



The Effect of Combined SEFT and SPEOS Therapy on Anxiety and Breast Milk Production in Postpartum Women: A Quasi-Experimental Study

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ABSTRACT

Postpartum anxiety affects approximately 30–40% of mothers and can reduce breast milk production by inhibiting the let-down reflex. Effective and holistic non-pharmacological interventions are still limited. This study aimed to test the effectiveness of the combination of SEFT and SPEOS therapy in addressing anxiety and increasing breast milk production in the postpartum period. This study used a quasi-experimental pretest–posttest design with a control group. A total of 48 postpartum mothers who met the inclusion criteria were divided into intervention and control groups using a purposive sampling technique. The intervention group received a combination of Spiritual Emotional Freedom Technique therapy and Endorphin, Oxytocin, and Suggestive Massage Stimulation for eight sessions (4 weeks) lasting 30–45 minutes. Anxiety levels were measured using the Postpartum Specific Anxiety Scale (PSAS), while breast milk production was recorded based on volume. Data were analyzed using a paired t-test. The results of this study indicate that the combination of SEFT and SPEOS therapy effectively reduces anxiety and significantly increases breast milk production ($p < 0.05$). The combination of SEFT and SPEOS is a non-pharmacological intervention that contributes practically to midwifery services to support successful exclusive breastfeeding and theoretically expands understanding of the interaction of psychological and neurohormonal factors in lactation.

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INTRODUCTION

The period following childbirth is a crucial time for the mother, as it is characterised by a multitude of changes, both physically and psychologically (Saharoy et al., 2023). One of the difficulties that is frequently encountered is postpartum anxiety, which has the potential to influence the supply of breast milk (Aqila & Muthia Dinni, 2022). Postpartum anxiety is a significant health problem; an estimated 30–40% of mothers experience it, and it has been shown to disrupt breast milk production by inhibiting the let-down reflex and reducing the release of the hormone oxytocin.

In Indonesia, the incidence of postpartum anxiety is significant; a survey indicated that 41.6% of women experienced mild anxiety, 25% moderate anxiety, and 16.7% severe anxiety (Ishmah et al., 2024). Consistent with prior research indicating that postpartum mothers in Indonesia endure elevated stress and anxiety levels, with prevalence rates of 50–70%, particularly among primiparous mothers (Utami & Nurfitra, 2022), this condition may adversely affect

breast milk production (Kartini & Kusumadewi, 2023). This finding illustrates the psychological strain that has not been adequately addressed.

Exclusive breastfeeding coverage in Indonesia remains a considerable distance from achieving the target, currently reaching just 37.3% by 2023, which is significantly behind the national target of 80% (E. Sari, 2020), according to data provided by UNICEF. The Indonesian Demographic and Health Survey (IDHS) found that one primary reason for the low rate of exclusive breastfeeding is that many mothers do not feel confident in their ability to produce enough breast milk for their babies. The release of oxytocin can be suppressed by psychological factors such as stress, worry, and a lack of self-confidence, leading to an inhibited let-down reflex and a reduction in milk volume (Lentina et al., 2021).

According to Wulansari et al. (2020), anxiety that is not well managed has the potential to decrease the amount of breast milk that is produced, which makes it more challenging to provide the infant with the best possible

nourishment. Around fifty per cent of moms who have recently given birth indicate that they are having trouble making sufficient amounts of breast milk, particularly in the first few weeks after giving birth (Delvina et al., 2022). According to Salsabilla et al. (2023), a significant number of postpartum moms who encounter challenges in the production of breast milk eventually decide to provide their infants with formula milk.

For this reason, an effective intervention should ideally target both physiological and psychological aspects to increase breast milk production. This holistic approach can include educational support, stress management techniques, and fostering a positive breastfeeding environment. By addressing both the mind and body, mothers may find increased confidence in their breastfeeding journey and ultimately improve their milk supply (Rahmaniasari & Zhafirah, 2024). A non-pharmacological intervention approach that encompasses physical, emotional, and spiritual dimensions is required. Regrettably, treatments in primary health care frequently prioritise physical aspects while neglecting the emotional and spiritual aspects of the mother. Psychosomatic anxiety necessitates a comprehensive strategy.

Conventional interventions, such as lactation education and general counseling, are still limited to physical aspects and information, often neglecting mothers' emotional and spiritual dimensions. However, psychosomatic anxiety demands a holistic approach that targets both the body and mind. According to emotion regulation theory, affective balance can reduce amygdala activity and stress hormones. In contrast, the physiological mechanisms of lactation theory emphasize the importance of oxytocin and endorphin stimulation in triggering breast myoepithelial cell contractions.

SEFT and SPEOS are two non-pharmacological methods proven to relieve anxiety and increase hormones important for lactation, potentially. This combination synergizes because they work through complementary mechanisms to reduce anxiety and increase breast milk production. SEFT (Spiritual Emotional Freedom Technique) focuses on releasing negative emotions through tapping on meridian points accompanied by spiritual affirmations. This process stimulates the parasympathetic nervous system and reduces amygdala activity, lowering stress hormone levels like cortisol and promoting a more relaxed body. When the mother is calmer, the let-down reflex, triggered by the hormone oxytocin, works optimally, resulting in a smoother milk flow (Nurjanah, 2023).

Meanwhile, SPEOS (Endorphin, Oxytocin, and Suggestive Massage Stimulation) provides physical stimulation and positive suggestions. Gentle massage of the back, breasts, and relaxation areas stimulates the release of endorphins, which induce a feeling of comfort, and oxytocin, which directly stimulates the contraction of breast myoepithelial cells to release milk. Positive suggestions strengthen the mother's confidence in her ability to breastfeed. When SEFT and SPEOS are combined, the calming effect of SEFT and the direct hormonal stimulation of SPEOS work together to profoundly reduce anxiety while increasing oxytocin and endorphin levels through two distinct psychological and physiological pathways (Julianti, 2023). This synergy makes the combination more effective than either method alone, as the mother receives emotional calm, spiritual support, and lactation hormone stimulation, all of which maximize milk production and release. This research, integrating these two methodologies into the postpartum environment is still rare, especially in urban areas like Batam City.

This research aligns with the objectives of the National Research Master Plan (RIRN) in the health sector, particularly in improving maternal and child health through the development of integrative and culturally relevant non-pharmacological interventions. This research further advances the achievement of the Sustainable Development Goals (SDGs), particularly by improving maternal and newborn health and promoting adequate nutrition through exclusive breastfeeding. Therefore, the findings of this study are expected to directly improve the quality of life of postpartum mothers and support national and international initiatives in the field of maternal and child health.

Based on the background description, implementing a structured combination of the Spiritual Emotional Freedom Technique (SEFT) and Endorphin, Oxytocin, and Suggestive Massage Stimulation (SPEOS) therapy can significantly reduce anxiety levels and increase breast milk production in postpartum mothers compared to mothers who do not receive this combination of therapies.

METHOD

This study used a quasi-experimental pretest-posttest design with a control group. The intervention group received a combination of SEFT and SPEOS therapy for 4 weeks (8 sessions), while the control group received standard postpartum care. Participants were recruited from the postpartum maternal population (0–42 days) within the Sambau Community Health Center (Puskesmas) coverage area. After verifying inclusion/exclusion criteria and providing written consent, participants were assigned to the intervention or control group following a predetermined purposive procedure.

Inclusion and Exclusion criteria:

Participants in this study were postpartum mothers aged 0–42 days after delivery who were willing to participate and had signed informed consent. Eligible participants were those able to communicate well (without cognitive impairment) and currently breastfeeding, particularly those experiencing challenges in breast milk production—either low or irregular supply—or those who expressed a need for lactation support. Exclusion criteria included mothers who were taking medications known to affect milk production (such as certain hormonal treatments), those with severe physical or psychological conditions that could interfere with therapy (for example, major psychiatric disorders), or those experiencing postpartum complications requiring intensive medical care, such as eclampsia or severe infections. In addition, mothers who were unwilling or unable to attend all scheduled therapy sessions, or were unavailable during the data collection period, were also excluded from participation.

Population and Sample

The population comprised 55 postpartum mothers (aged 0–42 days postpartum) registered at Puskesmas Sambau, Batam City. Using the Slovin formula with a 5% margin of error, a sample of 48 respondents was determined. Total final sample $n = 48$ (divided into 2 groups, namely control and intervention)

Intervention

The intervention was carried out for 4 weeks, a total of 8 sessions (2 sessions/week), each session lasting 30–45 minutes, consisting of 15 minutes of SEFT + 30 minutes of SPEOS, which was carried out consistently for all participants.

SEFT (15 minutes):

Relaxation (1 minute): deep breathing, grounding. Tapping sequence (9 minutes): gentle tapping on meridian points (e.g., the forehead, sides of the eyes, under the eyes, under the nose, chin, clavicle, under the arms, fingers) while the client recites short affirmations relevant to breastfeeding anxiety–spiritual affirmations (5 minutes): positive statements, short visualization techniques.

SPEOS (30 minutes):

Relaxation massage (10 minutes): gentle massage of the upper/lower back and shoulders to relieve tension. Relaxation area & breast massage (10 minutes): light massage of the breast area (do not massage directly on the mammary glands), plus perineal relaxation techniques, focusing on stimulation to trigger the release of oxytocin and endorphins. Suggestion/affirmation (8 minutes): providing positive suggestions that affirm the mother's breastfeeding ability and reduce anxiety. Closing & brief notes (2 minutes).

Instrument

Maternal anxiety levels were measured using the Postpartum Specific Anxiety Scale (PSAS), an instrument developed by Fallon et al. (2016) to assess anxiety specifically occurring in the postpartum period. The version used in this study consists of 51 items grouped into four subscales: Maternal Competence and Attachment (15 items); Infant Safety and Welfare (11 items); Practical Infant Care (7 items); and Psychosocial Adjustment to Motherhood (18 items). Each item is answered on a 4-point Likert scale (1 = never, 4 = almost always), with the reference period being the past week. The total score ranges from 51 to 204, with higher values indicating greater levels of postpartum anxiety.

Representative items include: "I worry that my baby will be accidentally hurt" (Infant Safety and Welfare) and "I have negative thoughts about my relationship with my baby" (Maternal Competence and Attachment).

This instrument was first developed and validated by Fallon et al. (2016). Meanwhile, Ekawati et al. (2019) validated the PSAS instrument in Indonesia. The Indonesian adaptation process was carried out through: Double translation by two bilingual translators, Back-translation by an independent translator, and Assessment by an expert panel (three midwifery lecturers and one clinical psychologist), which resulted in an average Content Validity Index (CVI) value of 0.92, indicating excellent content validity (Ekawati et al., 2019). The results of the construct validity analysis using confirmatory factor analysis (CFA) showed an adequate fit of the four-factor model ($\chi^2/df = 1.85$; CFI = 0.93; TLI = 0.91; RMSEA = 0.07). Internal reliability calculated with Cronbach's alpha showed good consistency: total score $\alpha = 0.94$, with a subscale range between 0.86 and 0.91 (Ekawati et al., 2019).

Data Analysis

Data were analyzed using SPSS software (version 26). Before hypothesis testing, a normality test was performed to assess the data distribution. For normally distributed data, paired t-tests were used to compare pre- and post-intervention outcomes within the groups. Results were considered statistically significant at a p-value < 0.05.

Researchers maintained intervention fidelity through several steps. All SEFT and SPEOS stages were outlined in a treatment manual, which served as a standard reference. Each session was conducted in a standardized order and duration and documented with a fidelity checklist that was reviewed weekly. The principal investigator conducted random observations and provided feedback for deviations, while regular evaluation meetings ensured uniform procedures. In this way, the content, duration, and quality of intervention implementation remained consistent across all participants throughout the study. To control for extraneous variables, researchers first measured and recorded baseline characteristics of the respondents. All anxiety and breast milk volume measurements were taken at the same time of day relative to the intervention to minimize temporal variation. The standard care protocol for the control group was standardized to prevent differences in non-intervention treatment from influencing the results.

This study has obtained ethical approval from the Health Research Ethics Committee of Batam University, No. 108/LPPM-UNIBA/PI-EC/VI/2025, and all procedures adhere to the principles of the Declaration of Helsinki. Prior to data collection, each prospective participant was given verbal and written explanations regarding the purpose, benefits, intervention procedures, potential risks, and the right to withdraw at any time without consequence. Mothers who agreed to participate signed informed consent forms, and their personal identities were encrypted to maintain confidentiality.

RESULTS OF STUDY

Table 1. Frequency Distribution of Respondent Characteristics

Characteristics	Category	Frequency	(%)
Age	20–24	12	25,0
	25–30	24	50,0
	31–35	12	25,0
Education	elementary school	2	5,0
	Middle School	7	15,0
	High School	21	45,0
	Diploma	10	20,0
	Bachelor	7	15,0
Work	Not working	24	50,0
	Civil Servant	7	15,0
	Private Sector Employees	12	25,0
	Entrepreneur	5	10,0
Parity	Primipara	29	60,0
	Multipara	19	40,0
Gestational Age	37–38 week	14	29,2
	39–40 week	26	54,2
	41 week	8	16,6
Types of Childbirth	Normal	34	70,0
	SC	14	30,0

Based on the results of descriptive analysis of 48 research respondents, it was found that the average maternal age was

27.7 years, with an age range between 20 and 35 years. Most respondents were in the productive age group, namely 25–30 years. The average gestational age at delivery was 39 weeks, with a variation between 37 and 41 weeks, indicating that the majority of respondents gave birth at term. In terms of education level, the majority of respondents had a high school education (45.0%), followed by diploma graduates (20.0%), bachelor's degree (15.0%), junior high school (15.0%), and elementary school (5.0%). Based on the type of employment, most respondents were housewives (IRT) (50.0%), followed by private employees (25.0%), civil servants (PNS) (15.0%), and self-employed (10.0%). When viewed from parity, more than half of the respondents were primiparous (60.0%), while the rest were multiparous (40.0%). In terms of delivery type, vaginal deliveries dominated (70.0%), while Caesarean sections (CS) accounted for 30.0%. These findings indicate that the majority of respondents were mothers of optimal reproductive age, had secondary education, were not employed in the formal sector, were giving birth for the first time, and delivered vaginally at full term.

The Shapiro-Wilk test results indicate that all data groups for the anxiety variable had a significance value of greater than 0.05 (table 2). The pre-test significant value for the control group was 0.283, while the post-test value was 0.240. The pre-test value for the experimental group was 0.510, and

the post-test value was 0.806. Consequently, all data on anxiety variables have a normal distribution, allowing for the use of parametric statistical tests, specifically the paired t-test, in subsequent analyses.

The normality test results for breast milk volume data indicated that all data groups exhibited a normal distribution (table 3). The Shapiro-Wilk significance values were as follows: control pre-test, 0.401; control post-test, 0.598; experimental pre-test, 0.314; and experimental post-test, 0.562. All p-values above 0.05 indicate that the breast milk volume statistics were normally distributed among the groups. Consequently, additional statistical analysis may be conducted utilising parametric tests, specifically the paired t-test.

The normality test results for breast milk volume data indicated that all data groups exhibited a normal distribution (table 3). The Shapiro-Wilk significance values were as follows: control pre-test, 0.401; control post-test, 0.598; experimental pre-test, 0.314; and experimental post-test, 0.562. All p-values above 0.05 indicate that the breast milk volume statistics were normally distributed among the groups. Consequently, additional statistical analysis may be conducted utilising parametric tests, specifically the paired t-test.

Table 2. Tests of Normality Anxiety

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Pre-test control Anxiety	.094	24	.200*	.951	24	.283
Post-test control Anxiety	.152	24	.159	.948	24	.240
Pre-test Experiment Anxiety	.111	24	.200*	.963	24	.510
Post-test Experiment Anxiety	.115	24	.200*	.976	24	.806

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Table 3. Tests of Normality Volume Breast Milk

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Post-test Control	.123	24	.200*	.967	24	.598
Pre-test Control	.136	24	.200*	.958	24	.401
Pre-test Experiment	.118	24	.200*	.953	24	.314
Post-test Experiment	.146	24	.198	.966	24	.562

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Table 4. Differences in Anxiety Levels Between Before and After Intervention in Each Group

	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
				Lower	Upper			
Pre-Post-test control Anxiety	.792	5.493	1.121	-1.528	3.111	.706	23	.487
Pre-Post-test Experiment Anxiety	6.000	4.065	.830	4.284	7.716	7.232	23	.000

Table 5. Difference in Breast Milk Volume Before and After Intervention in Each Group

	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
				Lower	Upper			
Pre-Post-test control ASI	-5.000	9.179	1.874	-8.876	-1.124	-2.668	23	.014
Pre-Post-test experiment ASI	-38.667	17.975	3.669	-46.257	-31.076	-10.538	23	.000

Table 4 shows a significant decrease in anxiety in the intervention group ($p < 0.001$), while no change was observed in the control group ($p = 0.487$). This therapy is effective in reducing postpartum maternal anxiety levels.

Table 5 shows that breast milk volume in the control group decreased significantly ($p = 0.014$), and an average decrease in breast milk volume of -5.0 was obtained. This shows a substantial difference, the change reflects a decrease in breast milk volume. In the experimental group, there was a significant increase in breast milk volume, an average of $38,667$ ml, with a p value of 0.000 (<0.05). These findings indicate that the integration of SEFT and SPEOS therapy significantly increases breast milk production in the postpartum period.

DISCUSSION

The findings indicated a substantial reduction in anxiety within the experimental group following the administration of a combination of SEFT and SPEOS therapy. The mean anxiety score diminished by 6 points, with a significance level of $p = 0.000$. Conversely, the control group exhibited no significant difference ($p = 0.487$). This demonstrates that the combined therapeutic intervention significantly alleviates anxiety in postpartum moms relative to routine postpartum care.

SEFT theoretically integrates elements of spirituality with psychological methods, such as tapping, that target the body's meridians (Rejeki et al., 2022). This method alleviates emotional tension by activating the parasympathetic nervous system and reducing stress hormones, such as cortisol. SPEOS, emphasizing spiritual, emotional, and physical optimization, offers affirmative reinforcement and self-awareness via visualization, positive affirmations, and relaxation techniques. The combination fosters a synergy that alleviates anxiety symptoms while enhancing the mother's emotional resilience to postpartum stress.

Several earlier investigations have supported this finding. SEFT therapy was found to considerably lower the levels of anxiety experienced by pregnant and postpartum women, according to research conducted by Sari et al. (2025). Furthermore, a study conducted by Hesti et al. (2017) on SPEOS in individuals who suffer from general anxiety showed comparable outcomes in terms of greater emotional tranquility and self-control after the treatment. According to the findings of research conducted by Kohrt et al. (2020), spiritual-emotional interventions have the potential to relieve anxiety more quickly than traditional therapies, such as counselling, as a standalone treatment.

Several factors may have influenced the effectiveness of the treatment being investigated in this study. One possible explanation is that the mother's familiarity with spiritual aspects may have contributed to the increased responsiveness to the therapy (Kwame & Petrucka, 2021). A second possibility is that the impact of emotional therapy could be amplified by social factors, such as family support (Susanti et al., 2024). Third, it is possible that the mothers' postpartum physical condition was stable, which allowed them to respond more successfully to the therapy. In the fourth place, the therapeutic effect of the attention and support received throughout the session may also boost feelings of safety and reduce anxiety (Liu et al., 2025).

Postpartum mothers who have a significant drop in their anxiety levels have the potential to increase their attachment to their children (Ionio et al., 2024), speed up

their physical recovery, and reduce the likelihood that they may experience postpartum depression (Liu et al., 2025). Mothers who can maintain their composure are typically better able to breastfeed their children, care for their infants, and cultivate strong connections with their partners (Delvina et al., 2022). In a broader sense, a mother's mental health has a direct influence on the growth and development of her child, including the child's emotional and social development (Modak et al., 2023).

However, this study has some assumptions and limitations. One of the main assumptions is that all mothers have the same understanding and acceptance of SEFT and SPEOS therapy. In reality, the level of spirituality and emotional experience is very subjective. In addition, external factors such as home environment and family economy were not strictly controlled, which could affect the level of anxiety.

The results indicated a substantial rise in the breast milk volume of postpartum women in the experimental group following combined therapy of SEFT and SPEOS. The mean volume of breast milk increased by 38.67 mL, with a significance level of $p = 0.000$, demonstrating the efficacy of the intervention in enhancing breast milk production. The control group experienced a reduction in breast milk volume of -5.0 mL ($p = 0.014$). Despite its significance, the change indicated a decrease in breast milk volume. This decrease likely reflects normal physiological fluctuations in the early postpartum weeks and the limitations of lactation support in standard postpartum care. This finding does not necessarily imply that standard care is inadequate, but rather indicates that routine support may be less intensive than structured interventions such as SEFT-SPEOS.

Furthermore, the extra support and attention provided by the researchers to the intervention group, for example, through eight therapy sessions and repeated interactions, could potentially induce a Hawthorne effect, a change in respondents' behavior due to the feeling of being observed. This effect can be a confounding factor that is difficult to separate from the pure influence of therapy, potentially affecting the objectivity of outcome measurements of both anxiety levels and breast milk volume.

Milk production is significantly regulated by two primary hormones, oxytocin and prolactin, which are activated by the mother's emotional condition. Anxiety, stress, and emotional tension can impede the let-down response and diminish milk supply (Alif et al., 2024). SEFT and SPEOS therapies regulate the autonomic nervous system, reducing cortisol levels in the bloodstream and thereby reducing stress while enhancing relaxation. This calm state creates optimal conditions for the natural secretion of oxytocin and the initiation of lactation. These interventions address both psychological and physiological factors.

According to the findings of research conducted by Abdullah et al. (2024), SEFT therapy was able to boost the amount of milk produced by breastfeeding moms who come from high-anxiety backgrounds. In addition, Ayu Muthiatulsalimah et al. (2022) conducted a study that investigated spiritually and emotionally based therapy. The findings of this study showed that the strategy could considerably raise the volume of breast milk within fifteen days. Research conducted by Wheeler et al. (2024) discovered that using breathing methods and positive affirmations improved mothers' self-perception of their capacity to breastfeed. This, in turn, led to an increase in the amount of milk produced and the frequency with which mothers breastfed their children.

Several variables may have contributed to the increase in breast milk volume in the experimental group. Psychological aspects such as peace, ease, and confidence following the intervention are initially considered (Hajian et al., 2021). Second, during the research, milk production was supported by physiological factors such as proper rest and hydration (Sufri et al., 2023). Third, the spirit of breastfeeding can be increased by social variables such as encouragement from researchers, family, and intervention team members. In fourth place, the findings were also influenced by the high level of maternal motivation during the therapy and the exclusive breastfeeding process (Nagel et al., 2022).

An increase in breast milk volume has a significant and beneficial effect on the health of both the mother and the infant. Babies who receive a proper amount of breast milk will experience optimal growth, be protected from illnesses, and exhibit improved cognitive development (Purkiewicz et al., 2025). The smooth production of milk strengthens the bond between mother and child, as well as the mother's sense of self-confidence. Additionally, exclusive breastfeeding lowers the incidence of breast and ovarian cancer in mothers, and it has been shown to hasten the recovery of the uterus after delivery (Deger et al., 2023).

This study adds important evidence to the global literature on non-pharmacological interventions to support lactation. Previous international studies have highlighted the benefits of oxytocin massage or mindfulness-based interventions separately. However, few have explored the combination of emotional relaxation techniques and hormonal stimulation in postpartum mothers. By documenting the combined effectiveness of SEFT and SPEOS, this study expands global understanding of how integrative interventions that combine psychological, spiritual, and physiological aspects can address breastfeeding barriers. These findings are relevant not only to the Indonesian context but also to other countries facing similar challenges in achieving exclusive breastfeeding targets. They can inform the development of evidence-based lactation protocols across health systems worldwide.

RESEARCH LIMITATIONS

This study has several important limitations that should be acknowledged. First, the control group received only standard postpartum care without additional sessions. Therefore, the intensive attention received by the intervention group through eight SEFT-SPEOS therapy sessions could have resulted in a Hawthorne effect, a change in respondent behavior due to awareness of being observed, potentially influencing the results. Outcome assessors measuring Postpartum Specific Anxiety Scale (PSAS) scores and breast milk volume were not blinded to group allocation, so the possibility of assessment bias could not be eliminated. Although the intervention was delivered by personnel with standardized training and using the SEFT-SPEOS manual protocol, monitoring of intervention fidelity was only done through routine supervision and checklists, so minor variations in session delivery may have occurred. The use of purposive sampling limits the generalizability of the findings to a broader population of postpartum mothers.

This study has not been registered with a clinical trials registry; future registration is highly recommended to increase the transparency and credibility of similar intervention studies. The study also did not rigorously control for home environmental factors and socioeconomic

status, which can influence breastfeeding success and maternal anxiety levels. Variations in these factors may contribute to differences in results between respondents and should be considered when interpreting the findings. Overall, these limitations underscore the need for more rigorous trial designs in the future, such as blinding assessors, monitoring environmental and socioeconomic status, and registering trials in clinical registries to enhance transparency and external validity.

CONCLUSIONS AND RECOMMENDATION

The combination of the Spiritual Emotional Freedom Technique (SEFT) and Endorphin, Oxytocin, and Suggestive Massage Stimulation (SPEOS) has been proven effective in reducing anxiety and increasing breast milk production in postpartum mothers. This approach simultaneously targets psychological and physiological aspects, making it a suitable non-pharmacological intervention for integration into obstetric services and breastfeeding promotion programs in primary health care facilities. For Clinical practice recommendations: Healthcare workers, particularly midwives and maternity nurses, are advised to incorporate the SEFT-SPEOS combination into breastfeeding support programs as an additional strategy to reduce anxiety and maintain breast milk production. Formal training and the development of standardized protocols are necessary to ensure consistent and safe implementation.

For future research, studies should use a randomized controlled trial (RCT) design with blinded assessors to minimize bias, involve a more diverse population to increase generalizability, and incorporate environmental factors and socioeconomic status that may influence breastfeeding success. Safeguards in international clinical trial registries are also recommended to enhance the transparency and credibility of the results.

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DECLARATION

Ethics approval and consent to participate

This research has received approval from the ethics committee of the Institute for Research and Community Service, Universitas Batam, with No.108/LPPM-UNIBA/PI-EC/VI/2025, and each respondent who participated in this research was required to sign a research consent.

Consent for publication

All participants in this study granted written agreement to use anonymised data derived from their involvement for academic publication purposes. The personal identities and confidential information of participants are rigorously safeguarded and will not be revealed in any section of this publication.

Availability of data and materials

The data produced and/or analysed during this research is not publicly accessible but can be obtained from the corresponding author upon a reasonable request.

Conflicts of Interest Statement

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Statement on the Use of Artificial Intelligence (AI)

The authors declare that no artificial intelligence (AI) was used in the data collection, statistical analysis, or interpretation of the research results. AI was limited to assisting with language editing and grammatical correction of the manuscript, without affecting the scientific substance.

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