

The Effect Of A Combination Of Speos (Endorphine Massage Stimulation, Oxytocin Massage And Suggestion) On The Success Of The Let Down Reflex And The Production Of The Mother's Milk Production Post Sectio Caesarea At Dr. Hospital. H. Slamet Martodirdjo Pamekasan

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Abstract.

Exclusive breastfeeding has a major impact on a baby's growth and development, as breast milk contains immune system proteins and high levels of bactericides, and breastfeeding can reduce the risk of a baby dying. At the 65th World Health Assembly, member countries of the World Health Organisation (WHO) set a target for at least 50% of babies under six months to be exclusively breastfed by 2025. With massage stimulation that stimulates the release of endorphins and oxytocin, as well as suggestions from the SPEOS method, it will create feelings of calm and strong confidence in the mother, which will influence the let-down reflex. The combination of endorphin massage, oxytocin and suggestive massage can lead to a smooth flow of breast milk, which will help the mother to meet the nutritional needs of the baby for its growth and development. The aim of this research is to determine the success of the let down reflex and the smooth production of breast milk (ASI) after a combination of endorphin massage, oxytocin and suggestive massage intervention. This research uses a post-test only control design, which is a type of true experimental design methodology. The study population consisted of thirty mothers after caesarean section on the first and second day in the delivery and postpartum room of Dr. RSUD. H. Slamet Martodirdjo Pamekasan. The sampling technique used in this study was purposive quota sampling. Data analysis in this study used bivariate and multivariate analysis, namely T-test. In this research design, there were 2 groups, namely the intervention group, namely post caesarean mothers who were given SPEOS intervention and the control group, namely post caesarean mothers who were not given SPEOS intervention. The results of statistical tests using a paired sample t-test on the control group showed results of sig-2 tailed = 1,000 > 0.05, meaning that there was no difference in the let down reflex and smoothness of breast milk production in the control group. The results of statistical tests using a paired sample t-test on the treatment group showed results of sig-2 tailed = 0.000 < 0.05, meaning that there was a difference in the let down reflex and smoothness of breast milk production in the treatment group after receiving the SPEOS intervention, so the hypothesis was accepted, meaning that there was a combination effect of SPEOS (stimulation), endorphin massage, oxytocin and suggestive massage) on the success of the let down reflex and the smoothness of the mother's breast milk production after caesarean section at RSUD Dr H. Slamet Martodirdjo Pamekasan in 2023.

Keywords: Endorphin Massage Stimulation, Oxytocin Massage and Post Sectio Caesarea Mother's Breast Milk Productio.

I. INTRODUCTION

Breast milk is a mixture of fat in a solution of protein, lactose and organic salts which is then secreted by the mother's two breast glands, so breast milk is the only natural food that is best for babies because it contains the complete energy and substance requirements needed during the first six months of baby's life. However, there are times when some mothers have problems in providing breast milk. [1]. Mother's milk (ASI) is the main source of nutrition for babies, especially for babies aged ≤ 6 months where complementary foods are not recommended for consumption by babies. [2]. WHO and UNICEF recommend that children should only be given breast milk (ASI) for at least 6 months and that breastfeeding should be continued until the child is two years old. Breast milk is not contaminated and contains many nutrients needed by children. Exclusive breastfeeding aims to guarantee the fulfillment of babies' rights to receive exclusive breastfeeding from birth until 6 months of age by paying attention to their growth and development, so that every mother who gives birth must provide exclusive breast milk to the baby she gives birth to (PP No. 23 of 2012). [3]. Even though several efforts have been made to optimize exclusive breastfeeding from both health workers and the government, based on global data obtained by UNICEF, 42% of babies aged 0-5 months are exclusively breastfed. Based on the results of the Indonesian Demographic and Health Survey (SDKI) in 2017, the percentage of children aged under 6 months who received exclusive breastfeeding was 52% [4]. Infant morbidity is mostly caused by infection.

The increasing infant mortality rate can be prevented by early breastfeeding and exclusive breastfeeding. Based on risked data in 2018, the number of exclusive breastfeeding coverage in Indonesia was 37.3%, which means it is still below that set by the World Health Organization (WHO), namely 50% of the number of babies. [5]. The factor that hinders breastfeeding is the production of breast milk itself. Insufficient milk production and slow release causes mothers not to provide enough breast milk. Apart from the hormone prolactin, the breast milk process also depends on the hormone oxytocin, which is released from the posterior pituitary as a reaction to nipple sucking. Oxytocin affects the myoepithelial cells which are surrounded by the mammary alveoli so that the alveoli contract to release breast milk that has been secreted by the mammary glands. This oxytocin reflex is influenced by the soul. Mother, if there is anxiety, stress and doubt, then breast milk production can be hampered [6] Indicators of good breast milk production can be measured by mother and baby factors, with indicators for babies including The baby urinates at least 8 times in 24 hours and the colour is clear to straw yellow. The frequency of the baby's stools is at least 2 times in 24 hours, yellowish 'seedy' in colour. And the baby sleeps at least 2 hours per night. The baby feeds at least 10-12 times in 24 hours. Meanwhile, indicators for the mother include breast milk leaking from the nipple without the mother having to squeeze the breast, tingling/tingling sensation during breastfeeding due to the flow of breast milk, the breast feeling full, the mother feeling thirsty and the uterus feeling sore (painful) during breastfeeding.

The baby gains weight, looks healthy and starts to gain weight after the first 2 weeks (100-200 grams per week)[7]. The success of expressing breast milk is determined at the start of breastfeeding on the first day after birth. One of the barriers to exclusive breastfeeding is that breast milk does not come in or does not flow easily. Up to 65% of newborn babies are fed food other than breast milk in the first three days. The survey results show that the use of breast-milk substitutes (PASI) increased by 3.65% among newborns (0-3 days after caesarean section). Most mothers produce little or no milk for three or four days after giving birth, due to anxiety and fear caused by low milk production and the mother's lack of knowledge about the breastfeeding process [8]. The success of exclusive breastfeeding is determined on the first day when breast milk is first given. Exclusive breastfeeding can be hampered by the provision of breast milk not yet coming out. Feelings of depression, anxiety and stress also cause obstruction to breast milk production. The release of adrenaline and vasoconstriction of alveolar blood vessels causes down regulation of the synthesis of breast milk production which inhibits the let-down reflex. The presence of pain receptors will inhibit the release of oxytocin from the neurohypophysis. The pain and stress experienced after giving birth greatly influence the timing of breast milk production. The more severe the pain and stress the mother feels, the longer it will take to express breast milk.

Mothers will usually experience anxiety and restlessness after giving birth due to the process of adapting themselves to becoming a mother, namely in primiparas, changes in body shape, reduced attention from husbands and families and post-caesarean mothers will experience more severe pain than normal birth mothers, the effects of anesthesia, and barriers to mobilization. This phenomenon affects breast milk production which has an effect on the success of exclusive breastfeeding.[9]. Increasing breast milk production in postpartum or post-caesarean mothers can be done through a nursing intervention called endorphin, oxytocin and suggestive massage stimulation (SPEOS). This method will stimulate the pituitary because it produces endorphins whose effects resemble heroin and morphine so that the mother will feel comfortable, besides that breast milk will be stimulated due to the presence of the hormones oxytocin and prolactin. One alternative is that breast milk will become smooth, and blockages that may occur in the first week of birth can be resolved, the mother will be given suggestions that will make the mother confident and confident that she can provide breast milk exclusively.[10].

II. METHODS

This research uses Posttest – Only Control Design, which is a type of True Experimental Design methodology. The Independent Variable in this study is SPEOS Stimulation (endorphine massage stimulation, oxytocin and suggestive massage), the Dependent Variable Let Down Reflex and smooth breast milk production. The study population was thirty post-section cesarean mothers on the second to third day

who gave birth in the delivery and postpartum rooms at DR.H Regional Hospital. slamet Martodirdjo Pamekasan. The sampling technique is Quota purposive sampling technique. In this research design there are 2 groups, each of which was chosen accidentally, namely the intervention group and the control group.

The first group (intervention group) was 15 Post Sectio Caesarea mothers on the first and second days who were given SPEOS treatment (endorphin massage stimulation, oxytocin and suggestion) and then their Let down reflex and the amount of breast milk production were measured. And the second group (control group) which was not given SPEOS intervention (endorphine massage stimulation, oxytocin and suggestion) was then observed for Let down reflex and observation of the flow of breast milk which included frequency and characteristics of urination, frequency, color and characteristics of defecation, and number of hours of sleep. Meanwhile, let down reflex indicators include breast milk seeping from the mother's nipple without squeezing the breast, tingling/tingling sensation during breastfeeding due to the flow of breast milk, the breast feeling full, the mother feeling thirsty and the uterus feeling sore (painful) during breastfeeding. Data analysis in this research uses data processing with SPSS using Univariate and Bivariate Analysis, namely the T-Test.

III. RESULT AND DISCUSSION

Table 1. Distribution of Characteristics of Postpartum Women Post Sectio Caesarea at RSUD Dr. H. Slamet Martodirdjo Pamekasan.

No	Karakteristik	Jumlah	
		Frekuensi	%
1.	Umur		
	17 - 25 tahun	5	17%
	26 – 35 tahun	15	50%
	36 – 45 tahun	10	33%
	≥ 46 tahun	0	0%
2.	Pendidikan		
	Tidak sekolah	0	0%
	SD / Sederajat	5	17%
	SLTP / Sederajat	6	20%
	SLTA / Sederajat	17	57%
	Akademik / PT	2	7%
3.	Pekerjaan		
	IRT	23	77%
	PNS	0	0%
	Wiraswasta	2	7%
	Swasta	2	7%
	Petani	3	10%
4.	Paritas		
	1x	10	33%
	2-4x	20	67%
	≥ 5x	0	0%

Based on table 1, the results showed that the characteristics of the 30 highest respondents aged 26 - 35 years were 15 respondents (50%), with the majority of respondents' education being high school/equivalent as many as 17 respondents (57%), the majority of respondents' work as housewives as many as 23 respondents (77%) , with a majority of 2-4x parity of 20 respondents (67%). The SPEOS research was also carried out on postpartum mothers with an average age of 26-45 years, namely. According to the best age for giving birth is 20 to 35 years, because this age is one of the factors that influences breast milk production. Mothers who are in a healthy reproductive period with an age of less than 35 years produce more breast milk than mothers who are older, but very young mothers with an age of less than 20 years also produce less breast milk because it is seen from the level of maturity, but in research In this confounding analysis, age is not a factor that influences breast milk production. The results of the study showed that the average increase in breast milk production in week 1 was an average of 96.17 ml with P 0.05, while weeks 2, 3 and 4 were almost the same.[11]. Furthermore, the results of the research were carried out on the majority

of multiparous postpartum mothers so that the things that influence breast milk production are parity and breastfeeding experience. In the research, the results showed that there were 16 respondents who fell into the primipara criteria and had no breastfeeding experience and 11 multiparous respondents who already had breastfeeding experience. Mothers' experiences can increase information about efforts to increase breast milk production, so that the higher the parity, the better the breastfeeding.[3]

Table 2. Differences in the Frequency Distribution of Let Down Reflex in Post Sectio # Caesarea Mothers on Days 2 and 3 at RSUD Dr. H. Slamet Martodirdjo Pamekasan in 2023 For control and treatment group.

No	Let Down Refleks	Kontrol				Perlakuan			
		Hari ke 2		Hari ke 3		Hari ke 2		Hari ke 3	
		Frekuensi	%	Frekuensi	%	Frekuensi	%	Frekuensi	%
1	Kurang	11	73%	11	73%	13	87%	3	20%
2	Baik	4	27%	4	27%	2	13%	12	80%

Based on table 2, it shows that on the second day of Post Sectio Caesarea mothers who were not given treatment in the form of SPEOS massage (Endorphine Massage Stimulation, Oxytocin and Suggestive Massage) as many as 15 people, 4 people (27%) got good let down reflex and on the third day those who did not 15 people were given treatment in the form of SPEOS massage (Endorphine Massage Stimulation, Oxytocin and Suggestive Massage), 4 people (27%) got good let down reflex, so it can be concluded that the results were the same in the control group or they were not given SPEOS treatment on the second day and third. Meanwhile, on the second day of Post Sectio Caesarea mothers who were given intervention in the form of SPEOS massage (Endorphine Massage Stimulation, Oxytocin and Suggestive Massage) as many as 15 people, 2 people (13%) obtained good let down reflexes. And on the third day of Post Sectio Caesarea mothers who were given intervention in the form of SPEOS massage (Endorphine Massage Stimulation, Oxytocin and Suggestive Massage) as many as 15 people, the majority of them had good let down reflexes, 12 people (80%). In the treatment group, the results obtained were quite high improvements in the Let Down Reflex on the second and third days, this was due to the influence of giving SPEOS (Endorphine Massage Stimulation, Oxytocin and Suggestive Massage) which was carried out regularly by the respondent's husband or family.

There are three actions carried out in the SPEOS method, namely oxytocin massage, endorphin massage and giving suggestive sentences. Oxytocin massage given for 15 minutes every day twice can increase breast milk production. Oxytocin massage will be more effective if given twice a day. Oxytocin is a hormone from the hypothalamic neuronal nuclei cells stored in the posterior lobe of the pituitary which stimulates muscle contractions around the breasts (alveoli). This hormone plays a role in uterine contractions and injecting breast milk, namely the let-down reflex. [12]. Endorphin massage provides calm, and can reduce pain. Happiness, creativity, stress and blood pressure can be overcome with endorphin massage. Light touch on the neck, back and arms will stimulate the hypothalamus to produce endorphins which help release the hormone oxytocin [17]. The suggestions given to the mother will have a relaxing effect. Feelings of stress, anxiety or psychological problems that commonly occur in primiparous mothers and post-Caesarean mothers can be resolved. The feeling of calm, comfort and happiness is a relaxing effect that can increase the hormones prolactin and oxytocin to facilitate breast milk production.[14].

Table 3. Differences in Frequency Distribution of Smooth Breast Milk Production among Mothers Post Sectio Caesarea Day 2 and 3 at RSUD Dr. H. Slamet Martodirdjo Pamekasan 2023 for control and treatment group.

No	Kelancaran Produksi ASI	Kontrol				Perlakuan			
		Hari ke 2		Hari ke 3		Hari ke 2		Hari ke 3	
		Frekuensi	%	Frekuensi	%	Frekuensi	%	Frekuensi	%
1	Tidak Lancar	8	53%	8	53%	13	87%	1	7%
2	Lancar	7	47%	7	47%	2	13%	14	93%

Based on table 3, it shows that 15 Post Sectio Caesarea mothers who were not given treatment in the form of SPEOS massage (Endorphine Massage Stimulation, Oxytocin and Suggestive Massage) received smooth breast milk production on the third day and 7 post Sectio Caesarea mothers on the third day. 15

people who were not given treatment in the form of SPEOS massage (Endorphine Massage Stimulation, Oxytocin and Suggestive Massage), found smooth breast milk production in 7 people (47%). This shows the same results in the control group, there is no difference in the smoothness of breast milk production on the second and third days in the group that was not given SPEOS treatment. Meanwhile, on the second day of post-cesarean section mothers who were given intervention in the form of SPEOS massage (Endorphine Massage Stimulation, Oxytocin and Suggestive Massage) as many as 15 people, there were 2 people (13%) who received smooth breast milk production and on the third day of post-cesarean section mothers who were given intervention in the form of SPEOS massage (Endorphine Massage Stimulation, Oxytocin and Suggestive Massage) for 15 people, it was found that almost all of them had smooth breast milk production for 14 people (93%).

Meanwhile, in the treatment group that received SPEOS massage, there was a significant increase in the smooth production of breast milk. Of course, this can help the exclusive breastfeeding program for mothers post sectio caesarea. The results of statistical tests using a paired sample t test on the control group showed results of sig-2 tailed = 1,000 > 0.05, meaning that there was no difference in the let down reflex and smoothness of breast milk production in the control group. The results of statistical tests using a paired sample t test on the treatment group showed the results of sig-2 tailed = 0.000 < 0.05, meaning that there was a difference in the let down reflex and smoothness of breast milk production in the treatment group after being given the SPEOS intervention, so the hypothesis was accepted, meaning there was a Combination Effect of SPEOS (Stimulation). Endorphine Massage, Oxytocin and Suggestive Massage) on the Success of Let Down Reflex and Smooth Breast Milk Production for Post Partum Mothers at Dr. Hospital. H. Slamet Martodirdjo Pamekasan in 2023. The SPEOS method is an action to increase breast milk production by seeing that the mother is not only helped physically but psychologically. The mother's stress, lack of self-confidence, anxiety, fear and restlessness, surgery and anesthesia can affect the flow of breast milk because it affects the performance of oxytocin and prolactin [12,15]. The SPEOS method is carried out by massaging the back on both sides along the spine from the cervical spine to the waist using the thumbs with circular movements on the right and left of the spine 1cm each [16].

Swedish massage on the back starting from the neck to the lower border of the scapula around the spine for 15 minutes will stimulate oxytocin in the blood, the hormone adenocorticotropin (ACTH) decreases, nitric oxide levels decrease and beta endorphin decreases [17]. In research on Post Sectio Caesarea mothers, the SPEOS method also helped facilitate breast milk production by giving it 30 minutes/day for 3 days. There was a difference in breast milk production in the group given the SPEOS method intervention and the group not given the intervention, where breast milk production after the intervention was in the sufficient category. The SPEOS method is more effective for postpartum mothers with problems expressing breast milk with a p value of 0.000 [18]. This is in line with Rosyidah's research that the hormone oxytocin will increase, beta endorphin levels and ACTH hormone levels will decrease if someone is given a back massage [9]. Giving a massage to the mother's spine can have a relaxing or calming effect, when the mother's subconscious mind is relaxed, the subconscious mind becomes active so that the mother can be easily influenced by positive suggestions which can increase the mother's confidence in the breastfeeding process. [10].

IV. CONCLUSION

The conclusion of this research is that there is an influence of the combination of SPEOS (Endorphine Massage Stimulation, Oxytocin and Suggestive Massage) on the success of the Let Down Reflex and the smooth production of breast milk in post-cesarean mothers.

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REFERENCES

- [1] Melyansari, R., Sartika, Y., & Vitriani, O. (2018). Pengaruh Metode Stimulasi Pijat Endorphine, Oksitosin, Dan Sugestif (SPEOS) Terhadap Produksi Asi Ibu Nifas Di Bidan Praktik Mandiri Siti Juleha Pekanbaru. *Jurnal Ibu dan Anak*, 6(2), 68-73..
- [2] Pramesti, L. D., Dewi, M., & Gayatri, M. (2022). Literature Review: Pengaruh Relaktasi Suplementer Dikombinasikan Dengan Metode “SPEOS”(Stimulasi Pijat Endorfin, Oksitosin, Dan Sugestif) Terhadap Durasi Relaktasi Pada Ibu Menyusui. *Journal of Issues in Midwifery*, 6(2), 88-96.
- [3] K Elisa, E., Septiariani, L. L., & Lestari, K. P. (2020). Pengaruh Metode SPEOS (Stimulasi Pijat Endorfin Oksitosin Sugestif) Terhadap Produksi ASI Pada Ibu Nifas. *Indonesian Journal of Nursing Research (IJNR)*, 3(1), 18-25.
- [4] Pramesti, L. D., Dewi, M., & Gayatri, M. (2022). Literature Review: Pengaruh Relaktasi Suplementer Dikombinasikan Dengan Metode “SPEOS”(Stimulasi Pijat Endorfin, Oksitosin, Dan Sugestif) Terhadap Durasi Relaktasi Pada Ibu Menyusui. *Journal of Issues in Midwifery*, 6(2), 88-96.
- [5] Arsi, R., Rejeki, S., & Zulfa, A. (2021). Metode Speos (Stimulasi Pijat Endorphin, Oksitosin, Dan Sugestif) Dalam Meningkatkan Produksi Asi Ibu Post Partum. *Jurnal Ilmu Keperawatan Maternitas*, 4(1), 1-14. DOI: [10.26714/mki.4.2.2021.140-148](https://doi.org/10.26714/mki.4.2.2021.140-148)
- [6] 120/Yunita, L. Y., & Murni, N. N. A. (2019). Perbedaan Produksi Ibu Nifas Pada Metode SPEOS (Stimulasi Pijat Endorphin Oksitosin Dan Sugestif) Dan Metode Marmet Di Wilayah Kerja Puskesmas Karang Pule Tahun 2019. *Jurnal Kebidanan*, 8(1), 8-15.
- [7] Silviani, Y. E., Fitriani, D., & Fitri, E. (2023). Pengaruh Terapi Pijat Oksitosin Terhadap Kelancaran ASI pada Ibu Nifas di Wilayah Kerja Puskesmas M. Taha Bengkulu Selatan. *Jurnal Kesehatan Medika Udayana*, 9(01), 53-68. DOI [10.24843/eum](https://doi.org/10.24843/eum)
- [8] Arsi, R., Rejeki, S., & Zulfa, A. (2021). Metode Speos (Stimulasi Pijat Endorphin, Oksitosin, Dan Sugestif) Dalam Meningkatkan Produksi Asi Ibu Post Partum. *Jurnal Ilmu Keperawatan Maternitas*, 4(1), 1-14.
- [9] Rosyidah R, Azizah N. Efektifitas Back Massage Menggunakan Minyak Esensial Clary Sage terhadap Produksi ASI Pada Ibu Nifas Pasca Bedah Sesarea. *J Issues Midwifery* 2018;2:46–52. <https://doi.org/10.21776/ub.joim.2018.002.02.5>.
- [10] Lestari I, Rahmawati I, Windarti E, Hariyono. Speos (Stimulation of endorphin, oxytocin and suggestive): Intervention to improvement of breastfeeding production. *Medico-Legal Updat* 2019;19:210–5. <https://doi.org/10.5958/0974-1283.2019.00042.2>.
- [11] Nugraheni, D. E., & Heryati, K. (2017). Metode speos (stimulasi pijat endorphin, oksitosin dan sugestif) dapat meningkatkan produksi ASI dan peningkatan berat badan bayi. *Jurnal Kesehatan*, 8(1), 1-7.
- [12] Doko tabita mariana, Aristiati K, Hadisaputro S. Pengaruh Pijat Oksitosin Oleh Suami terhadap Peningkatan Produksi ASI pada Ibu Nifas. *J Keperawatan Silampari* 2019;2:66– 86. https://doi.org/https://doi.org/10.31539/j_ks.v2i2.529 PENGARUH.
- [13] Anuhgera DE, Panjaitan EF, Pardede DW, Breast K, Massage E, Colostrum S. Pengeluaran Kolostrum dengan Pemberian Perawatan Payudara dan Endorphin Massage pada Ibu Post Seksio Sesaria. *J Peneliti Kebidanan Kespro* 2019;2.
- [14] Lestari NW, Fajria L. Pengetahuan , sikap tentang ASI (Air Susu Ibu) dan keterampilan suami ibu nifas dalam melakukan metode SPEOS (Stimulasi Pijat Endorphin , Oksitosin, dan Sugestif). *Holistik J Kesehat* 2020;14:321–31. DOI: [10.333024](https://doi.org/10.333024)
- [15] Nurhayati E. The Effect of Speos Method on Increasing Breast Milk among Mother with Post Section Caesaria in Pelni Hospital, Jakarta. *Int J Nurs Heal Serv* 2020;3:622–31. <https://doi.org/10.35654/ijnhs.v3i5.370>.
- [16] Mas’adah, Rusmini. Teknik Melancarkan Asi Pada Ibu Post Sectio Caesaria. *J Kesehat Prima* 2015;9:1495–505.
- [17] Dewi APS, Dasuki D, Kartini F. Efek Pijat Punggung terhadap Produksi ASI pada Ibu Pasca Bedah Sesar. *J Kesmas Indones* 2017;9:1–9.
- [18] DOI: <http://dx.doi.org/10.33657/jurkessia.v14i1>
- [19] Sari, D. P., Rahayu, heni esti, & Rohmayanti. (2017). Pengaruh Metode SPEOS Terhadap Produksi Asi pada Ibu Post Seksio Sesarea di Rumah Sakit Umum Daerah Tidar Kota Magelang Tahun 2017. *Urecol*, 183–190.