



ESCALATE MILK PRODUCTION: THE AMAZING ADVANTAGES OF MARMET AND ACUPUNCTURE TECHNIQUES

by

Dahlia¹, Rika Hairunisyah², Yuniike³, Ira Kusumawaty⁴

^{1,2}Midwifery Department, Poltekkes Kemenkes Palembang, Indonesia

^{3,4}Nursing Department, Poltekkes Kemenkes Palembang, Indonesia

Email: ⁴irakusumawaty@poltekkespalembang.ac.id

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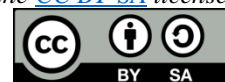
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ABSTRACT

Mother's milk contains essential components for the growth and development of infants. Limitations of breastfeeding are often caused by the inhibition of production factors which can be minimized by applying traditional marmet and acupuncture techniques. However, information about implementing marmet techniques and acupuncture techniques on breast milk production is still not widely found. This study aims to identify and analyze marmet and acupuncture techniques on breast milk production. The purposive sampling technique was used in determining the research respondents, totaling 60 respondents were divided into two groups. 30 respondents received treatment with marmet and acupuncture techniques for 30 other respondents. The research method used was quasi-experimental with a pretest-posttest design, and the results of data collection were analyzed using the Wilcoxon test. The respondent's informed consent was signed after explaining and agreeing to be involved in the research. The results of statistical tests showed an effect of marmet techniques and acupuncture techniques on significant baby weight before and after the study. It can be concluded that the marmet technique and acupuncture technique were significantly able to encourage milk production, which was indicated by an increase in the baby's weight on the tenth day. It is necessary to increase literacy regarding the benefits of marmet techniques and acupuncture techniques through the use of social media.

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Corresponding Author:

Ira Kusumawaty,

Nursing Department, Poltekkes Kemenkes Palembang,

Jl. Merdeka 76-78 Palembang 30314, Indonesia

Email: irakusumawaty@poltekkespalembang.ac.id

1. INTRODUCTION

Mother's Milk (ASI) is the best natural nutrition for babies because it contains energy and nutrients needed for the first six months of a baby's life. There are still many mothers who experience problems in breastfeeding [1], [2], and the main issue related to insufficient milk production is the inability to produce it [3], [4][5]. Postpartum mothers often experience problems with bad and slow milk production so that the milk consumed by the baby is not sufficient. Some of the factors that cause this condition are nipples that come in or the wrong breastfeeding position, poor nutritional intake, and disorders of the mother's psychological condition [6]–[8]

Postpartum breast care is essential to reduce problems in milk production and facilitate milk production. In general, it is known that postpartum mothers do not carry out breast care [9] due to limited understanding, lifestyle, and patterns of daily habits [10]. Knowledge underlies a person in carrying out actions [11] and other supports that encourage behavior formation [12]. A reference suggests that ability impacts shaping a behavior [13]. Awareness of postpartum mothers in performing breast care is also an essential factor in increasing breast milk production. Many traditional ways can be taken to increase milk production.

One of the traditional and natural efforts that postpartum mothers can make to facilitate the production and expenditure of breast milk is the marmet technique. The massage method and the stimulation of the milk ejection reflex are the principles adopted by the marmet method [3]. This technique also provides a relaxing effect so that it reactivates

the milk ejection reflex (MER), which stimulates the milk to come out by itself [14]. In other words, the marmet technique is a combination of expressing milk and massaging the breast by emptying the milk from the lactiferous sinuses under the areola to stimulate prolactin secretion, and the milk ejection reflex is optimal. The more milk that is removed or emptied from the breast, the more milk production [3]. Various studies have shown the effect of the marmet technique on postpartum mothers in increasing the amount of breast milk production to meet the nutritional needs of babies. Increased milk production and decreased pain in postpartum mothers with the marmet technique had an average value of breast milk production before marmet therapy was 4,389 cc and breast milk production after treatment was 5,667 cc at 6 hours PP, for pain pretest value 5,944 and posttest 5,666. At seven days of PP, breast milk production for posttest values increased and decreased in pain. All respondents given the marmet technique got sufficient milk production on the 7th day [15].

Acupuncture is another traditional therapy where acupuncture needles are inserted at specific points to restore health. This method of treatment encourages the body to improve health and reduce pain. The act of stabbing is based on the understanding that health and disease are related to the concepts of vital energy, energy balance, and energy imbalance [16], [17]. A study showed that acupuncture at ST 18, GB 21, and CV 17 points could increase breast milk volume [18]. However, there is still not much information based on research results showing the effect of marmet techniques and GB 21 acupuncture on breast milk production.

2. RESEARCH METHOD

This study involved 60 postpartum mothers divided into two groups, 30 respondents were included in the marmet technique group, and 30 respondents were included in the acupuncture technique group. Each group received one treatment, namely the marmet technique or acupuncture technique only. This study, conducted in 2021, used a quasi-experimental research design with a Pretest-Posttest design, aiming to assess breast milk production before and after massage with marmet and acupuncture techniques at GB 21 point. Based on the agreement with the respondents. The impact of giving marmet techniques and acupuncture techniques was assessed based on the amount of milk production, with an indicator of baby weight after the respondent received marmet or acupuncture techniques for ten days. The purposive sampling technique was used to take research samples with inclusion criteria: postpartum mothers, domiciled in Muara Enim City, still breastfeeding their babies, in good health, and willing to be respondents. After explaining the confidentiality of the information submitted, the respondent signed the informed consent form. The data collection results will only be published for research purposes. The Palembang Health Polytechnic Ethics Committee approved this study protocol.

Group	Pre-test	Perlakuan	Post-test
Marmet technique	A	X1	B
Acupuncture technique	A	X2	B

Keterangan:

- A : Before treatment
- X1 : Treatment of giving technique marmet
- X2 : Treatment of giving acupuncture technique
- B : After treatment

The results of research data collection were analyzed using the Wilcoxon test because the existing data were not normally distributed.

3. RESULTS AND ANALYSIS

3.1. RESULTS

Table 1. Characteristics of Respondents

Variable	Frekuensi (N)	Persentase (%)
Respondents with Marmet technique		
Age		
High Risk	12	40
Low Risk	18	60
Parity		
Primipara	15	50
Multipara	15	50
Breastfeeding History		
Not Exclusive	16	53
Exclusive	14	47
Respondents with acupuncture technique		
Age		
High Risk	16	53
Low Risk	14	47
Parities		
Primipara	15	50
Multipara	15	50
Breastfeeding History		
Not Exclusive	17	56
Exclusive	13	44

Based on this table, 40% of respondents who received the marmet technique were respondents with a high-risk age, while in the acupuncture technique group, there were 53%. The percentage of primiparous respondents was the same as that of multiparas, both given marmet and acupuncture techniques. Tabel 2. korelasi karakteristik responden dengan produksi ASI.

Variable	p-value
Age - Marmet technique	0.011
Parities - Marmet technique	0.009
Breastfeeding History - Marmet technique	0.730
Age - acupuncture technique	0.002
Parities - acupuncture technique	0.000
Breastfeeding History - acupuncture technique	0.001

Based on table 2, it can be seen that there is a significant correlation between the respondent's age and parity variables with milk production in the group given the marmet technique treatment. In contrast, the characteristics of the respondent's breastfeeding history with breast milk production show no significant correlation. In the group of respondents who were treated with acupuncture techniques, there was a correlation between the characteristics of the respondents (age, parity, and history of breastfeeding) with milk production in the group that received acupuncture techniques.

Table 3. The Effect of Marmet Techniques and Acupuncture Techniques on Breast Milk Production

	Mean		p-value
	Pre	Post	
Marmet	3274	3390	0.000
Acupuncture	3042	3093	0.000

Based on Table 3, marmet techniques and acupuncture techniques affect breast milk production with an indicator of increasing baby weight with a p-value of 0.000.

3.2. ANALYSIS

This study indicates that age and parity are associated with milk production in the group given the marmet and acupuncture techniques. In a similar study, the same results were obtained that the age of 20-35 is a productive age for women to get pregnant and give birth and are ready to breastfeed their babies. The factors that affect the ability to breastfeed, namely mothers younger or <35 years, will produce more milk than older mothers. This means a

significant difference in breast milk production between mothers at risk and mothers not at stake in maternal age. This study illustrates that postpartum maternal age affects the implementation of the marmet technique, namely the range of 20-35 years, which is classified as productive age and is at the peak of actualization. Accepting changes in this age range is vast to be absorbed and implemented effectively.

The number of parity describes the experience of postpartum mothers in breastfeeding. The more the number of parities, the more experienced breastfeeding and the more information a person has [21]. Direct experience provides learning to someone about exemplary efforts to achieve goals. Likewise, postpartum mothers with high parity are increasingly experienced in breastfeeding. This is in line with research that found that parity affects the ability of postpartum mothers to provide exclusive breastfeeding [22] and complementary feeding to infants [19].

Breast care is very important for milk production because it can flex and strengthen the nipples making it easier for the baby to suckle from the mother [23]–[25]. Good habits of mothers in performing breast care will have a good impact on the smoothness of breastfeeding [16], [19], [26]. On the other hand, mothers who do not perform breast care will have a destructive impact on the adequacy of breast milk [27], [28]. The marmet technique is a combination of expressing milk and massaging the breasts to optimize the milk production reflex. The expressing breast milk using marmet aims to empty the milk from the lactiferous sinuses located under the areola. It is hoped that opening the milk in the lactiferous sinuses will stimulate prolactin release. The release of the hormone prolactin is expected to boost the mammary alveoli to produce breast milk. The more milk is removed or emptied from the breast, and the more milk will be made [3], [29]–[31]. In this study, marmet techniques and acupuncture techniques affect breast milk production. It is also known that the Marmet technique intervention in postpartum mothers has two times the opportunity to launch breast milk production in meeting the nutritional needs of infants compared to postpartum mothers who do not perform marmet techniques in postpartum mothers [32].

Another study showed that the acupuncture technique group affected increasing the volume of breast milk, it was found that there was a difference in breast milk volume between before and after receiving acupuncture therapy at points ST 18, GB 21, and CV 17 [15], [17], [18]. Acupuncture is a form of piercing therapy using acupuncture needles at specific points to improve health and reduce pain [17], [33]–[35].

However, several variables are not controlled but can affect the success of marmet techniques [36] and acupuncture techniques [37], in addition to other factors that can directly trigger production or inhibit breast milk production. The triggers for the problem of breast milk production in mothers that cannot be controlled in this study include nutritional patterns, activity patterns, psychological conditions, frequency of expressing breast milk, breast care, use of contraceptives [4], [16], [36], [38] in addition to the baby's ability to suck [9].

4. CONCLUSION

Implementing marmet and acupuncture techniques is beneficial for postpartum mothers to increase milk production. The puskesmas and midwives need supervision, direction, and guidance for postpartum mothers to continuously carry out marmet and acupuncture techniques. Dissemination of information through social media can be a solution that can accelerate mothers' knowledge and skills to increase breast milk production.

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