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The Effectiveness Of Breast Care On Breast Milk Production Expenditure In Postpartum Mothers

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ABSTRACT

Background: Breast milk is complete nutrients needed by a baby and also easily digested by a small and sensitive baby's stomach. Breast milk alone is sufficient to meet the nutritional needs of infants from the age of 0-6 months and can be continued until the child is 2 years old. **Object:** The purpose of this study was to determine the effect of Breast Care on increasing milk production in postpartum mothers. The research design is pre-experimental. **Methods:** The design used is the one group pretest-posttest design. The data analysis used is the Wilcoxon test. **Results:** The results showed that there was an effect of Breast Care on increasing breast milk production as indicated by a p value of $0.0001 < \alpha 0.05$. **Conclusion:** Postpartum mothers can do Breast Care 2 times a day in the morning and evening, because it can help increase milk production and can fulfil the baby's nutrition, so that exclusive breastfeeding is achieved for 6 months without providing additional food in any form except for drugs as indicated. Breast Care education needs to be improved to support the first 1000 days of a child's life.

Keywords: Production Milk, Breast Care, Postpartum



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Introduction

Breast milk (Breast Milk) is the most ideal and important nutritional intake for newborns. Breast milk contains nutrients that are needed by babies for their growth and development (Artanti, 2023). Therefore, it is important to ensure that postpartum mothers can produce enough and quality breast milk.

The prevalence of under-milk production problems in postpartum mothers can vary across countries. According to the World Health Organization (WHO), about 40-60% of mothers worldwide experience the problem of insufficient milk production in the first week after giving birth (WHO, 2024). In Indonesia itself, the prevalence of insufficient breast milk production in postpartum mothers is still not known for sure. Government Agency Performance Accountability Report (LAKIP) Direktorat Gizi Kesehatan Ibu dan Anak (2023) shows that the percentage of babies under the age of 6 months in Indonesia who receive exclusive breast milk (ASI) will reach 67.94% in 2023. Meanwhile, the achievement in Central Java Province is 71.4%.

One of the problems that often occurs and is experienced in postpartum mothers is that breast milk has not yet come out. To minimize problems related to breast milk production, midwives need to provide care and guidance to mothers about breast care so that mothers are more aware of the benefits of breast care during the postpartum period. Regular breast care and the right treatment techniques will certainly bring very satisfactory results both for the mother herself and her baby (Rahmi dkk., 2024).

Actually, on the first day the baby does not need fluids or food, but the first 30 minutes of the baby is born, it must be immediately breastfed to the mother through early breastfeeding initiation, where the baby learns to breastfeed or habituates the baby to

sucking the nipple and prepares the mother to start producing breast milk. If the baby does not suck the nipple 30 minutes after delivery, the hormone prolactin will be difficult to produce so that it will affect milk flow and slow down the production of colostrum, the milk will only come out on the third day or more (Aryani dkk., 2021).

Breast care is an action taken to maintain the health of the breast area. Breast care is very necessary for mothers after childbirth, because it greatly affects the smooth production of breast milk. The purpose of breast care is to make blood circulation smooth, prevent obstruction of milk ducts, so that breast milk becomes smooth. hormones that affect breast milk production are the hormones prolactin and oxytocin (Zumaro, 2023).

Several previous studies have been conducted to evaluate the effectiveness of Breast Care on breast milk production expenditure in postpartum mothers. A study conducted by Diani (2024) found that Breast Care, which consists of breast massage, warm compresses, and nipple massage, can increase breast milk production expenditure in postpartum mothers. The study involved 100 postpartum mothers and the results showed a significant increase in the amount of breast milk produced after the application of Breast Care.

However, other research conducted by Sumarni dan Ratnasari (2021) show different results. Literature review research obtained that there is a relationship between breast care and breast milk production, there is a relationship between anxiety and breast milk production, there is a relationship between infant suction factors and breast milk production, there is a relationship between maternal nutritional intake and breast milk production. These results show that the effectiveness of Breast Care on breast milk



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production expenditure still needs to be further researched.

Based on previous studies, there are differences in results that can cause research gaps in the effectiveness of Breast Care on breast milk production expenditure in postpartum mothers. Research conducted by Diani (2024) showed positive results, while the research conducted by Sumarni dan Ratnasari (2021) showed insignificant results. Therefore, there is a need to conduct further research to identify the effectiveness of Breast Care on breast milk production expenditure in postpartum mothers. Some factors that can be considered to be controlled in this study are maternal age, parity, nutritional status, and maternal education.

It is hoped that this study can provide a better understanding of the effectiveness of Breast Care on breast milk production expenditure in postpartum mothers. The results of this study can be the basis for the development of effective interventions in increasing breast milk production in postpartum mothers.

Research Method

This study will use a pre-experimental research design with a pretest-posttest design. Postpartum mothers are a group that receives Breast Care. Measurement of breast milk production expenditure will be carried out before and after the intervention. The collected data will be analyzed using the appropriate Statistical Methods.

The implementation of Breast Care is carried out for 3 days starting at 07.30 WIB for 30 minutes. The implementation of Breast Care is carried out by midwives who have been given explanations and simulations of the implementation of the intervention. Breast milk production is measured every 24 hours. The location of this study is at dr. Gondo Suwarno Hospital, Semarang Regency.

The research will be carried out in July 2024. The population in this study is all postpartum mothers who gave birth at dr. Gondo Suwarno Hospital, Semarang Regency. The sampling technique was carried out using a purposive sampling technique, with the criteria of postpartum mothers who gave birth normally, the weight of the baby born ≥ 2500 grams to <4000 grams, mothers who were willing to be respondents, mothers who only breastfed their babies, were willing to be given Breast Care on the second and third days. The research sample was determined by a total of 20 respondents.

Breast Care is given 2 times a day to postpartum mothers from the first day to the second day. Breast care is done in the morning and evening for 30 minutes at each activity. Furthermore, breast milk production measurements were carried out on the second day after being given breast treatment.

The instruments used in this study are pre-test and post-test. This questionnaire sheet is used as an instrument to find out how Breast Care affects increasing breast milk production in postpartum mothers. There are two stages of data analysis techniques, the first is univariate analysis and bivariate analysis using a statistical test of 2 paired mean difference tests.

Results and Discussions

Based on the results of research that has been conducted on 20 respondents, the data has been recapitulated and then analyzed to find out about the effect of Breast Care on increasing breast milk production in postpartum mothers at dr. Gondo Suwarno Hospital, Semarang Regency. This pre and post test is in the form of a questionnaire sheet. Univariate data results in the form of objective criteria categories. The data is presented in the frequency distribution table as follows:



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Table 1. Distribution of Respondents Based on Education and Parity in Postpartum Mothers

Education	Frequency	Pesentase
Primary Education	7	35.0
Secondary Education	13	65.0
Total	20	100.0

Parity	Frequency	Pesentase
0	4	20.0
1	12	60.0
2	4	20.0
Total	20	100.0

Table 01 shows that the most respondents are educated at the secondary education level (junior high and high school) at 13 (65.0%), while the most parity characteristics are in multigravida at 16 (80.0%).

Table 2. Distribution of average age and expenditure of breast milk Pretest and Post test

Variable	Mean	Median	Min	Max	P value
Age	31,05	30,50	20	39	
ASI Pretest	76,95	76,5	68	87	0,000
ASI Post Test	117,50	117,50	108	127	

Based on table 2, it is known that the youngest age of postpartum mothers is 20 years old and the oldest age is 39 years. The results of the study on the average breast milk before Breast Care was 76.95 ml with the least amount being 68 ml and the most being 87 ml. The average breast milk expenditure after Breast Care is 117.5 ml with the least breast milk being 108 ml and the most being 127 ml. The results of the calculation using the paired t test, namely by comparing the increase in breast milk production before breast care and after breast care showed that there was an effect of breast care on the increase in breast milk production. This is indicated by a p value of $0.0001 < \alpha 0.05$. This can also be seen from the difference in average breast milk production before and after Breast Care.

Increased breast milk production pre and post-intervention Breast Care.

It shows that there is an effect of Breast Care on increasing milk production. This is indicated by a p value of 0.0001 which means $< \alpha 0.05$.

The production of breast milk (breast milk) produced by a mother is influenced by several factors, including the nutritional status of the mother during pregnancy and breastfeeding, stress, family support, maternal age and parity (Setyaningsih dkk., 2020). Breast Care is given 2 times a day to postpartum mothers from the first day to the second day. Breast Care is done in the morning and evening for 30 minutes each activity. Next, breast milk production measurements are carried out on the second day after Breast Care. The negative impact of not doing Breast Care is that breast



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milk takes longer to come out, milk volume is limited, breasts are dirty, mothers are not ready to breastfeed, especially the skin of the nipples of the breasts will be easily scratched. And in the case of a mother's putting that is not prominent, it can result in difficulty breastfeeding the child.

Based on the results of the study Nurahmawati dkk. (2021) showed that there was an effect of breast care on breast milk production in postpartum mothers at the Kassikassi Makassar Health Center, the average amount of breast milk production in the intervention group was higher (16.86) when compared to the control group that was not given breast care (14.94). This research is supported by research Agustiningsih dkk. (2024) showed that there was a relationship between breast care and smooth breast milk production in Bendan Village, Banyudono District, Boyolali Regency, with a value of $p=0.001$, $POR = 3.263$ ($95\% CI=1.211 -8.796$). Breast Care is carried out regularly to maintain breast health which aims to prepare for lactation at the time of postpartum. It should be done on the 1-2nd day after giving birth at least 2 times a day, namely in the morning and evening before bathing, the benefits of Breast Care include to launch the breast milk production reflex or the let down reflex, and is effective in increasing the volume of milk/milk, as well as preventing dams on the breasts so that the breasts do not swell (Putry dan Hermawati, 2024, Febriani dan Caesarrani, 2023).

Conclusion

Based on the description of the results and discussion above, it can be concluded that based on Age Group, Education, and Parity in Postpartum Mothers who underwent Breast Care intervention, it shows that the average respondent is 31 years old, for the educational characteristics of the most respondents are at the secondary education level. As for the most parity characteristics, it is in multigravida

which is 16 (80%). Meanwhile, from the results of calculations using the Wilcoxon test, namely by comparing the increase in breast milk production before and after breast care interventions, it shows that there is an effect of breast care on increasing milk production. This is shown by a p value of $0.0001 < \alpha 0.05$, This can also be seen from the difference in the average scale of increase in breast milk production before and after the intervention. This causes H_a to be accepted and H_o to be rejected, meaning that there is an effect of Breast Care on increasing breast milk production in postpartum mothers.

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Conflig of Interest

This research was not contained any conflict of interest from anywhere.

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