

THE EFFECTIVENESS OF PAPAYA ON INCREASING BREAST MILK PRODUCTION IN NURSING MOTHERS AT Bd. YULIATI CLINIC IN 2023

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ABSTRACT

The global strategy of infant and child feeding states that prevention of infant mortality is exclusive breastfeeding for 6 months along with continued breastfeeding until the age of 2 years or more. But there are still many breastfeeding mothers who experience a decrease in milk production. Research has reported that papaya fruit that grows a lot in Indonesia has the potential to increase breast milk through lactagogum content. This study aims to analyze the effect of papaya fruit on increasing breast milk production. This study was conducted in the period April – May 2023 on 35 postpartum mothers day 2. Papaya fruit is given for 7 days as much as 600 grams gr, 3 times a day and observed on the 9th postpartum day. Statistical analysis using independent t-test Bivariate analysis showed that there was an effect of giving papaya fruit as much as 600 grams for 7 days on increasing maternal breast milk and statistically the difference was considered significant, because the p-value of $0.039 < 0.05$.

Keywords: breast milk; carica papaya L; papaya

INTRODUCTION

According to the World Health Organization (WHO) and the United Nations of Children's Found (UNICEF) in the global strategy of infant and child feeding states that prevention of infant mortality is by proper feeding, namely exclusive breastfeeding for 6 months of life and the introduction of safe and nutritious complementary foods (MPASI) at the age of 6 months along with continued breastfeeding until the age of 2 years or more. Optimal breastfeeding when children are aged 0-23 months is very important because it can save the lives of more than 820,000 children under the age of 5 years every year (Permadi, 2017).

Based on data from the 2020 Indonesian Health Profile, the coverage of infants receiving exclusive breastfeeding in 2020 was 2,110,471 babies (66.06%), this figure has reached the 2020 strategic plan target of (40%) (BKKBN, 2017; RI, 2021). The success of exclusive breastfeeding is influenced by the smoothness of breast milk from the beginning of breastfeeding where early breastfeeding will occur nipple stimulation. Babies who can breastfeed the first 20-30 minutes after birth, will build a sucking reflex in babies that stimulates nerve endings around the breast to the front pituitary gland at the base of the brain so as to produce the hormone prolactin to produce milk and increase milk production so that milk is more smooth. Prolactin is related to maternal nutrition, the better the nutritional intake, the more milk production (Desmawati, 2013).

Insufficient milk production is the most common inhibiting factor causing the cessation of exclusive breastfeeding practices. Failure to breastfeed is caused by the mother's low knowledge about breastfeeding, about the correct breastfeeding technique so that breastfeeding becomes smooth. (Dewi Sartika, 2020). Intake of nutrients that can increase breast milk production, namely, balanced nutrition of fruits and green leaves such as sweet potato leaves, moringa leaves, papaya leaves and katuk leaves. Indonesia has many plants that have potential as medicinal plants, one of which can be used to facilitate breast milk, these plants that are traditionally used to increase breast

milk production are papaya, *Sauropus androgynus*, *Pimpinella anisum*, basil leaves, thorn spinach, black cumin, moringa, ginger, and others (BR Sebayang, 2020).

According to the results of research (Muhartono, 2018) entitled "the effect of Papaya Fruit (*Carica Papaya L.*) To the Smooth Production of Breast Milk (ASI) in Postpartum Mothers". Giving papaya fruit to postpartum mothers < 40 days. Giving papaya fruit as much as 600 grams 3 times a day for 7 consecutive days can launch milk production. According to the results of research Lety Arlenti (2021) states that giving young papaya fruit for 7 days continuously starting from day 2 or 3 after giving birth as much as 600 gr, 200 gr per 3 times a day, then boiled consumed for 7 days can increase breast milk production by 9.75 times with a standard deviation of 0.78640 after consuming papaya fruit. There is a significant effect of papaya fruit decoction on breast milk production based on the baby's weight gain of 500 grams per month.

Based on the results of a preliminary study conducted by the Yuliati Independent Midwife Practice, there were 11 postpartum mothers who experienced substandard breastfeeding problems. Based on the data above, the author is interested in conducting a case study because there are still many mothers who experience substandard breastfeeding. So researchers are interested in conducting a study entitled "The Effectiveness of Papaya Fruit Giving to Increase Breast Milk Production in Breastfeeding Mothers at TPMB Bd. Yuliati in 2023".

METHOD

This research was conducted in the period April – May 2023. The study population is all mothers who are still breastfeeding and will breastfeed based on targets and monitoring from April to May 2023. This study, using purposive sampling based on several criteria, namely. Still have Babies and Toddlers who consume breast milk. Breastfeeding mothers are fully breastfed or mixed with formula milk. Do not experience diarrhea or allergy to papaya. Willing to be a respondent. Breastfeeding mothers suffering from infectious diseases such as HIV / AIDS. Have medical indications not to be allowed to give breast milk. Papaya fruit is given to postpartum mothers on the 2nd day which has been processed into vegetables and consumed by mothers for 7 days as much as 600 grams gr, 3 times a day for 7 days. Done 3 times a day in the morning, afternoon and evening. The release of breast milk by radiating which is characterized by signs of smooth milk. Intervention is given on puerperium days 3, 4, 5, 6, 7.8. And observed on the 9th postpartum day. Univariate analysis will be carried out by looking at the distribution of average breast milk production (breast milk in estimated milliliters (ml), standr deviation, maximum and minimum. Bivariate analysis will be conducted to assess the effect of papaya administration by comparing the average difference through *independent t test analysis* with the help of the SPSS program.

RESULTS AND DISCUSSION

Table 1.
Univariate analysis of breast milk volume before and after papaya fruit

	Mean	Std Deviation	Minimum	Maximum
Volume of breast milk before papaya (in ml)	602.86	131.341	300	950
Volume of breast milk after papaya (in ml)	711.14	274.192	200	1300

able 1 based on the results of univariate analysis, there was an increase in the average milk production after consuming papaya for 7 days by 108.28 ml. In addition, there was a significant increase in the maximum value of breast milk production after giving papaya juice, which reached

450 ml.

Table 2.
 Test data normality

	Kolmogorov- Smirnov		Saphiro-Wilk	
	Df	Sig	Df	Sig
Volume of breast milk	70	0.042	70	0.019

Table 2 based on the results of the data normality test, it can be seen that the significance value is smaller than 0.05, so it can be interpreted that the data is not normally distributed.

Table 3.
 Bivariate analysis of the effectiveness of papaya juice administration

	Mean	P value	95% CI	
Volume of breast milk before given papaya juice (ml)	602.86	0.039	-210.84	-5.74
Volume of breast milk after given papaya juice (ml)	711.14			

Table 3 In table 2 it can be seen that the results of bivariate analysis show that there is an effect of giving papaya fruit for 7 days on increasing maternal breast milk and statistically the difference is considered significant, because the *p-value* is $0.039 < 0.05$.

Papaya in Latin called *Carica papaya L* is included in tropical fruits that contain Lactagogum. Lactagogum is a substance that can stimulate the production of breast milk (ASI) so that its production can increase (Wilda, 2021). The results of this study are also in line with those conducted by (Altahira, 2019) who reported that from 25 samples, it was proven that papaya fruit has significant benefits in the smooth production of breast milk, with the average composition of mothers who consume local papaya can increase on average breast milk production up to 70 mL per. In addition, papaya fruit also secretes sap (latex) which has the same effect as oxytocin on the uterus. The increase in milk production is due to the presence of the hormones prolactin and oxytocin. Prolactin plays a role in the synthesis of milk, while oxytocin plays a role in stimulating myoepithelium around the alveolus to contract so that milk can be passed through the ductus. Papaya fruit extract, both ripe and young, is often taken to stimulate lactation (Hanifa, 2021).

Other studies also showed that water extract of young papaya fruit (*Carica papaya*) with a preparation of 20 mg / 30 g body weight / day orally on the 4th day to the 16th day of breastfeeding was able to increase the number and diameter of the average alveoli of the mammary glands of lactating rats compared to the luteotropin group (Agustiani, 2017). Similar research results were also conveyed by (Indrayani, 2023) that young papaya contains lactogogum, vitamins C, A, B and E, as well as minerals and enzymes that have the effect of increasing the number and diameter of mamae glands (Sinaga, 2020). The content of polyphenols, and steroids in papaya fruit can increase the work of the hormone prolactin which stimulates the alveolus to form breast milk. In addition, polyphenols and steroids affect the production of oxytocin to drain breast milk, so that breast milk flows more rapidly in mothers who consume papaya fruit (Nataria, 2018).

CONCLUSION

There was an effect of giving papaya fruit as much as 600 grams for 7 days on increasing maternal breast milk and statistically the difference was considered significant, because the *p-value* of $0.039 < 0.05$.

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