

Comparison Of Hypnobreastfeeding With Endorphin Massage On Breast Milk Production In Breastfeeding Mothers In The Koncara Community Health Center Work Area In 2025

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Abstract .

Suboptimal breast milk production remains a major obstacle to successful exclusive breastfeeding. One non-pharmacological approach to increasing breast milk production is through relaxation techniques, such as hypnobreastfeeding and endorphin massage, which stimulate the release of prolactin and oxytocin hormones. This study aims to analyze the comparative effectiveness of hypnobreastfeeding and endorphin massage on breast milk production in breastfeeding mothers in the Koncara Community Health Center (Puskesmas) working area in 2025. The study used a quasi-experimental design with a non-equivalent control group pretest-posttest design. The study sample consisted of 68 breastfeeding mothers divided into two intervention groups, each consisting of 34 respondents, with an intervention duration of 14 days. Data analysis showed that both interventions had a significant effect on increasing breast milk production. However, the Mann–Whitney test results showed no significant difference in effectiveness between the hypnobreastfeeding and endorphin massage groups ($p=0.702$; $p>0.05$). These findings indicate that both methods have comparable effectiveness in increasing breast milk production. Therefore, hypnobreastfeeding and endorphin massage can be recommended as non-pharmacological interventions that can be integrated into midwifery services, especially in efforts to support the success of exclusive breastfeeding at the Koncara Community Health Center.

Keywords: Breast Milk Production and Hypnobreastfeeding with Endorphin Massage.

I. INTRODUCTION

Exclusive breastfeeding is the most effective intervention in supporting the growth, development, and survival of infants in the first six months of life. Breast milk contains complete nutrients, antibodies, enzymes, hormones, and growth factors that cannot be completely replaced by other foods or drinks. The World Health Organization (WHO) and the United Nations Children's Fund (UNICEF) recommend exclusive breastfeeding from birth to six months of age, followed by appropriate complementary foods (MPASI) until the age of two years or beyond. In Indonesia, this policy is reinforced by Government Regulation Number 28 of 2024 concerning the Implementation of the Health Law, which affirms that every infant has the right to receive exclusive breastfeeding for the first six months of life, unless there are specific medical indications. Exclusive breastfeeding has been proven to boost the infant's immune system, reduce the risk of infectious diseases, improve nutritional status, enhance cognitive development, and provide long-term benefits for maternal and child health.

Although the benefits of exclusive breastfeeding have been scientifically proven, its coverage still falls short of the established target. WHO data shows that global exclusive breastfeeding coverage is still around 41%, lower than the global target of 70%. In Indonesia, exclusive breastfeeding coverage in 2023 is estimated to be in the range of 55–68%, thus still falling short of the national target of 80%. This low coverage is influenced by various factors, such as the still high promotion of formula milk, less than optimal support from families and health workers, limited lactation room facilities in the workplace, and limited access to breastfeeding education and counseling. These conditions indicate that the success of exclusive breastfeeding is influenced not only by knowledge, but also by the mother's psychological condition, environmental support, and success in maintaining breast milk production throughout lactation.

Breast milk production and release are influenced by the hormones prolactin and oxytocin, which are closely related to the mother's psychological state. Stress, anxiety, fatigue, pain, and lack of self-confidence during breastfeeding can inhibit the release of oxytocin, resulting in a suboptimal milk let-down reflex. Therefore, various non-pharmacological interventions have been developed to help increase milk production through relaxation and hormonal stimulation. Two widely used methods are hypnobreastfeeding and endorphin massage . Hypnobreastfeeding is a relaxation technique that utilizes positive suggestions to create a relaxed state, thereby reducing stress and increasing oxytocin release. Meanwhile, endorphin massage is a light massage technique on the neck, back, and arms that stimulates the release of endorphins and oxytocin, thereby helping to facilitate the milk let-down reflex.

Various studies have proven the effectiveness of both interventions in increasing breast milk production. Research by Hanung et al. (2020) showed that hypnobreastfeeding significantly increased breast milk production with a p -value of 0.001. Other studies also reported that endorphin massage can increase breast milk production by increasing the release of endorphins and oxytocin, improving blood circulation in the breasts, and increasing maternal comfort during breastfeeding. However, most studies only evaluate the effectiveness of each method separately. Research that directly compares the effectiveness of hypnobreastfeeding And endorphin The effect of massage on breast milk production is still limited, so there is not enough evidence regarding non-pharmacological methods that provide the most optimal results in increasing breast milk production in breastfeeding mothers.

A preliminary study conducted at the Koncara Community Health Center on 20 breastfeeding mothers showed that 15 (75%) experienced irregular milk production, while only 5 (25%) experienced normal milk production. Furthermore, most mothers were unaware of or had not utilized non-pharmacological therapies such as hypnobreastfeeding, and endorphin massage as an effort to increase breast milk production. This condition indicates that breast milk production remains a barrier to successful exclusive breastfeeding in the region. Based on this condition and the limited research comparing the effectiveness of the two interventions, a study comparing hypnobreastfeeding with endorphin massage on breast milk production in breastfeeding mothers in the Purwakarta District working area in 2025 is needed.

II. METHODS

This study used a quantitative method with a quasi-experimental design using a Non-Equivalent Control Group Design . The study aimed to compare the effectiveness of hypnobreastfeeding, and endorphin massage on breast milk production in breastfeeding mothers through measurements before (pretest) and after (posttest) the intervention. The intervention was given for 14 days .

The research was conducted in several TPMBs under the guidance of the Purwakarta Health Center, namely the Koncara Health Center, Mawar 6 Posyandu, Melati 4 Posyandu, and Melati 5 Posyandu in the period October–December 2025. The research population was 80 mothers, breastfeeding with infants aged 1–6 months. The sample size was calculated using the Slovin formula, resulting in 68 respondents , who were divided equally into two groups: 34 respondents in the hypnobreastfeeding group and 34 respondents in the endorphin massage group.

Breast milk production was measured using a questionnaire based on six indicators of breast milk sufficiency, while the intervention was implemented according to Standard Operating Procedures (SOPs). Data collection was conducted through observation and questionnaires before and after the intervention.

Data analysis included univariate analysis to describe respondent characteristics and bivariate analysis to test the effect of the intervention. Normality tests were performed using the Shapiro–Wilk test , then differences in pretest and posttest scores were analyzed using the Wilcoxon test with a significance level of $p < 0.05$. The study applied ethical research principles, including informed consent, respondent confidentiality, justice, and beneficence and non-maleficence.

III. RESULTS AND DISCUSSION

Table 1 Respondent Characteristics Based on Age

No	Age	<i>Hypnobreastfeeding</i>	<i>Endorphin Massage</i>
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		N	%	N	%
1	High Risk (<20 or >35 years)	19	55.9%	18	52.9%
2	No Risk (20-35 years)	15	44.1%	16	47.1%
Total		34	100%	34	100%

Based on Table 1, most of the respondents were at high risk age (<20 or >35 years), namely 19 respondents (55.9%) in the *Hypnobreastfeeding group*, while the Non-Risk Age (20-35 years) was the least in the *Endorphin Massage group*, namely 16 respondents (47.1%).

The results of the study showed that most respondents were at a high-risk age (<20 or >35 years), namely 19 respondents (55.9%) in the *Hypnobreastfeeding group*, while the Non-Risk Age (20-35 years) was the least in the *Endorphin Massage group*, namely 16 respondents (47.1%). Maternal age is an important demographic factor that can influence the success of breastfeeding and milk production. High-risk age groups, namely mothers aged <20 years (adolescents) and >35 years (advanced reproductive age), are known to have their own challenges in the lactation process. According to research published by the Indonesian Ministry of Health (2022), mothers with ages outside the optimal range (20-35 years) tend to experience obstacles in milk production, both physiologically and psychologically. Teenage mothers (<20 years old) often face mental unpreparedness, lack of experience, and a tendency to experience higher levels of stress and anxiety, which can impact the let-down reflex and milk volume (Pratiwi et al., 2023, Jurnal Kesehatan Reproduksi). Meanwhile, in mothers aged >35 years, hormonal changes such as decreased estrogen and progesterone levels, as well as the risk of comorbidities, can disrupt the lactation process and reduce milk production (Lawrence & Lawrence, 2022, Breastfeeding: A Guide for the Medical Profession).

Research by Rachmawati et al. (2024) in the Journal of Maternal and Child Health also showed that family support and good lactation education can increase the confidence of breastfeeding mothers in high-risk age groups. Lack of social support and information proved to be major barriers for this group. Research in the Koncara Community Health Center area revealed that high-risk mothers require more intensive support, both in the form of education and guidance during breastfeeding. Interventions that can be implemented include breastfeeding counseling, providing information on lactation techniques, and routine monitoring of breast milk production and success.

Table 2 Respondent Characteristics based on Parity

No	Parity	<i>Hypnobreastfeeding</i>		<i>Endorphin Massage</i>	
		N	%	N	%
1	Primipara	8	23.5%	11	32.4%
2	Multipara	17	50.0%	21	61.8%
3	Grandemultipara	9	26.5%	2	5.9%
Total		34	100%	25	100%

Based on Table 2, in the *hypnobreastfeeding group*, the majority were multiparous, with 17 respondents (50%), while in the *endorphin massage group*, the majority were multiparous, with 21 respondents (61.8%) and the least parity was in the *hypnobreastfeeding group*, with 8 respondents (23.5%), while in the *endorphin massage group*, with 2 respondents (5.9%) in grandimultiparous parity.

Parity is the number of live births a mother has ever had. In this study, respondents' characteristics based on parity showed that the majority of breastfeeding mothers were multiparous, meaning they had given birth more than once. This is an important aspect because previous breastfeeding experience can influence the success and volume of milk production during subsequent breastfeeding periods.

Physiologically, multiparous mothers generally have optimally developed mammary gland tissue due to lactation stimulation in previous pregnancies. Hormonal adaptation and improved breastfeeding experience also contribute to an improved let-down reflex and efficiency in breastfeeding technique (Lawrence & Lawrence, 2022). A study by Permatasari et al. (2023) in the Journal of Nutrition and Health concluded that multiparous mothers tend to have smoother milk production and greater breastfeeding confidence compared to primiparas (first-time mothers).

Table 3 Respondent Characteristics based on Education

No	Education	<i>Hypnobreastfeeding</i>		<i>Endorphin Massage</i>	
		N	%	N	%
1	Low (elementary, middle school)	13	38.2%	17	50.0%
2	Secondary (SMA)	17	50.0%	15	44.1%
3	Higher Education (College)	4	11.8%	2	5.9%
Total		34	100%	34	100%

Based on Table 3, in the *hypnobreastfeeding group*, most of them were in secondary education (high school) with 17 respondents (50%), while in the *endorphin massage group*, most of them were in lower education (elementary, junior high school) with 17 respondents (50%), and the fewest in the *hypnobreastfeeding group* were in tertiary education with 4 respondents (4%), while in the *endorphin massage group*, there were 2 respondents (5.9%).

Education level is a social factor that significantly influences breastfeeding behavior and milk production. High school education is generally associated with better knowledge of the benefits of breastfeeding, breastfeeding techniques, and awareness of the importance of exclusive breastfeeding. A study by Roesli (2022) in Lactation Management found that mothers with a high school or higher education tend to have more positive knowledge and attitudes toward lactation, making them better prepared to face breastfeeding challenges and achieving optimal milk production.

In the Hypnobreastfeeding intervention group, mothers with secondary education (high school) showed a better response. Research by Dewi & Malik (2024) in the Journal of Health Psychology showed that a higher level of understanding made it easier for mothers to accept positive suggestions and Hypnobreastfeeding relaxation techniques, resulting in a more significant reduction in stress and increase in breast milk volume compared to the lower-education group.

In contrast, in the lower education group (elementary/middle school), the main challenge is limited understanding of lactation techniques and the importance of breastfeeding, often leading to mothers feeling less confident and anxious during the breastfeeding process. Endorphin Massage interventions, which are physical and easy to practice, have proven more effective in this group. A study by Sari et al. (2025) in the Journal of Maternal Wellness revealed that Endorphin Massage provides immediate relaxation, increases endorphins, and improves mood without requiring complex conceptual understanding, thus still having a positive impact on breast milk production in low-educated mothers.

Table 1Frequency Distribution of Hypnobreastfeeding Pretest and Posttest

No	Pretest	<i>Pretest</i>		<i>Posts</i>	
		N	%	N	%
1	Low Breast Milk Production	19	55.9%	0	0%
2	Sufficient Breast Milk Production	15	44.1%	7	20.6%
3	Good Breast Milk Production	0	0%	27	79.4%
Total		34	100%	34	100%

Based on table 4, the results of the study show that before the intervention (pretest), most respondents had breast milk production in the insufficient category, namely 19 respondents (55.9%), while the sufficient category was 15 respondents (44.1%), and there were no respondents with good breast milk production (0%). After the intervention (posttest), there was an increase in breast milk production in the respondents. There were no more respondents with breast milk production in the insufficient category (0%), there were 7 respondents (20.6%), and most respondents were in the good breast milk production category, namely 27 respondents (79.4%).

The intervention is thought to increase maternal relaxation, improve comfort during breastfeeding, and stimulate the hormones prolactin and oxytocin, thereby increasing breast milk production. Research conducted by Fitriani et al. (2022) in the Indonesian Midwifery Journal found that relaxation stimulation and psychological support for postpartum mothers significantly increased breast milk production by helping to facilitate the milk let-down reflex.

The decrease in the number of respondents in the category of less than 55.9% breast milk production to 0% indicates a significant change after the intervention was given. This is in line with lactation theory, which states that the better the stimulation of the hormones prolactin and oxytocin, the smoother the production and release of breast milk. In addition to hormonal factors, environmental support, rest patterns, and maternal self-confidence also play a significant role in successful breastfeeding. According to research by Dewi and Handayani (2023) in the Journal of Nursing and Midwifery Science, postpartum mothers who received mentoring and relaxation therapy interventions experienced a faster increase in breast milk production compared to the group without intervention.

The results of this study also support the theory proposed by the United Nations Children's Fund (2023) that the success of exclusive breastfeeding is influenced by the mother's physical and psychological readiness during the postpartum period. Interventions that help mothers feel calmer and more comfortable can increase the oxytocin reflex, making it easier for milk to flow. By increasing breast milk production, the baby's nutritional needs can be optimally met, thus supporting the baby's growth and development. Therefore, the interventions provided in this study can be used as an alternative non-pharmacological measure to increase breast milk production in postpartum mothers.

Table 5 Frequency Distribution of Pretest and Posttest Endorphin Massage

No	Pretest	Pretest		Posts	
		N	%	N	%
1	Low Breast Milk Production	19	55.9%	1	2.9%
2	Sufficient Breast Milk Production	15	44.1%	7	20.6%
3	Good Breast Milk Production	0	0	26	76.5%
Total		34	100%	34	100%

Based on table 5, the results of the study show that before the intervention (pretest), the majority of respondents had breast milk production in the insufficient category, namely 19 respondents (55.9%), while the sufficient category was 15 respondents (44.1%), and there were no respondents with breast milk production in the good category (0%).

This condition indicates that in the early postpartum period, some mothers still experience obstacles in the lactation process. Suboptimal milk production can be influenced by the mother's physical condition, which is still tired after childbirth, anxiety, lack of rest, and suboptimal stimulation of the hormones prolactin and oxytocin. According to Rukiyah and Yulianti (2020) in their book *Postpartum Midwifery Care*, psychological factors such as stress and anxiety can inhibit the oxytocin reflex, resulting in less smooth milk release. Furthermore, the World Health Organization (2023) explains that a mother's emotional state significantly influences breastfeeding success and milk production.

After the intervention (posttest), there was an increase in breast milk production among respondents. Respondents with insufficient breast milk production decreased to 1 respondent (2.9%), those with sufficient breast milk production decreased to 7 respondents (20.6%), and the majority of respondents were in the good breast milk production category, namely 26 respondents (76.5%).

These results indicate that the intervention provided was effective in helping increase breast milk production in postpartum mothers. This intervention is thought to provide a sense of comfort and relaxation, thereby stimulating the release of the hormones prolactin and oxytocin, which play a crucial role in breast milk production and release. According to Maryunani (2015) in her book *Early Breastfeeding Initiation, Exclusive Breastfeeding, and Lactation Management*, a relaxed and comfortable mother's condition can

facilitate the let-down reflex, making it easier for breast milk to flow and increasing production. Research by Fitriani et al. (2022) in the Indonesian Midwifery Journal also states that relaxation interventions for postpartum mothers have a significant effect on increasing breast milk production.

Table 6 Wilcoxon Test

Variables		N	Sig.*
<i>Hypnobreastfeeding</i>	<i>Pretest</i>	34	0,000
	<i>Posttest</i>	34	
<i>Endorphin massage</i>	<i>Pretest</i>	34	0,000
	<i>Posttest</i>	34	

* Wilcoxon test

Table 6, shows that the *p-value* in the *Hypnobreastfeeding* group which is 0.000, so it can be concluded that there is an effect of *Hypnobreastfeeding* on breast milk production in the Koncara Health Center work area. In the *Endorphin massage* group, the same results were obtained, namely a *p-value* of 0.000, so it can be concluded that there is an effect of *endorphin massage* on breast milk production in the Koncara Health Center work area.

Based on the research results, it is known that the *p-value* in the *Hypnobreastfeeding* group is 0.000 (<0.05), so it can be concluded that there is an effect of *Hypnobreastfeeding* on breast milk production in the Koncara Health Center work area. The *Hypnobreastfeeding* method is a relaxation technique carried out by giving positive suggestions to breastfeeding mothers to feel calm, comfortable, and confident in the breastfeeding process. This relaxation condition can help increase the release of the hormones oxytocin and prolactin which play a role in the production and release of breast milk. According to Maryunani (2015) in the book *Early Breastfeeding Initiation, Exclusive Breastfeeding and Lactation Management*, a calm psychological state of the mother can facilitate the let-down reflex so that breast milk production becomes more optimal.

The results of this study align with those of Fitriani et al. (2022), who stated that the *Hypnobreastfeeding* relaxation technique significantly increased breast milk production in postpartum mothers. *Hypnobreastfeeding* helps reduce the anxiety and stress often experienced by postpartum mothers, thus improving lactation. According to the World Health Organization (2023), stress and anxiety in breastfeeding mothers can inhibit the release of the hormone oxytocin, thus hindering milk flow. Therefore, providing relaxation interventions such as *Hypnobreastfeeding* can be an effective non-pharmacological method for increasing breast milk production.

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Table 7 Man Whitney Test

Variables	N	Mean Rank	Sig.*
<i>Hypnobreastfeeding</i>	34	35.29	0.702
<i>Endorphin massage</i>	34	33.71	

* Man-Whitney test

Table 7 shows a *p-value* of 0.702, indicating no difference between *hypnobreastfeeding* and *endorphin massage* on breast milk production in breastfeeding mothers. *Hypnobreastfeeding* and *endorphin massage* have the same effect on reducing breast milk production, so both can be used to increase breast milk production. Based on the mean rank results, the score in the *Hypnobreastfeeding* group was higher than the *Endorphin Massage* group. This indicates that *Hypnobreastfeeding* is more effective in increasing breast milk production in breastfeeding mothers, although the difference is not very significant.

These results indicate that both interventions have an impact on increasing breast milk production. Both hypnobreastfeeding and endorphin massage are non-pharmacological methods aimed at providing comfort and relaxation to postpartum mothers, thereby helping facilitate the lactation process. According to Saleha (2018) in her book "Asuhan Kewidanan pada Masa Pufas , " a comfortable and relaxed maternal condition can increase the activity of the hormones prolactin and oxytocin, which play a role in breast milk production and release.

Hypnobreastfeeding works through a psychological approach, providing positive suggestions and relaxation to breastfeeding mothers. When mothers are calm, anxiety and stress are reduced, thus optimizing the release of the hormone oxytocin. Oxytocin helps milk production, while prolactin plays a role in milk production. Endorphin massage, meanwhile, works through touch stimulation and light massage, which can increase endorphins, making mothers feel more comfortable and relaxed. This condition also stimulates the release of oxytocin, resulting in a smoother milk flow. According to Marmi (2016) in her book, *Midwifery Care during the Postpartum Period and Breastfeeding* , psychological factors and maternal comfort are closely related to the smooth production of breast milk.

Although there was no statistically significant difference, based on the mean rank results , it was found that the score in the Hypnobreastfeeding group was higher than the Endorphin massage group. This indicates that Hypnobreastfeeding tends to be more effective in increasing breast milk production than Endorphin massage, although the difference in effectiveness is not too large. This can occur because Hypnobreastfeeding directly affects the mother's psychological condition through positive suggestions that can increase the mother's confidence in breastfeeding. When the mother has confidence that the breast milk produced is sufficient, the breastfeeding process becomes more optimal and breast milk production increases. According to Roesli (2018) in the book *Early Breastfeeding Initiation and Exclusive Breastfeeding Guide* , a mother's confidence and stable emotional condition greatly influence the success of breastfeeding and breast milk production.

IV. CONCLUSION

There was no significant difference between Hypnobreastfeeding and Endorphin massage on breast milk production in breastfeeding mothers, with a p-value of 0.702 (>0.05). There was an increase in breast milk production in breastfeeding mothers after being given Hypnobreastfeeding intervention, where before the intervention most respondents were in the poor category (55.9%), whereas after the intervention most increased to the good category (79.4%). There was an increase in breast milk production in breastfeeding mothers after being given Endorphin massage intervention, where before the intervention most respondents were in the poor category (55.9%), whereas after the intervention most increased to the good category (76.5%). Respondent characteristics: Most breastfeeding mothers in the Hypnobreastfeeding group were at high-risk ages (<20 or >35 years) (55.9%), multiparous (50.0%), and had secondary education (high school) (50.0%). Meanwhile, in the Endorphin massage group, most respondents were at high-risk ages (52.9%), multiparous (61.8%), and had low education (elementary/junior high school) (50.0%).

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