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# THE EFFECTIVENESS OF BREAST CARE AND SOY MILK PRODUCTION ON THE PRODUCTION OF MOM'S BREAST MILK

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## ABSTRACT : THE EFFECTIVENESS OF BREAST CARE AND SOY MILK PRODUCTION ON THE PRODUCTION OF MOM'S BREAST MILK

*Background:* The role of breastfeeding is very important and can even affect the risk of death. Breastfeeding can save up to 30,000 infant deaths in Indonesia and exclusive breastfeeding can prevent 10 million deaths of children under five in the world every year. Low milk production is a major problem for new mothers, apart from flat or inverted nipples, sore nipples, swollen breasts, and lack of or misinformation. This will have a bad effect on the baby because mothers usually look for alternatives by giving formula milk to their babies which causes the intensity of the baby's sucking to decrease because they take turns using formula milk which makes less milk come out because the baby is full and lazy to suckle.

*Purpose:* The purpose of this study was to determine the effectiveness of breast care and soy milk provision to the production of breast milk for postpartum mothers.

*Method:* This research was conducted in the Sidomulyo Health Center, Pekanbaru City starting from March to May 2021. This type of research is a Quasy Experimental reserach. The population of this study were all postpartum mothers who had babies who were at the SarinahPratama Clinic and PMB HasnaDewi. The sample of this research was 20 postpartum mothers who were divided into 2 groups and selected by purposive sampling. The data collection method is observation with the observation sheet instrument. Data analysis used Mann-Whitney with a significant level of 95%.

*Results:* The results showed that the average milk production in the breast care intervention group was better, namely 171.90 ml (SD 42.91) compared to the soy milk group, namely 84.10 ml (SD 15.99).

*Conclusion:* The conclusion of this study is that there is a difference in the production of breast milk in postpartum mothers who are given breast care and who are given soy milk ( $p = 0.000$ ), namely breast care is more effective in increasing breast milk production.

*Suggestion* It is hoped that breast care is expected as one of the routines at home for postpartum mothers who are breastfeeding in an effort to increase milk production and support the success of exclusive breastfeeding.

*Keyword:* Soy Milk Provision, Breast Care, Breastmilk Production

## ABSTRAK

Latar Belakang : Peran ASI sangat penting bahkan dapat mempengaruhi risiko kematian. Pemberian ASI dapat menyelamatkan hingga 30.000 kematian bayi di Indonesia, dan pemberian ASI eksklusif dapat mencegah 10 juta kematian balita di dunia setiap tahunnya. Produksi ASI yang sedikit menjadi masalah utama para ibu yang baru melahirkan, selain masalah putting susu datar atau terbenam, putting susu lecet, payudara bengkak, serta kurang atau kesalahan informasi. Hal tersebut akan berakibat buruk pada bayi karena ibu biasanya mencari alternatif dengan memberikan susu formula pada bayinya yang menyebabkan intensitas isapan bayi saat menyusui berkurang karena bergantian menggunakan susu formula yang menjadikan ASI menjadi semakin sedikit keluar karena bayi menjadi kenyang dan malas menyusui.

Tujuan: Tujuan penelitian ini untuk mengetahui efektivitas perawatan payudara dan pemberian susu kedelai terhadap produksi ASI ibu nifas.

Metode: Penelitian ini dilakukan di Wilayah Kerja Puskesmas Sidomulyo Kota Pekanbaru pada bulan Maret-Mei 2021. Jenis penelitian ini adalah *Quasy Eksperimen*. Populasi penelitian ini seluruh ibu nifas yang mempunyai bayi yang berada di Klinik Pratama Sarinah dan PMB Hasna Dewi. Sampel penelitian ini berjumlah 20 ibu nifas yang dibagi menjadi 2 kelompok dan diambil secara *purposive sampling*. Metode pengumpulan data yaitu observasi dengan instrumen lembar observasi. Analisis data menggunakan *Mann-Whitney* dengan taraf signifikan 95%.

Hasil: Hasil penelitian didapatkan bahwa rata-rata produksi ASI pada kelompok intervensi perawatan payudara lebih banyak yaitu 171.90 ml (SD 42.91) dibandingkan dengan kelompok pemberian susu kedelai yaitu 84.10 ml (SD 15.99).

Simpulan: Kesimpulan penelitian ini ada perbedaan produksi ASI pada ibu nifas yang dilakukan perawatan payudara dan yang diberikan susu kedelai ( $p = 0,000$ ) yaitu perawatan payudara lebih efektif dalam meningkatkan produksi ASI.

Saran: Diharapkan kepada ibu nifas agar dapat melakukan perawatan payudara sebagai salah satu rutinitas di rumah bagi ibu nifas yang menyusui untuk upaya meningkatkan produksi ASI dan menunjang keberhasilan pemberian ASI eksklusif.

Kata kunci: Pemberian Susu Kedelai, Perawatan Payudara, Produksi ASI

## PRELIMINARY

One of the causes of unsuccessful breastfeeding is because the mother lacks confidence that her breast milk cannot meet the needs of her baby (Roesli, 2012). In addition, factors that cause failure in the breastfeeding process are often caused by mothers who complain about breastfeeding, such as breast milk production that is not smooth (Gunawan, 2017). Around 35% of mothers stop breastfeeding exclusively because they feel that there is not enough milk and the baby is not satisfied (Sutanto, 2018). The role of breast milk is very important and can even affect the risk of death. Breastfeeding can save up to 30,000 infant deaths in Indonesia, and exclusive breastfeeding can prevent 10 million under-five deaths in the world each year (UNICEF, 2012).

According to the Indonesian Health Profile in 2019, the percentage of exclusive breastfeeding in Indonesia was 67.74%, but this achievement did not meet the target of exclusive breastfeeding in Indonesia which reached 80% (Kemenkes RI, 2019). Data from the Pekanbaru City Health Office Profile in 2019 stated that the coverage of exclusive breastfeeding in Pekanbaru city was 41.3% and all 21 health centers in Pekanbaru City had not reached the target of exclusive breastfeeding of 80%. Sidomulyo Health Center is one of the health centers in Pekanbaru City with the lowest coverage of exclusive breastfeeding, namely with a percentage of 14.9% (Pekanbaru City Health Office, 2019).

Low milk production is a major problem for new mothers, apart from flat or inverted nipples, sore nipples, swollen breasts, and lack of or misinformation. This will have a bad impact on the baby because mothers usually look for alternatives by giving formula milk to their babies which causes the intensity of the baby's sucking while breastfeeding to decrease because they take turns using formula milk which makes less milk come out because the baby is full and lazy to suckle (Sutanto, 2018).

Smooth milk production will greatly affect the success of breastfeeding. Low milk production in the first few days after giving birth can be caused by a lack of stimulation of the hormones prolactin and oxytocin which play a very important role in the smooth production of breast milk (Juliastruti and Sulastri, 2018).

Efforts are made to facilitate and increase milk production that can be used by postpartum mothers, one of which is breast care. Breast care is an action to take care of the breasts, especially during breastfeeding to facilitate the release of breast milk (Walyani, 2017). Breast care is carried out in the form of breast massage to improve blood circulation and is useful for launching the milk ejection reflex (Meilirianta, et al, 2014).

Another way to increase breast milk production is by giving soy milk made from soybeans. Soy milk contains 35% protein which is almost the same as beef or egg protein which when compared to green beans only contains 24% protein (Astawan, 2009). Soy milk was chosen to increase breast milk production because the protein content in soy milk can help increase breast milk production because soy milk contains isoflavones, alkaloids, polyphenols, steroids and other substances that have the potential to stimulate the hormones oxytocin and prolactin which are effective in increasing and facilitating production. ASI (Pramitasari, et al, 2017).

Based on this, the authors are interested in conducting further research on the Effectiveness of Breast Care and Soy Milk Provision on Breast Milk Production for Postpartum Mothers in the Work Area of the Sidomulyo Health Center, Pekanbaru City.

## RESEARCH METHODOLOGY

The type of research used is quantitative research using a quasi-experimental approach with a post-test only group design, namely by comparing two groups, namely the group given breast care treatment and the group given soy milk. After receiving a research permit and receiving a letter of approval from the Research Ethics Study No. LB.02.03/6/39/2021 from KEPK Poltekkes, Ministry of Health, Riau, the two groups were treated. In the breast care group, massage on the right and left breasts was carried out 2 times a day for 30 minutes for 7 days and an assessment of milk production was carried out on day 8. In the soy milk group, intervention was given in the form of soy milk from the factory brand Hoki 320 ml, but according to SOP researchers give only 200 ml. This milk was given 2 times in the morning and evening for 7 days and breast milk production was assessed on day 8. The results obtained from the measurements in the two groups will be compared and analyzed. The population in this study were all postpartum mothers who had babies at the Sarinah Pratama Clinic and Hasri Dewi PMB in the Sidomulyo Health Center Work Area, Pekanbaru City. The sample of this study amounted to 20 postpartum mothers who were taken by purposive sampling. Data analysis using Mann-Whitney.

## RESEARCH RESULT

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Table 1  
Differences in Breast Milk Production in Postpartum Mothers with Breast Care and Giving Soy milk

Group	N	Mean	SD	Min-Max	Mann-Whitney-U	Mean Rank	Nilai- p
Breast Care	10	171.90	42.915	138-260	0.000	15.50	0.000
Feeding Soy Milk	10	84.10	15.996	60-110		5.50	

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Based on table 1, it can be seen that the average milk production in the group receiving breast care was 171.90 ml (SD: 42.9) and the group receiving soy milk was 84.10 ml (SD: 15.9). The results of the Mann Whitney statistical test with a 95% confidence degree showed that there was a difference in the milk production of postpartum mothers who were given breast care with those who were given soy milk with (p value = 0.000), the Mean Rank for the breast care group was higher, namely 15.50 ml compared to the group giving soy milk was 5.50 ml, which means that the milk production was more in the group receiving breast care compared to the group giving soy milk.

## DISCUSSION

Breast care is done by stimulating or massaging the breasts of nursing mothers and compressing the breasts with warm water and cold water alternately for 2 minutes which can affect the pituitary to secrete the hormones progesterone and estrogen to produce the hormone oxytocin (Wulan, 2012).

Breast care has been investigated to increase breast milk production from various previous studies including research conducted by Soleha (2019) on "The Effect of Breast Care on Breast Milk Production for Postpartum Mothers" with a sample of 30 postpartum mothers. Sufficient milk production while those who do not do breast care have less milk production, as evidenced by analysis using correlation tests and obtained p value = 0.002, which means it is proven that breast care is positively related to breast milk production in postpartum mothers. The results of this study are in line with the theory which suggests that movement in breast care is beneficial in launching the milk ejection reflex. This effort is also an effective way to increase the amount of milk in the breast. In addition, it can also prevent the occurrence of breast milk dams in the breast (Sholeha, et al, 2019).

Likewise, giving soy milk is another way to increase milk production. The average milk production in the intervention of giving soy milk from the results of the study was 84.10 ml. Soy milk, one of which is part of nutrition and fluids, is a factor that can affect breast milk production (Rini, 2017).

In line with Puspitasari's research (2018) with the title "The Influence of Soy Milk Feeding on Increasing Breast Milk Production in Postpartum Mothers in RB Bina Sehat Bantul" with a sample of 40 people and the results showed that before soy milk intervention was given, most of the respondents with smooth breast milk production were 45 % (18 people), slightly fluent breastfeeding category 35% (14 people) and very smooth breastfeeding 20% (8 people). Then, after being given soy milk, there was an increase in breast milk production by 77.5% (35 people) in the very smooth breastfeeding category and 12.5% (5 people) in the smooth breastfeeding category. It is proven by the results of the Wilcoxon test and obtained p value = 0.000 (p < 0.05), which means that there is an effect of giving soy milk to increasing breast milk production (Puspitasari, 2018).

Based on the results of data collection at the Sarinah Pratama Clinic and Hasna Dewi PMB located in the working area of the Sidomulyo Health Center Pekanbaru City, it was found that there were differences in breast care and soy milk giving to postpartum mother's milk production ( $p$  value = 0.000) with a Mean Rank for the breast care group more higher that is 15.50 ml compared to the group giving soy milk which is 5.50 ml, which means that milk production is more in the group receiving breast care compared to the group receiving soy milk. The results of the research that researchers did with breast care turned out to be more effective in increasing and facilitating breast milk production. This is in accordance with the theory which states that the purpose of breast care is to maintain breast hygiene, flex and strengthen the nipples, breasts that are maintained will produce sufficient milk for the baby's needs, and with good breast care the nipples will not blister when sucked by the baby (Walyani, 2008).

The breast care intervention consists of a series of massages and ends with compressions which are carried out in direct contact with the areas of the two breasts as a source of milk production, so that the massage and compression series in breast care will prevent blockage of breast milk and promote blood circulation, then stimulate the hormones oxytocin and prolactin. for milk production and smooth breast milk. So that the advantage of breast care is direct stimulation to the nerve point of milk production. Meanwhile, when compared with the provision of soy milk, which if consumed, it is not necessarily fully absorbed by the body for the production and smoothness of breast milk.

The novelty in this study is that breast care and soy milk were given at the same time in two different groups, whereas in previous studies other people only carried out one treatment in one study.

## CONCLUSION

Based on research conducted from January to May 2021 on the effectiveness of breast care and giving soy milk to postpartum mother's milk production in the work area of the Sidomulyo Health Center Pekanbaru City, it can be concluded that: The average milk production in the breast care group is 171.90 ml (SD: 42.9), the average milk production in the soy milk group was 84.10 ml (SD: 15.9) and there was a difference in breast milk production in postpartum mothers who received breast care and those who were given soy milk ( $p$  value = 0.000) that is breast care is more effective in increasing milk production.

## SUGGESTION

It is hoped that the Sidomulyo Health Center, the Sarinah Pratama Clinic and the Midwife at PMB Hasna Dewi can provide advice to postpartum mothers who are breastfeeding so that they can implement breast care as one of the routines at home for postpartum mothers who are breastfeeding in an effort to increase breast milk production and support the success of exclusive breastfeeding.

## THANK YOU NOTE

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