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Systematic Literature Review

Effectiveness SPEOS Method (Endorphin, Oxytocin, and Suggestive Massage Stimulation) on Breast Milk Production in Postpartum Mothers: A Systematic Literature Review

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ABSTRACT

Background *The postpartum period is a critical phase of physiological and psychological recovery, beginning with the expulsion of the placenta and typically lasting up to six weeks. Breast milk (human milk) is recognized as the most essential source of nutrition for newborns, particularly in the first month of life.*
Objective *This study aimed to evaluate the effectiveness of the SPEOS method in stimulating breast milk production among postpartum mothers through a literature review approach.*
Methods *A literature review design was employed by analyzing relevant studies from national and international databases. Articles were selected based on predetermined inclusion criteria, and data synthesis focused on outcomes related to breast milk production following the application of the SPEOS method.*
Results *The reviewed studies consistently reported a statistically significant effect of the SPEOS method on increasing breast milk production among postpartum women. The average reported p-value across the studies was 0.000, indicating a high level of statistical significance.*
Conclusion *The SPEOS method appears to be an effective non-pharmacological intervention to enhance breast milk production in postpartum mothers.*

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KEYWORDS
Postpartum Mothers, Breast Milk Production, SPEOS Method, Oxytocin Massage, Endorphin Stimulation

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INTRODUCTION

Postpartum is a recovery period after going through pregnancy and childbirth which starts from the birth of the placenta and ends after the reproductive organs return to their original state, on average lasting 6 weeks to 42 days. (Sukriana et al., 2018). Breast milk is a very important liquid for babies because it contains antibodies that can protect babies from infection. It has been proven that exclusive breastfeeding can meet the nutritional needs of infants (Maryatun et al., 2018). (Maryatun et al., 2019).. According to Basic Health Research (RISKESDAS) 2021 data, Exclusive Breastfeeding Coverage in Central Java itself has increased from year to year. In 2020 the average exclusive breastfeeding coverage was 71.88% while in 2021 the average exclusive breastfeeding coverage was 73.87%. Despite the increase, exclusive breastfeeding coverage is still far from the national target. According to the *World Health Organization* (WHO) in 2020, the average global exclusive breastfeeding rate is around 44% of the 50% exclusive breastfeeding target. (Yeni, 2022). Research Sari et al. (2017) stated that there were differences in breast milk production before and after the SPEOS method. The SPEOS method has an effect in increasing breast milk production in postpartum mothers. Many methods can be done to facilitate breast milk production including the SPEOS method. This SPEOS method is a combination of endorphin, oxytocin and suggestive massage stimulation. Breastfeeding mothers are not only seen or assisted from the physical aspect, but the psychological adaptation process is also important. (Nurhayati & Sukadiariani, 2020).. The purpose of this study was to determine the effect of the SPEOS (Stimulation of Endorphin, Oxytocin and Suggestive Massage) method on breast milk production in postpartum mothers. In this study, it can determine the characteristics of respondents, the implementation of SPEOS method therapy, determine the instrument for increasing breast milk production, can determine the effect of the SPEOS method on breast milk production.

METHOD

The literature search process was carried out using electronic databases. The databases used were Google Schoolar and Crossref by entering the keywords "SPEOS Method *AND* Breast milk production" in Indonesian, "SPEOS Method *AND* Breast milk production" in English. The limitations given to the journals reviewed were journal publications within the last 5 years, *full text,* Indonesian and English and the subject of postpartum mothers. Searches were conducted in August 2023 and September 2023 with the above keywords after 2018 351 articles were obtained. In accordance with the purpose of writing this *literature review,* the subject determined was postpartum mothers. Studies with subjects outside the predetermined criteria were not used in the review process.

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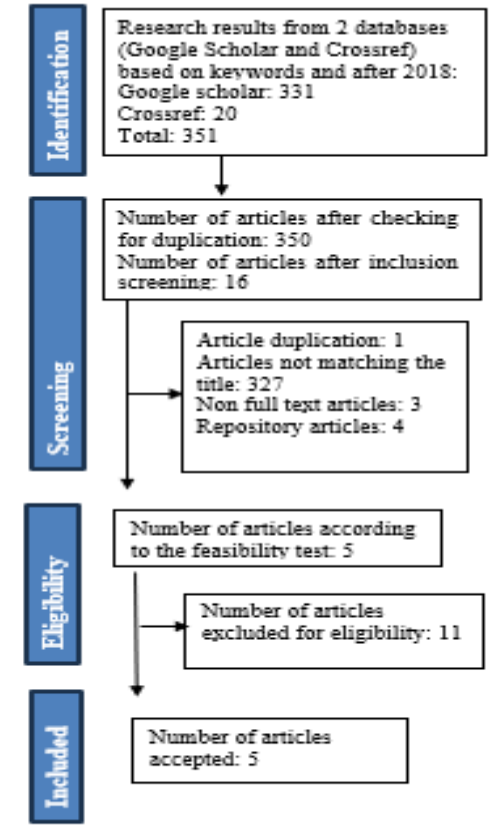
Data analysis



Gambar 1. Diagram of a prism

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Study quality assessment method/ Critical appraisal

	Rise Melyansari , Yan Sartika , Okta Vitriani (2018)	Ety Nurhayati, Ni Putu Nopia The Last Supper (2020)	Elisa, Latifah Lely Septiariani , Kurniati Puji Lestari (2020)	Hemi Fitriani, Ismafiaty, Syifa Nadira (2019)	Sephrina Rukmawati , Puji Astutik , Ambar Dwi Retnoningrum (2020)
1. Whether clear in study What cause and effect (i.e. there is no confusion about which variable came first)	Yes	Yes	Yes	Yes	Yes
2. Are participants included in a similar comparison?	Yes	Yes	Yes	Yes	Yes
3. Were participants included in the comparison receiving similar treatment/treatment, other than the exposure or intervention of interest?	Yes	Yes	Yes	Yes	Yes
4. Is there a control group?	Yes	Yes	No	Yes	Yes
5. Were there any outcome measures	No	Yes	Yes	Yes	No

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both before and after the intervention/exposure?					
6. Is follow-up complete and if not, are differences between groups in terms of follow-up described and analyzed in the same way?	Yes	Yes	Yes	Yes	Yes
7. Were the participants' results included in the comparison measured in the same way?	Yes	Yes	Yes	Yes	Yes
8. Are the outcomes measured in a reliable manner?	Yes	Yes	Yes	Yes	Yes
9. Is the appropriate statistical analysis used?	Yes	Yes	Yes	Yes	Yes
Total	8	9	8	9	8
	88.9%	100%	88.9%	100%	88.9%

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RESULTS

Author, year	Respondent Characteristics					Implementation of the SPEOS Method			Breast Milk Production Instrument	Influence
	Postpartum day-	Age	Education level	Jobs	Parity	Day-	Time	How to		
(Melyanasari et al., 2018)	1-3 days	-	-	-	-	First, second , third 24 hours	-	No description of how to implement	Breast milk production volume meter (in ml)	The average production of breast milk using the SPEOS method was 4,766 ml and that without the SPEOS method was 2,250 ml. There is a difference in breast milk production in postpartum women who are given SPEOS and those who are not given SPEOS with a *p* value =

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										0.000, which means that there is a significant effect on breast milk production in the group that is carried out by the SPEOS method.
(Nurhayati & Sukadiariani, 2020)	Day 1	20-35 years	SMP HIGH SCHOOL Bachelor Level	Work Not Working	-	Day 1-3	-	Massage is performed on the spine, neck, back, or along the spine to the fifth-sixth rib.	BBAT (*Bristol Breastfeeding Assessment Tool)* questionnaire and observation sheet	In the control group 15% of respondents produced 51-100cc with a p-value of 0.001. 75% of respondents who received treatment produced 51-100cc with a p-value of 0.000. There was a significant difference in

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										the SPEOS method on increasing breast milk production in the control and intervention groups (p = <0.05).
(Elisa et al., 2021)	Day 1	21-34 years old	-	-	Primiparous Multiparous	Day 1	-	Sit leaning forward and resting your head on your arms. Take a deep breath and start giving suggestions that can increase the mother's confidence, do endorphin stimulation and continue with oxytocin	Questionnaire and breast milk production volume measurement tool (in ml)	The intervention group produced more breast milk 3,744 cc on the third day of the experiment than the control group 2,04 cc. SPEOS method influenced breast milk production in postpartum

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								massage.		women with *p-value=0*.000.
(Fitriani et al., 2019)	Day 2	-	-	-	-	Day 1	-	No description of how to implement	Observation and measurement of breast milk	Breast milk production before the SPEOS method was performed averaged 3.70 ml and after the SPEOS method averaged 129.63 ml. The SPEOS method has a significant effect on breast milk supply in postpartum mothers, with a *p value = 0*.001.
(Rukmawati et al., 2020)	1-10 days	-	-	-	-	Day 1-10	-	Massage around the back parallel	Observation sheet measuring	The results of the study from 30

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								to the breasts with positive suggestions.	tool containing day 10 evaluation checklist	respondents, 15 respondents were not given the SPEOS method almost all respondents, namely 13 respondents did not produce breast milk smoothly (86.6%) and 15 respondents were given the SPEOS method almost all respondents produced breast milk smoothly (93.3%). The results of the t-test obtained

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										p value = *0*.000 so that there is an effect of the SPEOS method on increasing breast milk production.

table 1. Journal Review Results

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DISCUSSION

Respondent Characteristics

Based on table 1, it was found that the characteristics of respondents included *postpartum* days 1-10, the majority of the SPEOS method was carried out on the first day postpartum mothers. On the first to third postpartum day, many mothers feel that their milk does not come out, because during this period there are still many hormones from pregnancy that inhibit breast milk from coming out and the *lactogenesis phase* only starts 30-40 hours after giving birth (Melyanasari et al., 2018). (Melyanasari et al., 2018).. Maternal age less than 20 years is considered immature so that mothers will rely on others in providing exclusive breastfeeding. Mothers with an age of more than 35 years experience changes in their hormonal system so that the resulting breast milk production is reduced (Polwandari & Wuldari et al., 2018). (Polwandari & Wulandari, 2021).. Mothers who have higher education may have more opportunities to provide exclusive breastfeeding, because mothers who have higher education will find it easier to understand and receive information and then mothers will have better knowledge about exclusive breastfeeding (Suja Dela et al., 2020). (Suja Dela et al., 2023).. Postpartum mothers who work tend not to provide exclusive breastfeeding because of the demands of working to help the family economy, therefore working mothers cannot have full contact with their babies. Whereas mothers who do not work have free time and can provide breast milk directly, so that breast milk production becomes smooth. (Polwandari & Wulandari, 2021). Parity is very influential for the smoothness of breast milk. Milk production in multiparous mothers is more than that of primiparous mothers on the fourth postpartum day but after breastfeeding is done properly there is no significant difference. (Rahmawati & Wahyuningati, 2020).

Implementation of the SPEOS Method

Based on table 1, the implementation of the SPEOS method is mostly given to postpartum women on the first day after delivery. Of all the articles above, only one article describes the implementation time of the SPEOS method which is carried out for 15 minutes in the morning, afternoon and evening. This research is in line with the research of Nugraheni & Heryati, (2017) which explains the duration of the SPEOS method is carried out with a duration of 10-20 minutes and is recommended to be done before breastfeeding or expressing breast milk. Performing a combination of endorphin, oxytocin and suggestive massage by massaging along the spine to the fifth-sixth *costae* bone, and bringing the mother to relaxation will stimulate the brain to be able to release endorphin, oxytocin and prolactin hormones. (Nugraheni & Heryati, 2017). The implementation of the SPEOS method is carried out in the cervical spine, back or along the spine to the fifth to sixth costal bones. (Sari et al., 2017).

Breast Milk Production Instrument

The instruments used in table 1. mostly use observation sheets and questionnaires. Observation instrument is a way of collecting data by direct observation of respondents to find out changes or things to be studied. The questionnaire instrument is a written statement used to obtain information from respondents

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about their personal reports or things that are known to them. (Imasrani et al., 2016). The BBAT (*Bristol Breastfeeding Assessment Tool*) questionnaire was developed to measure postpartum breastfeeding difficulties that are often encountered. This tool is short, simple, general, easy to use. It has also been noted to be effective in identifying infant problems with breastfeeding difficulties. The tool has 4 items consisting of position, holding, sucking and swallowing. The position of the baby should be well supported, propped up on the mother's body lying on her side and the neck should not be bent. Holding or the baby should be firmly attached to the breast, the mouth should be opened wide and attachment should be maintained. Effective sucking should be achieved. Swallowing reaches a state of producing regular, soft sounding suction (Dolgun et al., 2018).

Effect of SPEOS Method on breast milk production

The SPEOS method can have a significant effect on increasing breast milk production in postpartum mothers. This SPEOS method has an effect that can make postpartum mothers have a comfortable feeling and foster confidence in the mother that breast milk will definitely come out and can also stimulate the release of oxytocin hormone through oxytocin massage. This therapy is done by massaging along the spine (fifth-sixth costa bone) and bringing the mother to relaxation which will stimulate the brain to be able to release prolactin and oxytocin hormones so that breast milk becomes smooth, provides comfort and removes blockages so that obstacles in breastfeeding can be resolved. (Fitriwati & Dwi, 2023).

The SPEOS method has been proven effective in increasing breast milk production based on the p-value. This is in line with research conducted by Sari et al., (2017)According to Sari et al. (2017), this SPEOS method can help facilitate the release of breast milk production. With a *p-value of* 0.000 ($p < 0.05$), which means that there is an effect of the SPEOS method on breast milk production. Research conducted by Yunita et al., (2019) showed an increase in breast milk production after the SPEOS method. After being given the SPEOS method, breast milk production in postpartum mothers with a *p-value of* 0.000. This is also supported by the results of research conducted by Clarasari et al., (2022) which shows a significant difference with a *p-value* <0.05 in this case it can be concluded that the SPEOS method has a positive effect on breast milk production.

CONCLUSION

Based on the results of the analysis and discussion of the 5 articles above, it can be concluded that the SPEOS Method is one of the effective non-pharmacological therapies used in increasing breast milk production in postpartum mothers. This is proven by the results of the search and literature that the researchers conducted. Oxytocin massage can release oxytocin hormone stimulation to increase breast milk production. Endorphin massage is a light massage that can stimulate and release endhorpine hormone. This hormone can also stimulate prolactin and oxytocin hormones that provide a state of relaxation in the body after childbirth. The suggestion itself will focus on positive thoughts to give breastfeeding mothers confidence

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