

Jurnal Penelitian Kebidanan & Kespro	Vol. 6 No. 1	Edition: Oktober 2023 – April 2024
	http://ejournal.delihusada.ac.id/index.php/JPK2R	
Received : 20 Oktober 2023	Revised: 22 Oktober 2023	Accepted: 26 Oktober 2023

THE EFFECT OF ADMINISTRATION OF GREEN BEAN JUICE ON INCREASING BREAST MILK PRODUCTION IN PILOT WOMEN AT PMB KURNIA OLD DELI DISTRICT DELI DISTRICT SERDANG YEAR 2023

Marlen Sadrina Sitepu¹, Septa Dwi Insani²

Deli Husada Deli Health Institute Old

e-mail : marlensitepu05maret1988@gmail.com

Abstract

Breast milk (ASI) is the most optimal source of nutrition for babies during the first six months of growth, without the need for additional liquids or solid foods. Green bean juice is a drink that contains lactagogue and polyphenols. A lactagogue is a food that can increase and facilitate the production of breast milk, while polyphenols can stimulate the release of prolactin, which increases milk production and triggers oxytocin to facilitate milk secretion. The purpose of this study is to evaluate the differences in breast milk production after delivery before and after consumption of green bean juice in PMB Kurnia, Deli Tua District, Deli Serdang Regency in 2023. The research used in this study is quasi-experimental. Using a single-group pretest-posttest design. The study and sample consisted of a total of 10 participants selected through purposive sampling. Data were collected through observation forms and questionnaires from 1 to 8. until June 2023 in Deli Tua district Deli Serdang regency PMB Kurnia. An independent Wilcoxon signed-rank test was used for statistical analysis. The results showed that women who gave birth after consuming green bean juice had an average breast milk production of 2.90 compared to 1.20 before consuming green bean juice. The average difference in breast milk production between the two groups was 1.70 with a p-value of 0.004 (p andlt; 0.05). This indicates the rejection of the null hypothesis (H_0) and the acceptance of the alternative hypothesis (H_a) which is the effect of green bean juice on increasing production of breast milk in postpartum women after its consumption compared to the period before its consumption in PMB Kurnia. Kurnia, Deli Tua District, Deli Serdang Regency in 2023. From the results of this study, it is hoped that health workers can motivate postpartum women to consume mung beans which can increase breast milk production.

Keywords: Mung Bean Juice, Breast Milk Production

INTRODUCTION

Breast milk, or mother's milk, is a natural and highly nutritious liquid produced by a mother and her mammary glands during pregnancy. It is considered the ideal and most useful food for babies, especially children aged 0-6 months, because it contains essential nutrients that are crucial for their optimal growth and development (Wiji, 2017). As defined by the World Health Organization (WHO), exclusive breastfeeding means giving only breast milk to babies up to the age of six months without other fluids, including formula, water, fruit juice or nutritional supplements. Many mothers face challenges in achieving exclusive breastfeeding, with insufficient breast milk production being the main obstacle. This inadequacy often results in low breastfeeding rates for newborns. The 2020 data from the WHO showed that the proportion of individual names in the world is on average 44%. According to the 2018 Indonesia Health Profile, exclusive breastfeeding coverage at the provincial level in Indonesia was 68.74% (2018 Indonesia Health Profile).

According to (Nugraheni & Heryati, 2017) the achievement of exclusive breastfeeding in Southeast Asia shows figures that are not much different. In comparison, exclusive breastfeeding coverage in Myanmar is 24%, Vietnamese 27%, the Philippines 34% and India reaching 46%, and globally it is reported that exclusive breastfeeding coverage is below 40% (Zahara, 2021).

Indonesia currently still has

complex health problems. The Infant Mortality Rate (IMR) is a sensitive indicator of health status in explaining the level of public health. One of the main health problems in Indonesia is the infant mortality rate which is still the highest compared to other ASEAN countries. The proportion of under-five deaths due to respiratory tract infections and diarrhea is 22.8% and 13.2% which can be prevented. Prevention is done, among other things, by providing breast milk properly, including initiating breastfeeding in the first 30 minutes after birth with the aim of maintaining prolactin hormone levels in the mother's blood which maintains breast milk production (Tonasih, 2019).

According to the results of the Basic Health Survey 2021 (RISKESDAS), of the 2.3 million children under six months in Indonesia, only half, about 52.5%, are exclusively breastfed. This represents a significant 12 percent decrease compared to 2019 statistics. In addition, the rate of early initiation of breastfeeding also decreased, falling from 58.2% in 2019 to 48.6% in 2021. According to the 2019 health profile, out of 186,460 children under the age of six months, only 75,820 were infants reported receiving only breast milk, which is 40.66 percent of the total. It is important to note that this achievement falls short of the 2019 North Sumatra Provincial Health Plan target of 53 percent exclusive breastfeeding. For region. Deli Serdang Regency, the percentage of babies who receive exclusive breast milk is only 47.26%.

From these data it can be seen that there is still a lack of exclusive breastfeeding for babies. One of the causes of poor breastfeeding is the decrease in breast milk production on the first day after giving birth, which can be caused by a lack of stimulation of the hormones oxytocin and prolactin which play an important role in the smooth production of breast milk. To produce breast milk production, non-pharmacological efforts are needed in the form of giving green bean juice (Susiloningtyas & Sa'diyah, 2021).

Breast milk is an emulsion of fat in a solution of protein, lactose and organic salts secreted by both mother's breast glands, as the main food for babies. The quantity and quality of a mother's food greatly influences the amount of breast milk produced. Mothers who breastfeed are strongly encouraged to obtain additional nutrition for breast milk production and maternal energy (Ayton, Tesch, & Hansen, 2019).

Green bean juice is a food that is useful for facilitating breast milk production. Protein is useful in helping the formation of muscle cells, speeding up recovery and increasing body endurance and helping you stay full longer. The iron content functions to increase hemoglobin thereby preventing anemia (Rukmana & Yudirachman, 2019).

Lydia, According to a 2019 study published in the Darul Azhar Journal, serving green bean juice has been empirically shown to increase breast milk production after childbirth. The test method used in the study was

the sign test. The calculated ρ (exact sign/2 tails) was set to 0.002, which is less than the threshold of 0.005. This result means a significant difference in the smoothness of breast milk production before and after administration of green bean juice (*Vigna Radiate*). Thus, the null hypothesis (H_0) is rejected, while the alternative hypothesis (H_1) is accepted, which shows the effectiveness of green bean juice in increasing breast milk production in postpartum mothers. The sign test is used to evaluate the differences between two paired sample group means, as in the given context X_a and X_b .

In addition, Wahkida, S.W. in 2017 entitled "Effect of green bean consumption on breast milk production among lactating mothers with infants aged 0-6 months in Posyandu, Bakalani Village, Malang," showed a significant effect. This study used the chi-square test with a p-value less than 0.005 (0.002 andlt; 0.005). This result shows a significant difference before and after giving green bean juice in Bakalan village area in Malang. The method of consumption of green beans is recommended for all mothers who gave birth in this study.

Similarities between these studies relate to the independent variable, green bean juice, and the dependent variable, namely, consistency of breast milk production. However, there are differences in the testing methods used in these separate studies.

According to reports and surveys conducted by researchers at the PMB Kurnia clinic, Deli Tua sub-district,

Deli Serdang district on March 7 2023, the results were that 43 postpartum mothers were unable to breastfeed their babies because breast milk was not coming out or there were several mothers whose breast milk had come out but was still very little. Currently, the only intervention for mothers who have given birth is to encourage them to breastfeed more often, even in situations where breast milk is not yet available. Despite this, these dedicated mothers continue to breastfeed with the goal of increasing milk production. In certain cases, babies are temporarily supplemented with milk while they wait for the mother and milk. In the light of the given description, it is interesting to investigate the effect of green bean juice on the consistency of breast milk production in PMB Kurnia, located in Delitua

subdivision, Deli Serdang district.

METHOD

This research is a type of quantitative research with a quasi-experimental design. with the design using *the one group pretest posttest design*. This research activity was carried out at PMB Kurnia Deli Tua, Deli Serdang Regency. The population of this study is postpartum mothers at PMB Kurnia Deli Tua in May 2023, namely 10 respondents. The samples taken were postpartum mothers at PMB Kurnia Deli Tua in May 2023 using a purposive sampling technique, namely 10 respondents. This research uses the data normality test and the *Wilcoxon Signed Rank t* statistical test on the data processing application, namely SPSS (*Statistical Package for the Social Sciences*)

RESULTS

Table 4.1 Frequency Distribution Based on Age, Education, BAK Frequency, Sleeping Condition of Baby, Occupation, Parity, and Breast Milk Access to Postpartum Mothers in PMB Kurnia, Deli Tua District, Deli Serdang Regency, 2023

No	Variable	Total Percentage	
		N	%
1	AGE		
	- 21-25 years old	4	40%
	- 26-30 years old	6	60%
	Total	10	100%
2	EDUCATION		
	- JUNIOR HIGH SCHOOL	3	30%
	- SENIOR HIGH SCHOOL	6	60%
	- S1	1	10%
	Total	10	100%
3	TUB FREQUENCY		
	- < 6-8 times/day	2	20%
	- >6 -8 times/day	8	80%

	Total	10	100%
4	BABY SLEEPING QUIETLY/NOT		
	- Not calm	2	20%
	- Calm	8	80%
	Total	10	100%
5	WORK		
	- Work	3	30%
	- Doesn't work	7	70%
	Total	10	100%
6	PARITY		
	- Primipara	8	80%
	- Multiparous	2	20%
	Total	10	100%
7	Breast milk leaks		
	- Doesn't Seep	3	30%
	- Leak	7	70%
	Total	10	100%

Table 4.3 Frequency Distribution of Increased Breast Milk Production Before and After Giving Green Bean Juice to Postpartum Mothers in PMB Kurnia, Deli Tua District, Deli Serdang Regency in 2023

Group	Variable	N	Mean	Min	Max	elementary school
Postpartum Mother	Pre Test	10	1.20	1	2	0.422
	Post Test	10	2.90	2	3	0.316

Table 4.4 Normality Test

Breast milk production	Shapiro-Wilk			Information
	Statistics	df	P-value	
Pre-test	0.509	10	0,000	Abnormal
Post-test	0.366	10	0,000	

Table 4.6 Effect of Giving Green Bean Juice on Increasing Production Breastfeeding for postpartum mothers in PMB Kurnia, Deli Tua District, Deli Serdang Regency in 2023

Wilcoxon test				
N	Mean Rank	Sum of Rank	P-Value	Z

	Negative ranks	0 ^a	0.00	0.00		
Pre-test	Positive ranks	10 ^b	5.50	5.50	0.004	2,919 ^b
Post-test	Ties	0 ^c				
	Total	10				

DISCUSSION

a. The effect of giving green bean juice on increasing breast milk production in postpartum mothers in PMB Kurnia, Deli Tua District, Deli Serdang Regency, 2023

Based on the research results, it was analyzed using the *Wilcoxon statistical test* regarding the Effect of Giving Sari. The study focused on the effect of green beans on increasing breast milk production in mothers who gave birth in PMB Kurnia, Deli Tua District, Deli Serdang Administrative Region. Data collection took place in May 2023. A sample of 10 respondents was included in the study. The study began with a pretest on May 21, followed by a one-week intervention in which participants received green bean juice. A post-test was administered after the intervention.

The results showed that the production of breast milk increased as indicated by negative value 0^a, positive value 10^b and zero levels resulting in a mean of 5.50. The Wilcoxon test showed a Z value of 2.919 and a significant value of 0.004, which is less than α (0.05). Thus, the null hypothesis (H₀) was rejected while the alternative hypothesis (H_a) was accepted. This suggests that provision of green bean juice had a positive effect on increasing breast milk production

after delivery PMB Kurnia, Deli Tua, Deli Serdang Regency in 2023.

The researcher hypothesized that every 10 people who consumed green beans experienced breast milk production. This significant effect may be due not only to the consumption of green bean juice, but also to the fact that mothers were encouraged to continue breastfeeding, although milk production was initially limited. This practice stimulates alveolar smooth muscle and triggers hormones such as prolactin and oxytocin, which promote breast milk production.

Green bean juice is encouraged to boost breast milk production due to its nutrients such as protein, iron and vitamin B1. Proteins play a key role in the development of muscle cells, speeding up recovery, improving endurance and prolonging the feeling of satiety.

in Gatot (2016) states that the content of nuts is able to help the fetal growth process in pregnant women and is able to optimize breast milk production and the density of breast milk color in breastfeeding mothers. The results of this study are in accordance with research by Wakhida (2016) which states that there is an influence of consumption of green beans on breast milk production in

breastfeeding mothers.

Apart from that, it is also in line with research by Iriani (2017) which states that there is an influence of consuming green bean juice on increasing breast milk production in breastfeeding mothers.

This is in accordance with the opinion of Ali Khomsan (2005) who states that one of the nuts. The hormone oxytocin can work well because it is influenced by the vitamin B1 content in green beans which can make the mother feel calm and happy. An increase in the hormone oxytocin will make breast milk flow more abundantly than usual (Widyastuti, 2014). Nursing mothers who consume green bean juice directly will increase need nutrition and nutrition every day. This means that the more you consume green bean juice, the more breast milk you will produce and the smoother your milk production will be. So, breastfeeding mothers are advised to consume additional foods such as green bean juice to meet their nutritional and nutritional needs every day.

CONCLUSION

Based on the research results, it can be concluded that from the statistical score results the average increase in breast milk production from the data results before being given green bean juice with a score of 1.20 (SD: 0.422) (min: 1) (max: 2) while after being given. The score for green bean juice was 2.90 (SD: 0.316) (min: 2) (max: 3), meaning that postpartum mothers

experienced an increase in breast milk production after being given green bean juice. The Wilcoxon test results obtained a Z value of 2.919 with a significant value of $0.004 < \alpha (0.05)$. So H_0 is rejected and H_a is accepted, this shows that there is an effect of giving green bean juice on increasing breast milk production in postpartum mothers in PMB Kurnia, Deli Tua subdistrict, Deli Serdang Regency in 2018. 2023.

Reference

- Diah Evawanna, Eka Defi, Nikmah Jalilah Ritonga, et al. (2019). *Green Bean Juice as an Alternative to Increase Breast Milk Production in Breastfeeding Mothers*, Journal of Nursing and Physiotherapy (JKF), Vol. 2 No.1 May-October Edition 2019.
- Hanifah, F. 2020. *The Effect of Giving Green Bean Juice on Hemoglobin Levels of Level III Midwifery Students at the Tanjungpinang Ministry of Health Polytechnic*. Thesis. Riau Ministry of Health Polytechnic: Pekanbaru.
- Iriani, F. (2017). *The Effect of Giving Green Bean Juice (Vigna Radiata) on the Smooth Production of Postpartum Mother's Breast Milk in the Working Area of the Pelambuan Community Health Center, Banjarmasin, Year 2017*. Manuscript. Muhammadiyah University Banjarmasin.

- Maritalia, D. (2018). *Midwifery Care during the Postpartum and Breastfeeding Period*. Editor Sujono Riyadi. Yogyakarta: Learning Library.
- Purwono, MS and Rudi Hartono. (2019). *Mung beans*. Jakarta: Self-Help Spreader. North Sumatra Health Profile. 2019. North Sumatra Province Central Statistics Agency.
- Ritonga, Nj, Mulyani, Ed, Anuhgera, De, Damayanti, D., Sitorus, R., & Siregar, Ww (2019). *Green Bean Juice As An Alternative To Increase The Production Of Breast Milk (Asi) In Breastfeeding Mothers*. Journal Of Nursing And Physiotherapy (JKF), 2(1), 89–94.
- Sugiyono, (2018). *Qualitative, Quantitative Research and R & D*. Bandung; Alfabeta.
- Wakhida, SW (2017). *Effect of Green Bean Consumption on Breast Milk Production in Mothers Breastfeeding with Babies Aged 0-6 Months*. Journal of Midwifery and Health 1(1): 23-27.
- Widia, L., & Putri, AS (2019). *Consumption Effectiveness Sari Green Beans (Vigna Radiate) On Mother's Milk Production Postpartum (Consumption Effectiveness Of Green Beans Extract (Vigna Radiate) For Smoothing Out The Release Of Breast Milk In Postpartum)*. In Darul Azhar Journal (Vol. 7, Issue 1).
- Yuniarti. (2020). *Effectiveness of Giving Green Bean Juice on Increasing the Volume of Breast Milk in Postpartum Mothers in the Practice of Independent Midwives in Palangka Raya City*, health forum journal: scientific publication media, vol. No. 10 February Edition- year 2010.