



The Effect of Speos Method on Increasing Breast Milk among Mother with Post Section Caesaria in Pelni Hospital, Jakarta

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Abstract. In Jakarta, the proportion of low birth weight is 6.0%. LBW has difficulty adapting to extra-uterine life. This is due to the organ systems' inability, such as the lungs, heart, kidneys, liver, and digestive system. The SPEOS method can be used to increase breast milk production in mothers. This study aims to identify whether there is an effect of the SPEOS method on the increase in breast milk production in post-section caesarian mothers at Pelni Hospital, Jakarta. The sample used was Post-Caesaria Section Patients with 64 respondents. The method used was a quasi-experiment with a pre-test and post-test control group design approach. The statistical test used was the paired-sample t-test, so breast milk production was p-value <0.05. This shows a significant effect between the SPOES method on the increase in milk production in post-section caesarian mothers at Pelni Hospital, Jakarta. It is suggested that PELNI Hospital Jakarta need to implement a new policy so that breast milk production increases with the SPEOS method in Post Sectio patients.

Keyword: breast milk, Sectio caesarian, speos method



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INTRODUCTION

The Infant Mortality Rate (IMR) in the world is still high. Based on UNICEF data, the infant mortality rate in the world reaches more than 10 million deaths. Of the 10 million infant deaths, nearly 90% of infant deaths occur in developing countries. Based on WHO 2011, the infant mortality rate in Indonesia is 35.3 per 1000 live births. This statistic is higher than other ASEAN countries such as Malaysia, which is 6.3 per 1000 live births, Thailand is 13 per 1000 live births, and Singapore is 2.6 per 1000 live births (1).

The mortality rate for infants and children under five in Indonesia is still relatively high. The 2015-2030 Sustainable Development Goals (SDGs) are committed to reducing the Infant Mortality Rate (IMR). SDGs have 17 goals and 169 targets. The first, second, and third objectives relate to health. Meanwhile, the purpose associated with IMR reduction is the third goal, namely by targeting the IMR 12 reduction per 1,000 live births. According to the Indonesian Demographic and Health Survey (IDHS), in 2007, the infant mortality rate was 34 per 1000 live births (2).

In Southeast Asia, the achievement of exclusive breastfeeding shows that the number is not much different. In comparison, complete breastfeeding coverage in India has reached 46%, in the Philippines 34%, in Vietnam, 27%, and 24% in Myanmar (3). It is reported globally that exclusive breastfeeding is below 40%; the rate of exclusive breastfeeding in Indonesia is lower than the global rate (4). According to basic health research in 2018, the proportion of exclusive breastfeeding at the age of 0-5 months for boys is 38.7% and for girls is 35.9% (5).

Breastfeeding from an early age has a positive impact on both mother and baby. For babies, breastfeeding plays an essential role in supporting the baby's growth, health, and survival because breast milk is rich in nutrients and antibodies and can reduce infant morbidity and mortality (5).

Exclusive breastfeeding aims to ensure the baby's right to receive exclusive breastfeeding from birth to 6 months of age. Thus, every mother who gives birth must provide exclusive breastfeeding to the baby she is born with (PP No. 23 of 2012). The baby's growth and development are seen from the beginning of birth, namely the baby's weight. Low Birth Weight (LBW) is a baby who weighs less than 2,500 grams at birth regardless of gestational age. Infants with low birth weight are among the main factors in increasing infant mortality and morbidity, especially during the perinatal period. According to the 2018 Riskesdas data, the proportion of birth weight <2500 grams in Indonesia is 6.2%. In Jakarta, the proportion of low birth weight is 6.0%. LBW has difficulty adapting to extra-uterine life due to the body's organ systems' inability, such as the lungs, heart, kidneys, liver, and digestive system (6).

Several problems often cause failure in the breastfeeding process. The issues that cause mothers to fail to breastfeed are blistered nipples, swollen breasts (breast milk dam), mastitis, and breast abscesses (7). Breast milk dam is milk ducts due to narrowing of the lactiferous ducts by glands that are not emptied entirely or due to abnormalities in the nipple. Swollen breasts usually occur after delivery on the third or fourth day. Dams of breast milk cause fever, breast pain, red breasts, swollen breasts, and hardened breasts. It can affect the breastfeeding process (8).

It shows that early breastfeeding success is also influenced by the condition of the mother and baby. Post-cesarean section mothers need time to recover due to the effects of anesthesia and the pain caused by the section wound. Several hospitals that do not apply rooming because the mother still needs supervision is weak and cannot care for her baby will result in the breastfeeding process being delayed. The delayed breastfeeding process will cause the mother to stop breastfeeding. A previous study showed that mothers who birth with cesarean section are three times more likely to stop breastfeeding in the first month postpartum due to non-IMD delay in breastfeeding compared to mothers who give birth naturally (9).

The SPEOS method can be used to increase breast milk production in mothers. One way that is still rarely used to stimulate breast milk productivity is the SPEOS method. The SPEOS method is a combination of stimulation of endorphin massage, oxytocin massage, and suggestive. The SPEOS method concept is that a mother who breastfeeds is not only seen

or assisted from the physical aspect, but the psychological adaptation process is also a study (10).

In addition to the mother getting comfort when it occurs, the mother is also raised with the confidence or suggestions that the mother's milk will come out quickly. One way to accelerate the lactation process to support exclusive breastfeeding is by combining stimulation of endorphin massage, oxytocin massage, and suggestive giving. Endorphin massage can stimulate the release of endorphin hormones and stimulate the prolactin and oxytocin reflexes, thereby increasing the volume of breast milk production. Oxytocin massage also helps boost the hormone oxytocin, and this massage is carried out in the cervical spine area, back, or along the spine to the fifth to sixth rib bones. Suggestive techniques were used to prepare the milk to flow smoothly and meet the baby's needs from the first day of the study (10).

The questionnaires used in this study were the BBAT questionnaire and the observation sheet. The questionnaire on breastfeeding production knowledge was seen from the BBAT (Breastfeeding Assessment Tools), which consists of 4 BBAT items that have been tested for validity with results (Cronbach's alpha = 0.668) and $p = 0.002$ (11).

The results of a preliminary study conducted at Pelni Hospital in June 2018 - August 2018 found 46 section patients treated were faced with complaints of pain and swelling around the breasts. On August 31st of 46, Sectio Secaria patients had a fever, swelling, and the milk cannot come out to not breastfeed and increase the loss of hospitalization is getting longer, but the baby's weight decreases gradually. In August 2018 - October 2018, 57 patients were undergoing cesarean section, and 42 of them had breastfeeding problems. In October 2018 - November 2018, 52 patients had a cesarean section, and 49 of them also experienced breastfeeding problems. The total number of Sectio Caesaria patients without indication at PELNI Hospital from January 2018 - December 2018 in 180 patients. The increase in breastfeeding in mothers who have had a monthly cesarean section at Pelni Hospital has caused new problems in service quality. At Pelni Hospital, no one has used the SPEOS method in patients after sectarian surgery who have difficulty producing milk production and breastfeeding problems.

OBJECTIVE

This study aims to identify the SPEOS method's effect on increasing breast milk production in post-section caesarian mothers.

METHOD

Research design is a model or method used by researchers to conduct research that provides direction for the study. The research design is determined based on the research objectives and hypotheses (12).

This study's research design was a quasi-experimental research design with a pre-test and post-test control group design. This design shows that two groups consist of an experimental group and a control group. The two groups are pre-tested before being given treatment to determine the difference in the group's initial conditions. After that, the intervention was given to the intervention group, but not to the control group. Post-tests were carried out in both groups after the implementation process. In this study's design, mother respondents were asked to fill out a questionnaire about mothers' characteristics from age, education, occupation, and knowledge about milk production, smoothness of breastfeeding, management of swelling in breast milk before training and after training. Then observe milk production after being given SPEOS massage in the intervention group and observe milk production. This study links the SPEOS method's effect on the increase in breast milk production in post-section caesarian mothers at Pelni Hospital.

RESULTS

Characteristic of respondents

Table 1 explains the characteristic of respondents based on age. The results showed that most of the experimental group respondents were 20-35 years old (65,6%), and respondents in the control group 20-35 years old were 50%.

Tabel 1. Characteristic of respondents based on aged (n=64)

| Group | | F | % | Mean | Median | SD |
|--------------------|-------------|----|-------|------|--------|-------|
| Intervention group | < 20 year | 6 | 18.8% | 0.97 | 1.00 | 0.595 |
| | 20-35 year | 21 | 65.6% | | | |
| | > 35 year | 5 | 15.6% | | | |
| | Total | 32 | 100% | | | |
| Control group | < 20 years | 6 | 18.8% | 1.13 | 1.00 | 0.707 |
| | 20-35 tahun | 16 | 50% | | | |
| | > 35 years | 10 | 31.3% | | | |
| | Total | 32 | 100% | | | |

Table 2 explains the characteristic of respondents based on education level. The results showed that most of the respondents in both the experimental group (71.9%) and control group (78.1%) were bachelor of education level.

Tabel 2. Characteristic of respondents based on education (n=64)

| Group | | F | % | Mean | Median | SD |
|--------------------|------------------|----|-------|------|--------|-----|
| Intervention group | Secondary school | 2 | 6.3% | 2.66 | 3.00 | 0.6 |
| | High school | 7 | 21.9% | | | |
| | Bachelor level | 23 | 71.9% | | | |
| | Total | 32 | 100% | | | |
| Control group | Secondary school | 1 | 3.1% | 2.75 | 3.00 | 0.5 |
| | High school | 6 | 18.8% | | | |
| | Bachelor level | 25 | 78.1% | | | |
| | Total | 32 | 100% | | | |

Table 3 explains the characteristic of respondents based on occupation. The results found that most of the respondents in the experimental group (71.9%) and the control group (81.3%) worked in the Pelni Hospital.

Tabel 3. Characteristic of respondents based on occupation (n=64)

| Group | | F | % | Mean | Median | SD |
|--------------------|-------------|----|-------|------|--------|-------|
| Intervention group | Working | 23 | 71.9% | 0.28 | 0.00 | 0.457 |
| | Not working | 9 | 28.1% | | | |
| | Total | 32 | 100% | | | |
| Control group | Working | 26 | 81.3% | 0.19 | 0.00 | 0.397 |
| | Not working | 6 | 18.8% | | | |
| | Total | 32 | 100% | | | |

Level of knowledge among mother post of section caesarian

Table 4 described the level of knowledge among mother posts of section caesarian. The findings found that from 64 respondents, 46.9% of respondents in the experimental group have a higher level of knowledge, whereas half of the respondents in the control group have high knowledge (50%).

Table 4. Level of knowledge among mother post of section caesarian (n=64)

| Group | | F | % | Mean | Median | Std Dev |
|--------------------|----------|----|-------|------|--------|---------|
| Intervention group | Low | 12 | 37.5% | 1.34 | 1.00 | 0.483 |
| | Moderate | 5 | 15.6% | | | |
| | High | 15 | 46.9% | | | |
| | Total | 32 | 100% | | | |
| Control group | Low | 8 | 25% | 1.66 | 2.00 | 0.483 |
| | Moderate | 8 | 25% | | | |
| | High | 16 | 50% | | | |
| | Total | 32 | 100% | | | |

Breast milk production

Table 5 explains the breast milk production on the first day after section caesarian. The results found that respondents in the experimental group with 50 cc breast milk production on the first day after section caesarian were 65.6%. The control group showed only 53.1% of respondents have 50 cc breast milk production on the first day after section caesarian.

Table 5. Breast milk production on the first day after section caesarian (n=64)

| Group | CC | F | % |
|--------------------|-------|----|-------|
| Intervention group | 20 | 1 | 3.1% |
| | 30 | 1 | 3.1% |
| | 40 | 3 | 9.4% |
| | 50 | 21 | 65.6% |
| | 70 | 1 | 3.1% |
| | 80 | 1 | 3.1% |
| | 100 | 4 | 12.5% |
| | Total | 32 | 100% |
| Control group | 35 | 1 | 3.1% |
| | 40 | 9 | 28.1% |
| | 50 | 17 | 53.1% |
| | 60 | 1 | 3.1% |
| | 80 | 2 | 6.3% |
| | 100 | 2 | 6.3% |
| | Total | 32 | 100% |

Table 6 explains breast milk production on the second day after section caesarian. The findings described that on the second day of section caesarian, the breast milk production among the experimental group with 90 cc 18.8 %, and the control group who have 50 cc was 21.9%.

Tabel 6. Breast milk production on the second day after section caesarian (n=64)

| Group | CC | F | % |
|--------------------|-----|------|-------|
| Intervention group | 50 | 1 | 3.1% |
| | 55 | 1 | 3.1% |
| | 60 | 5 | 15.6% |
| | 65 | 1 | 3.1% |
| | 70 | 4 | 12.5% |
| | 75 | 1 | 3.1% |
| | 80 | 6 | 18.8% |
| | 90 | 6 | 18.8% |
| | 100 | 3 | 9.4% |
| | 110 | 1 | 3.1% |
| | 115 | 1 | 3.1% |
| | 120 | 1 | 3.1% |
| 124 | 1 | 3.1% | |

| | | | |
|---------------|-------|----|--------|
| | Total | 32 | 100,0% |
| Control group | 30 | 2 | 6.3% |
| | 40 | 2 | 6.3% |
| | 50 | 7 | 21.9% |
| | 55 | 1 | 3.1% |
| | 60 | 6 | 18.8% |
| | 65 | 4 | 12.5% |
| | 70 | 5 | 15.6% |
| | 75 | 1 | 3.1% |
| | 85 | 2 | 6.3% |
| | 100 | 1 | 3.1% |
| | 110 | 1 | 3.1% |
| | Total | 32 | 100.0% |

Table 7 explains breast milk production on the third day after section caesarian (n=64). Patients in the experimental group who have 120 cc of breast milk production was 25 %. In contrast, patients in the control group who have 80 cc of breast milk production was 15.6%.

Tabel 7. Breast milk production on the third day after section caesarian (n=64)

| Group | CC | F | % |
|--------------------|-------|----|-------|
| Intervention group | 90 | 3 | 9.4% |
| | 95 | 1 | 3.1% |
| | 100 | 5 | 15.6% |
| | 110 | 3 | 9.4% |
| | 115 | 2 | 6.3% |
| | 120 | 8 | 25.0% |
| | 125 | 1 | 3.1% |
| | 130 | 4 | 12.5% |
| | 140 | 3 | 9.4% |
| | 145 | 1 | 3.1% |
| | 180 | 1 | 3.1% |
| | Total | 32 | 100% |
| Control group | 20 | 2 | 6.3% |
| | 40 | 3 | 9.4% |
| | 50 | 1 | 3.1% |
| | 60 | 3 | 9.4% |
| | 65 | 2 | 6.3% |
| | 70 | 3 | 9.4% |
| | 75 | 4 | 12.5% |
| | 80 | 5 | 15.6% |
| | 85 | 1 | 3.1% |
| | 90 | 5 | 15.6% |

| | | |
|-------|----|------|
| 100 | 1 | 3.1% |
| 110 | 1 | 3.1% |
| 120 | 1 | 3.1% |
| Total | 32 | 100% |

The effect of the SPEOS method on breast milk production among the experimental group and the control group

Table 8 described the SPOES method's impact on breast milk production among the experimental and control groups. The results explained that respondents in the experimental group who received not standard SPEOS method, only 10% produced 51-100 cc. Whereas respondents who received the good SPEOS, 81.8% produced the 51-100 of milk

Among the control group, 15% of respondents produced 51-100cc breast milk, and 75% of respondents who received a suitable SPEOS method produced 51-100cc of breast milk. The significance level showed that the SPEOS method positively affects breast milk production among the intervention group ($p < 0.05$).

Tabel 8. The effect of SPOES method on breast milk production among the experimental group and the control group (n=64)

| SPEOS Method | Intervention | | p-value | Control | | p-value |
|--------------|--------------|-------------|---------|-----------|-----------|---------|
| | 0-50 cc | 51-100 cc | | 0-50 cc | 51-100 cc | |
| Not standard | 9 90% | 1 10% | 0.000 | 17 85% | 3 15% | 0.001 |
| Good | 4 18,2% | 18 81,8% | | 3 25% | 9 75% | |

DISCUSSION

Based on the analysis of the effect of the SPOES method on the increase in breast milk production in post section caesarian mothers at Pelni Hospital, Jakarta. It shows that from the calculation of the paired-sample t-test, the pre and post breast milk production p-value (Asymp. Sig 2 tailed) is 0.000. If sig. (2-tailed) < 0.05 , then it can be concluded that H_a is accepted, which means an effect of the SPEOS method on the increase in breast milk production in post-section caesarian mothers at Pelni Hospital, Jakarta.

The results of this study are following the theoretical basis, according to Sari (2017), which states that the SPEOS method can be used to increase breast milk production in mothers. One way that is rarely used to stimulate breast milk productivity is the SPEOS method (10).

The SPEOS method is a combination of stimulation of endorphin massage, oxytocin massage, and suggestive. The SPEOS method concept is that a mother who breastfeeds is not only viewed or assisted from the physical aspect, but the psychological adaptation process is also a study. In addition to the mother getting comfort when it occurs, the mother is also raised with the confidence or suggestions that the mother's milk will come out quickly. One way to accelerate the lactation process to support the process of exclusive breastfeeding.

It can be done by combining stimulation of endorphin massage, oxytocin massage, and suggestive giving. Endorphin massage can stimulate the release of endorphin hormones and

stimulate the prolactin and oxytocin reflexes, thereby increasing the volume of breast milk production. Oxytocin massage also stimulates the hormone oxytocin, and this massage is carried out in the cervical spine area, back, or along the spine to the fifth to sixth rib bones. Suggestive techniques are used to prepare the milk to flow smoothly and meet the baby's needs from the first day of birth.

This study's results follow Sari's (2017) study entitled "The Effect of the SPEOS Method on Breast Milk Production in Post Section Cesarea Women at the Regional General Hospital of Tidar, Magelang City in 2017". It was found that the SPEOS method in post-section cesarean mothers for breast milk production was beneficial. With the problem of breastfeeding with p-value 0.000 ($p < 0.05$). Postpartum breast milk production after being given the SPEOS method intervention, all mothers successfully breastfed because their milk production was sufficient with a p-value of 0.000 ($P < 0.05$) (10). What this research has in common with researchers are the quasi-experimental method and research samples. The difference between this study and the researcher is that it does not perform the Homogeneity test.

From the research results, theoretical basis, and previous research, it can be assumed that using the SPEOS method is proven to increase milk production, especially in mothers who undergo a delivery process with SC surgery. The SPEOS method is a combination of stimulation of endorphin massage, oxytocin massage, and suggestive. The SPEOS method concept is that a mother who breastfeeds is not only viewed or assisted from the physical aspect, but the psychological adaptation process is also a study. In addition to the mother getting comfort when it occurs, the mother is also raised with the confidence or suggestions that the mother's milk will come out quickly.

CONCLUSION

Based on this study's results, it is known that the characteristics of postpartum mothers with cesarean sections are mostly 20-35 years old, high school education, work work, and good knowledge. Breastmilk production in Post Partum mothers with Sectio Caesarea in the intervention group before treatment was mostly 50 cc and after treatment 120 cc. In the control group, most of the milk production before action was 50 cc, and after-action was 80 cc. The final result obtained is that there is a significant difference in the SPEOS method's provision to the increase in breast milk production in the control and intervention groups ($p < 0.05$).

It is hoped that the next research will further develop the factors that affect breast milk production and baby weight by using a random sampling technique so that it can better describe the population. Also, this study's results can be used as material for further research, especially in finding more effective methods of delivering health education materials about breastfeeding. According to the general, the material can be packaged more attractively to be applied in all health services. The low level of mothers' success in the breastfeeding process requires studying further and researching the influencing phenomena, including health service policies and health workers' role.

It is recommended that PELNI Hospital Jakarta implement a new policy so that breast milk production increases and newborn weight increases with the SPEOS method in Post Sectio patients.

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