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THE EFFECT OF PAPAYA FRUIT CONSUMPTION (CARICA PAPAYA L) ON INCREASING BREAST MILK PRODUCTION IN BREASTFEEDING MOTHERS

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ABSTRACT

Exclusive breastfeeding during the first 6 months of a baby's life still has many obstacles. One of the obstacles that are often encountered is the lack of milk production. Various ways are done by postpartum mothers in increasing breast milk, one of which is by consuming foods that contain lactagogum. Papaya is one of the fruits available throughout the year in Indonesia and is believed to increase breast milk production. The purpose of this study was to determine the effectiveness of giving and consuming papaya fruit on increasing breast milk production. The design of this study was an experimental quasy. The location used for this research is in the working area of the UPT Puskesmas Petir Serang Regency, Banten Province from June to July 2023. The sample used in this study was 30 people. The intervention is the administration of young papaya fruit to be consumed at least 600 grams in 1 day and given in 7 days. The bivariate analysis used is chi square. Based on the results of chi-square analysis, the odds ratio value (OR: 2.98; 95% Confident Interval 1.04 – 8.52; p value 0.035).

Keywords: breast milk; carica papaya; papaya fruit

INTRODUCTION

World Health Organization (WHO) and *United Nations Children's Fund* (UNICEF) recommends exclusive breastfeeding, namely breast milk given to infants from birth for 6 (six) months, without adding and/or replacing with other foods or drinks. Basic health research data (Riskedas) 2013 shows that breastfeeding coverage in Indonesia is only 42%. This is clearly below the WHO's target of requiring breast milk coverage of up to 50%. (Badrus, 2018)(Usman, 2019) In reality, exclusive breastfeeding during the first 6 months of a baby's life has many obstacles. One of the problems that causes the failure of exclusive breastfeeding is that mothers lack confidence that their milk can cover the nutritional needs of their babies. The percentage of the baby's process of starting to breastfeed between < 1 hour is 84.1% and that ≥ 1 hour is 15.1%, the percentage of the baby's process starts breastfeeding between 7-23 hours is 3.7%, the percentage of the baby's process starts breastfeeding between 24-47 hours is 13.0%, the percentage of the baby's process starts breastfeeding more than 47 hours is 13.7%.(Sulistyowati, 2020)(Rosmadewi, 2022)

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 as a breast milk facilitation, these plants that are traditionally used to increase breast milk production are papaya fruit, Sauropus androgynus, Pimpinella anisum, basil leaves, thorn spinach, black cumin, moringa and temulawak.(Wardiyah, 2021) The content of lactagogum in papaya fruit is a substance that can increase and launch breast milk production, besides that sapoin and alkaloids in papaya fruit can affect the hormone prolactin so that it functions in increasing the smooth process of breast milk production. Adequate milk production can be seen from the frequency of baby weight gain on day 10, BAK as much as 6-8 times a day, the frequency of breastfeeding babies, and the length of sleep of babies after breastfeeding.(Nurmisih, 2022)

Previous research reported that 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 breast milk production.(Sebayang, 2020) In addition, other studies also state 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.(Arlenti, 2021) Based on preliminary studies, papaya fruit production in the working area of the Lightning Health Center and among 15 breastfeeding mothers in the researcher's village area, 10 breastfeeding mothers still experience a lack of milk so they need alternative therapy, therefore the purpose of this study is to determine the effectiveness of giving and consuming papaya fruit on increasing breast milk production in the working area of the Lightning Health Center in 2023.

METHOD

The design of this study was an experimental quasy. The location used for this research is in the working area of the UPT Puskesmas Petir Serang Regency, Banten Province from June to July 2023. The sample used in this study was 30 people. The intervention is the administration of young papaya fruit to be consumed at least 600 grams in 1 day and given within 7 days (consumption can be done gradually every time the patient eats). The measured outcome was the quantity of breast milk (volume of breast milk) measured daily during the 7-day intervention. Univariate analysis was conducted to look at the characteristics of respondents. The bivariate analysis used is chi square by including (odds ratio, confident interval, and p value). Postpartum mothers at least day 2. Nursing postpartum mothers. There are no symptoms of infection or abnormal bleeding. Willing to be a respondent and follow the research. Postpartum mothers with complicating labor and uterine involution, bleeding or puerperal infection occur.

RESULT AND DISCUSSION

Table 1.
Characteristics of Respondents

Characteristic	f	%
Age of Respondents		
< 20 Years	15	50
20 – 35 Years	12	40
> 35 Years	3	10
Parity		
Primipara	13	43.3
Multiparous	17	56.7
Work		
Housewives	19	63
Trader/ self-employed	7	23.3
Civil servants	4	13.4

Table 1 based on the results of research that has been conducted, the majority of pregnant women are depicted at a young age, namely < 20 years old with 15 people or equivalent to 50%, second to

third or multiparous childbirth as many as 17 (56.7%) respondents, and working as housewives as many as 19 people or 63.3%.

Table 2.
Cross-tabulation of breast milk volume before and after papaya fruit feeding intervention

Volume of breast milk	Time Group				Total	Percentage
	Before the Intervention	Percentage (%)	After the Intervention	Percentage (%)		
< 500 ml	19	31.7	11	18.3	30	50
> 500 ml	11	18.3	19	31.7	30	62.5

Table 2 based on the cross-tabulation table, it can be seen that after the papaya administration intervention, the majority of respondents 19 respondents (63.3%) had breast milk levels of more than 500 ml, while in the group before the intervention only 11 (18.3%) respondents had breast milk levels of > 500 ml.

Table 3.
Chi-Square Analysis of the Effect of Wake-Up on Increased Breast Milk Levels

Risk Estimate	Value	95% Confident Interval		P Value
		Lower	Upper	
Odds Ratio for Breast Milk Volume before - after	2.98	1.04	8.52	0.035

Table 3 based on the results of chi-square analysis, the odds ratio value (OR: 2.98; 95% Confident Interval 1.04 – 8.52; p value 0.035) can be concluded that papaya can increase breast milk production up to 2.9 or 3 times compared to not consuming papaya fruit and is statistically significant. This result is in line with research that states that the results of the paired T test and T Independent show that there is a significant difference in the volume of breast milk before and after the intervention so that giving young papaya juice routinely taken 2 times a day for 10 days effectively increases the volume of breast milk.(Indrayani, 2023) A healthy baby consumes 700-800 ml of breast milk daily. After entering the 6-month period, the volume of milk expenditure begins to decrease. Since then, nutritional needs can no longer be met by breast milk, and must get additional food. Physiologically, breast size does not affect the volume of milk produced. That is, the amount of milk produced does not depend on the size or size of the breast. The amount of production varies every day, as it is influenced by the nutritional content of the mother. The milk needed by the baby is in accordance with the level of growth and development. The healthier the baby, the more breast milk should be consumed (Jahriani, 2019)

Papaya fruit (Carica Papaya L) is a plant that has erect and wet stems. Papaya resembles a palm, the flowers are white and the ripe fruits are reddish-yellow. Papaya tree height can reach 8 to 10 meters with strong roots. The leaf blades resemble the palm of a human hand. If the papaya leaf is folded into two parts exactly in the middle, it will appear that the papaya leaf is symmetrical. The cavity in the papaya fruit is star-shaped when the cross section of the fruit is cut crosswise. This plant is also cultivated in large gardens because of its fresh and nutritious fruit. (REGETA, 2020). Papaya fruit is useful for adding appetite, a source of vitamin A (a source of antioxidants), facilitating bowel movements, canker sores and green papaya fruit / raw fruit can increase breast milk production, vitamin B complex (helps the body work), potassium (prevents heart disease. One

of the benefits of papaya fruit is to launch breast milk production, because it contains lactogogum which can be one way to increase the rate of secretion and production of breast milk and be a strategy to increase the effectiveness of exclusive breastfeeding.(KHUZAIMA, 2022)

Papaya fruit also contains caricaksanthine and violaxantin. Papaya fruit also contains lactagogue which can be one way to increase the rate of secretion and production of breast milk and be a strategy to increase the effectiveness of exclusive breastfeeding. Papaya fruit is a fruit that contains lactagogum which is a substance that can increase and launch breast milk production, Lactagogum has an effect in stimulating the production of oxytocin and prolactin hormones such as alkaloids, polyphenols, steroids, flavonoids, which are effective in increasing the secretion and secretion of breast milk.(Saleha, 2022)(Hanifa, 2021) In addition, sapoin and alkaloids in papaya fruit can affect the hormone prolactin so that it functions in increasing the smooth process of breast milk production. The phytochemical content of papaya fruit functions as lactagogum or galactogogues which are compounds that help in initiating, launching, and increasing milk production (Sinaga, 2020) (JUMITA, 2022).

CONCLUSION

Consuming papaya fruit can increase breast milk production up to 2.9 or 3 times compared to not consuming papaya fruit and is statistically significant

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