

EFFECTIVENESS BACK MASSAGE FOR POSTPARTUM MOTHERS WHO EXPERIENCED CAESAREA SECTION AT PRIVATE HOSPITAL IN WEST JAKARTA

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ABSTRACT

Mothers who experienced Caesarea have delayed for coming out the breast milk, coming up longer than spontaneous labor, and this is because of mothers who gave birth to a section on the second-day postpartum would have low oxytocin and prolactin levels. The study utilized a quantitative research design with quasi-experimental design and post-test only with 96 of participants' Caesarea mother for three months. Data was analyzed using frequency; percentage and chi-square were utilized to determine the relationship of the profile of the participant and the effectiveness of the back massage to the colostrum coming up. Respondents who experienced colostrum spending on the first-day post back massage that 20-29-year-olds of 59.5 %, while those aged ≥ 30 years at 83.3 %. Chi-square test results p -value 0.135 means that there is no significant relationship between maternal age and expenditure in colostrum post back massage. The respondents who did back massage are 90.0 %. Chi-square test results p -value 0.000 means that there is a significant back massage with colostrum coming up for postpartum mother who experienced CS. The conclusion of the implementation of the back massage is an effective method for Colostrum coming up and recommends using the back massage for postpartum especially Caesarea mother.

Keywords: *Back massage, Breastfeeding and Caesarea section (CS)*

INTRODUCTION

Maternal mortality during the perinatal period is a measure of the ability of the health service of a State, and one of the specific indicators of health status. Mortality can be seen from the indicators of Maternal Mortality Rate (MMR) and Infant Mortality Rate (IMR). Most of the major causes of maternal deaths are directly known by the classic triad follows hemorrhage (28 %), eclampsia (24 %) and infections (11 %) that can occur during labor and postpartum. In addition, the indirect causes include: the mother suffers from chronic energy

malnutrition (KEK) and there are several conditions such as anemia (Hb less than 11 gr %) by 40 %. The cause of maternal death due to bleeding can be prevented by breastfeeding.

The cause of infant mortality by Bappenas (2010) in Indonesia by 46.2 %, 15.0 % diarrhea, and pneumonia was 12.7 %. Those data should be made for quick action to tackle high infant mortality. One of the actions that can be undertaken to improve the baby's immunity is to conduct Early Initiation of Breastfeeding (IMD) in newborns. Babies who directly performed IMD will quickly receive colostrum from the mother who had just given birth because colostrum contains immunoglobulin A (IgA) that help coat the baby's sensitive intestines and prevent bacteria entering the baby (Roesli, 2008).

On the first-day of birth, decrease of the breast milk production is caused by the lack of stimulation of the hormone prolactin and oxytocin (Mardila, 2014). On the second-day after the birth mother is the height of the milk production process, and causes swelling in the breast, if not well-treated, it will cause inflammation or mastitis (Jenny, 2006). Another problem arises during lactation begins in the immediate postnatal period. Complaints of pain in the nipple are because the nipple abrasions, putting the entrance, big nipples, causing the mother could not do the breastfeeding. The low understanding of mothers, families and the community about breastfeeding led to reduced support for nursing mothers. This happened also on documenting women who experience postpartum breastfeeding problems in a documentation room was created specifically. The role of nurses in an effort to prevent problems that can occur in mothers postpartum is by breast care as early as possible.

Breast care is an act and needs to be done by the mother after birth because on the second-day after the birth is the process of mounting the production of milk that causes a swelling in the breast (Scholicha, 2012). Massage movements performed on breast care is very helpful in processing the milk, which can prevent the problem, occurs in the mother such as swollen breasts, nipples are too big and abrasions.

Massage the breast includes massage oxytocin. Benefits of oxytocin massage therapy in mothers postpartum to stimulate the oxytocin reflex, or let-down reflex, making the mother's body relaxes and removes fatigue after giving birth, so as to stimulate the hormone oxytocin. Massage oxytocin is done by massaging the hip area along the side of the spinal mothers after childbirth (Albertina et al. 2015). Through massage or stimulation to the spinal cord, the neurotransmitters will stimulate medulla oblongata to send a message to the hypothalamus in hypofise posterior to secrete oxytocin so the breasts secrete breast milk (Endah et al. 2011).

Massage oketani (Kabir, 2011) and massage lactation (Selasi, 2013). Benefits of massage therapy oketani useful to increase the production and excretion of breast milk, make mammary gland becomes mature and more widely, and increased the production of the hormone prolactin and oxytocin in nursing mothers. The benefits of massage lactation (2013) for maternal postpartum can stabilize the condition of the mother's body relax, accelerate maternal blood circulation, prepares the breasts for breastfeeding, help breast un-engorged, and help mothers stop breastfeeding to breastfeeding again. Lactation massage consists of massage the face, breast massage, and back massage. The benefits of massage the back has the purpose to launch spending colostrum, through massage or stimulation of the spine and scapula, a neurotransmitter will stimulate the medulla oblongata directly send messages to the hypothalamus in hypofise posterior to secrete oxytocin so that the breasts secrete colostrum (Wahyu et al. 2013). The amount of colostrum produced is determined by gland alveoli in the breast if small amounts can affect spending colostrum (Moehyi, 2008). Doing some massage techniques will relax muscles of tension, relieve stress and make the hormone oxytocin will come out and help the process colostrum spending on maternal mothers.

Back massage technic of Vidayanti (2015) in mothers after Caesarea sections between intervention group and control group with a p-value of 0.006. Mothers who do a back massage using lavender essential oil is likely to have the smoothness of breast milk, while the other benefits of a back massage Patel (2013), which is given to breastfeeding mothers with indicators of the baby can be measured by several parameters shows the results, which are weight gain significantly, infant sleep duration was longer, more frequent urinating frequency also due to increased milk production. Various methods can be done to facilitate breastfeeding expenditure, Ayers (2014) reveals that there are a variety of alternative techniques to expedite the process of breastfeeding, including the use of herbs, acupuncture, imagery, massage, diet and the use of cabbage leaves. Oketani relaxing massage and massage lactation is a simple method that required for new mothers because it has benefits to increase breast milk production, the protein content of colostrum and colostrum carbohydrates (Machmudah et al. 2013). Based on research Patel (2013) shows the influence of a back massage on the process of postpartum lactation in mothers, it is very effective in increasing the volume of milk marked increase baby's weight. In Caesarea section breast milk spending longer than spontaneous labor,

Private Hospital in West Jakarta and provide BPJS facilities. January-December 2015 the number of patients in the postpartum room as many as 574 people and are having problems in the smooth expenditure colostrum is not done specifically on the subject of breastfeeding during treatment. Based on unstructured interviews Caesarea section patients often complain of not discharge the breast milk smoothly.

Based on the above data, the researchers are interested in taking the title “The Effectiveness of a back massage to the expenditure of colostrum for mother post-Caesarea section, which aims to tackle the above problems, and necessary to the preventive and promotive in improving the usefulness of breastfeeding by providing health education about breast care massage the back on breastfeeding mothers.

RESEARCH METHOD

The study utilized quantitative research design with quasy-experimental design and post-test only. The study Described the profile of the of participants such as age, education, and parity after Caesarea section. It also assessed the relationship of the profile of the participants to reviews their colostrum. Likewise, it also looked into the effectiveness of the intervention back massage for colostrum comes on the first, second and third day.

The population in this study were mothers with postpartum Caesarea section inward postpartum room in private hospitals from October to December 2015 amounted to 96 people. The sample in this study conducted by consecutive sampling. The sample was calculated using the formula Lwanga and Lemeshow, so the sample size in the study was 60 respondents consisting of 30 respondents’ intervention group, the control group of 30 respondents.

Data collection has been held in the post-partum room in private hospital West Jakarta. The research will be carried out by the researchers themselves by doing a back massage on postpartum maternal section Caesarea on the first day. Respondents were be divided into two groups of intervention and control groups. Researchers collect data about demographics and spending colostrum, then researchers observed in the control group, while the intervention group of the researcher to ask and to massage the back. Finally, the results was recorded on the questionnaire that has been prepared. Data collection as follows: the preparation phase, back massage, and data collection.

Researchers apply for permits to the private hospital and postpartum room to do research on the effects of back massage to the expenditure of colostrum in the mother post section

Caesarea. Massage was done in accordance with intervention protocol; massage offender is the researchers themselves. The duration of the massage is 15 minutes and performed on the first day and the second-day post-surgery section Caesarea. Location massage starts from the top of the gluteus muscles, the scapula to the shoulders. Data was collected through a questionnaire that includes colostrum out the first-day post-backs massage, colostrum out the second-day post- back massage, the respondent's name, age, education, and parity.

Data Analysis

The descriptive statistics were used to know the distribution, frequency, and percentage of the profiles Including age, education, and parity. The Chi-Square test was used to determine the relationship of the profile variable to come to the colostrum. Likewise, it also determined the effectiveness of the intervention back massage for coming colostrum on postpartum mothers undertaking Caesarea section.

RESULT

The Participant's Profile

Univariate analysis in this study is presented in a frequency distribution that includes the data characteristics of respondents: age, education, parity, back massage, and expenditure colostrum.

Table 1. Distribution of Respondents (Age, Level of Education, Paritas, Expenditure Colostrum) n = 60

Age	Frequency	Percent (%)
Respondents age 20-29 year	42	70.0
Respondents age $\geq$ 30 year	18	30.0
Level Education		
Low education	37	58.3
High education	23	41.7
Paritas		
Primiparas	35	58.3
Multiparas	25	41.7
Expenditures colostrum		
Post a back massage day 1	40	66.7
Post a back massage 2nd day	20	33.3
Total	60	100

Table 2. The Relationship between Characteristic Respondents on the Expenditure of Colostrum (n = 60)

Characteristics	Post Back Massage				Total	%	<i>p Value</i>
	Colostrum 1 st day	%	Colostrum 2 nd day	%			
Age							
20-29 Year	25	59.5	17	40.5	19	100	0, 135
≥ 30 Year	15	83.3	3	16.7	11	100	
Education							
Low	19	51.4	18	48.6	37	100	0, 004
High	21	91.3	2	8.7	23	100	
Paritas							
Primipara	16	45.7	19	54.3	35	100	0, 000
Multipara	24	96.0	1	4.0	25	100	

Table 2 shows that respondents who experienced colostrum spending on first-day post back massage that 20-29-year-olds of 59.5 %, while those aged ≥ 30 years at 83.3 %. Chi-square test results obtained *p* value 0.135 ($p > 0.05$) means that there is no significant relationship between maternal age and expenditure colostrum post back massage in postpartum care at private Hospital Jakarta.

The results of this study reinforced by Yuliana et al. (2016) which stated that there was no correlation between age and expenditure colostrum. During breastfeeding mothers age factor does not affect the expenditure of breast milk (Ogunlesi, 2013). The success of exclusive breastfeeding is precisely determined by a strong desire and conviction of the mother (Kurniawan, 2013). Mother with a strong desire and conviction can increase the confidence of mothers to breastfeed so that mothers can breastfeed longer than women who lack confidence (Masriyah et al. 2017).

This study is not in line with the research Albertina et al. (2012) which says that there is a relationship between the age of the mother with breastfeeding expenditure to the value of *p* value of 0.03 ($p > 0.05$). Maternal age more than 25 years of maturity in the process of thinking and can make the decision to breastfeed and is supported by the reproductive system is functioning properly so that the support in the process of formation and the production of milk (Al-Sahab et al. 2010).

Researchers assume that spending colostrum is not entirely affected by maternal age. Mothers with age 20-29 years or ≥ 30 years if they have enough information about

breastfeeding, and given the opportunity to do Early Initiation of Breastfeeding correctly or according to the procedure, especially in women who experience post caesarean section and supported by a strong self-confidence for breastfeeding, then it will affect spending early breast milk called colostrum.

Table 2 shows that respondents who have a higher education and experience colostrum spending the first-day post back massage as much as 91.3 %, while the less educated respondents and those with post-massage colostrum spending the first day as much as 51.4%. Statistical test results obtained a value of chi-square P value 0.004 ($p > 0.05$) means that there is a significant relationship between education spending colostrum. The results are consistent with research Al-Sahab et al. (2010) which says that the higher the mother's education will increase the curiosity which the mother tried to find out information about breastfeeding, so the impact on increasing knowledge about breastfeeding mothers who indicated breastfeeding behavior as soon as possible after delivery.

The results are consistent with research Widiyanto & Avianti (2012) that higher the education will affect the basis of one's ability to think and make decisions to breastfeed. The results of this study are not consistent with research Vidayanti (2015) in which no significant relationship between education spending colostrum. Breast milk initial outlay is influenced also by good nutrition plays an important role in the process of spending the colostrum.

Researchers believe the higher education, the mother will be encouraged to seek information about the benefits of breast milk so that it can change the behavior of mothers to breastfeed as soon as possible after birth, it will have an impact on the expenditure of colostrum.

According to the table 2 indicating that primiparas respondents who secrete colostrum on first day post back massage by 45.7 %, while respondents who issued colostrum multipara on first day post back massage by 96.0 %, from the chi-square test results obtained value of p value = 0.000 ($p < 0.05$) means that there is significant influence between parity with colostrum expenditure. The results are consistent with research Astuti (2014) in which the IMD delay condition, the mother multiparous not affecting the colostrum expenditure when compared to primiparous mothers. Multiparous mothers generally have previous breastfeeding experience so that these experiences can influence the behavior of mothers to breastfeed as soon as possible the impact on expenditure colostrum (Mimatun, 2010). This study is not in line with the research Patel and Gedam (2013) which states that the

primiparous faster out of his milk production than in multiparous. In primiparous mothers with physical and psychological preparation that has been prepared since the beginning of pregnancy as well as having a strong self-confidence to breastfeed will have an impact on the smooth process of spending colostrum. Researchers assume that spending colostrum is not completely influenced by parity. Mothers with parity primiparas if it has a physical and psychological preparation that has been prepared since the beginning of pregnancy and high maternal confidence to breastfeed it will affect the behavior of mothers to breastfeed soon it will affect the processing of colostrum.

Table 3. Effect of a Back Massage to The Expenditure of Colostrum in The Intervention and The Control Group (n = 60)

Back Massage	Expenditure Colostrum				Total	%	<i>p Value</i>
	1 st day	%	2 nd day	%			
No Massage	13	43.3	17	56.7	30	100	0.000
Massage	27	90.0	3	10.0	30	100	

Table 3 shows that respondents who did not do a back massage in the colostrum expenditure amounted to 43.3 %, while respondents who do a back massage in the colostrum expenditure amounted to 90.0 %. Chi-square test results obtained P value 0.000 ($p < 0.05$) means that there is significant influence between a back massage with colostrum expenditure.

The results are consistent with research Safitri et al. (2012) in which the postpartum mothers who do a back massage can stimulate lactation compared with women who did not do a back massage with a value of 0.029 value p ($p < 0.05$). After delivery of the placenta hormones estrogen and progesterone significantly decreased so that the hormone prolactin begin to produce milk and with the assistance of the baby sucking stimulation hormone oxytocin is secreted by the pituitary gland that causes the milk out (Scholichah, 2012). On the first day, postpartum decline in milk production occurs due to a lack of stimulation to stimulate the baby sucking the hormone oxytocin which is useful in the smooth expenditure ASI (Safitri et al. 2013).

The results of this study are not consistent with research Endah et al. (2011) showed that the oxytocin massage in back massage does not affect the length of time expenditure colostrum with P value 0.939 ($p > 0.05$). Lactation affected baby sucking. The amount of colostrum produced is determined by the alveoli glands, hormones oxytocin, and prolactin in the breast if small amounts can affect spending colostrum (Moehyi, 2008).

DISCUSSION

The expenditure of colostrum is related to behavior mothers to seek information about the benefits of breast milk so the behavior will be change such as early breastfeeding started after birth, massage the breast and pumping. The mothers act have an impact on the expenditure of colostrum.

According to the table 1 indicating that there is significant influence between parity with colostrum expenditure. Multiparous mothers generally have previous breastfeeding experience with early breastfeeding when there are any breast milk or not the behavior of mothers could stimulating the oxytocin hormone that influence on expenditure colostrum (Mimatun, 2010). In primiparous mothers with limited physical and psychological preparation, have low of the self-confidence to breastfeed, because they did not how and when to breastfeed their newborn because of pain after cesarean.

Researchers assume that a back massage done by five movements will make the mother to be relaxed, resulting in the hormone prolactin and oxytocin become an active impact on expenditure colostrum. Mother post caesarean section generally delayed first lactation resulting in a decrease in estrogen and progesterone hormones to slow down so that the lower production of the hormone oxytocin, which affects the milk or colostrum, is reduced. Another thing that causes the mother who gave birth to caesarean section will have low levels of the hormone prolactin and oxytocin due to many factors, among others, the incision surgical wounds that cause pain, causing discomfort, delayed mobilization of mothers, physical weakness mothers, as well as the influence anesthetic that caused the baby sleepy, so that the baby does not respond to breastfeed. Mothers who get massages very influential experience the smooth backs of colostrum expenditure compared with women who did not do a back massage, so she becomes relaxed and the hormone oxytocin will come out so that the mother can breastfeed as soon as possible. Back massage performed an alternative action given to the mother post caesarean section experiencing barriers colostrum expenditure.

CONCLUSION

The back massage for postpartum mothers who experienced caesarean section is effective to the expenditure of colostrum in private hospital West Jakarta in 2016. There is significantly (p -value 0.000) between groups intervention and control groups that the respondents were massaged faster expenditure colostrum compared with no receive back massage. The percentage of respondents were aged 20-29 years at 70.0 %, 61.7 % less

educated, primiparous parity 58.3 %, spending colostrum post first day back massage 66.7%. Respondents multipara colostrum coming up significantly faster than primiparous. Recommendation providing training to nurses and midwives regularly to improve their competence that can be applied for postpartum mothers with CS who have trouble spending colostrum.

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