3):32–4. <http://dx.doi.org/10.58258/jisip.v4i3.1147>
 20. Ningrum, Astri Dwi D. Pengaruh Pemberian Teknik Marmet Terhadap Produksi ASI Pada Ibu Post Partum di Wilayah Kerja Puskesmas Sukorame Kota Kediri. *Jurnal Ilmu Kesehatan*. 2017;5(2). <https://doi.org/10.32831/jik.v5i2.134>
 21. Delima, M., Arni, G., & Rosya E. Pengaruh Pijat Oksitosin Terhadap Peningkatan Produksi ASI Ibu Menyusui Di Puskesmas Plus Mandiangin. *Jurnal Ipteks Terapan*. 2016;9(4):283–93. <http://doi.org/10.22216/jit.2015.v9i4.1238>
 22. Indriani, Dewi, dkk. Pengaruh Paritas, Pekerjaan Ibu, Pengetahuan Dan Dukungan Keluarga Terhadap Pemberian ASI Eksklusif Pada Ibu Bayi. *Jurnal Bidan Pintar*. 2022;3(1):329–38. <https://doi.org/10.30737/jubitar.v3i1.3240>