Volume. 6 Number. 1	Jurnal Ilmiah Keperawatan
Period: January – June 2022; page 16-21	Orthopedi (JIKO)
p-ISSN : 2580-1112; e-ISSN : 2655-6669	Article history:
Copyrighr @2020	Received: February 28, 2022
The author owns the copyright of this article	Revised: March 26, 2022
journal homepage: https://ejournal.akperfatmawati.ac.id	Accepted: April 4, 2022
DOI : <u>10.46749/jiko.v6i1.81</u>	• • •

The Effect of Green Bean Consumption on Breast Milk Production in Breastfeeding Mothers in the Work Area of the Kedungmundu Health Center, Tembalang District, Semarang City

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Abstract

This study aims to determine the effect. Green bean consumption on breast milk production in breastfeeding mothers in the working area of the Kedungmundu Health Center, Tembalang District, Semarang City. The design in this study is a static group comparison/posttest only control group design, that is, a pre-experimental design. The data collection tool used is a questionnaire. The research sample was obtained by accidental sampling. The number of respondents in the study amounted to 34 respondents. The results showed that the milk production of breastfeeding mothers in the intervention group was mostly 12 respondents (70.6%) and 5 respondents (29.4%) had little breast milk production. Breast milk production of breastfeeding mothers in the control group was mostly a lot of 11 respondents (64.7%) and a little milk production of 6 respondents (35.3%). And it can be seen that p value = 0.005 (p value 0.05) so it can be concluded that there is an effect of green bean consumption on breast milk production in breastfeeding mothers in the working area of Kedungmundu Public Health Center, Tembalang District, Semarang City.

Keywords: Green Beans, Mother's Milk (ASI), Breastfeeding Mothers

Introduction

Breastfeeding mothers are one of the groups that are included in the nutritional vulnerable group. This is in accordance with the mandate of Health Law no. 36 of 2009 Chapter Ш Article 142 Breastfeeding mothers are classified as one of the vulnerable groups, because breast milk is the main source of milk for babies obtained from mothers. Therefore, mothers who are breastfeeding must pay attention to the intake of nutrients consumed. Secretion from breast milk every day on average 800-850 ml and every 100 ml contains 60-65 Kcal, 1-1.2

g protein, and 2.5-3.5 g fat per 100 ml. Substances in the secretion of breast milk are taken from the body of nursing mothers who get their daily food supply. (Maryunani. A, 2018).

Based on WHO research, it was stated that the most reason for mothers to stop exclusive breastfeeding was because they felt their breast milk was not sufficient for the baby's needs. Around 35% of mothers stop breastfeeding exclusively in the few weeks postpartum because they feel that there is not enough milk and the baby is dissatisfied (Susanto.A, 2018) Breastfeeding for infants is expected to be able to achieve the 3rd target of Sustainable Development Goals (SDG's) 2nd target, namely by 2030 ending preventable infant and under-five mortality, with all countries trying to reduce the Neonatal Mortality Rate to at least 12 per 1,000 live births. (Bappenas, 2011).

According to Yudhaasmara in 2010 in developed countries such as England, 22% of mothers never breastfeed their children at all, in Sweden only 2% do not do so, sufficient exclusive breastfeeding in India has reached 46%, in the Philippines 34%, in Vietnam 27 % and in Myanmar 24%. Breastfeeding in Indonesia for up to 6 months is 35.73%, while the percentage of babies who are exclusively breastfed for up to 6 months in North Sumatra is currently still concerning at 10.73%, which is the lowest (Pusdatin, 2018).

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The quality of breast milk (ASI) is greatly influenced by the nutrients consumed by the mother. Some food ingredients that can increase the quantity and quality of breast milk include animal protein such as shrimp, chicken and meat. Other food ingredients are vegetable proteins such as tofu and tempeh which can form and repair body cells and facilitate the digestive process. Green vegetables such as cassava leaves, spinach and katuk leaves can also increase breast milk production. Legumes, such as long beans, soybeans, green beans and red beans, contain lots of minerals, vitamins and fiber (Sutomo, B and Anggraini, DY, 2010).

Nuts, especially green beans, are a healthy source of protein and can support breast production. milk Almonds, cashews and green beans are the best nuts for breastfeeding mothers which can be added to sweet drinks or dishes to make them more savory, if you are bored of consuming them directly (Limpomo, B.A. Sudaryanto, 2014). Green beans are rich in protein, thiamine (vitamin B1), iron, magnesium, phosphorus, potassium and manganese. Good for vegetable protein sources. Thiamine or vitamin B1 converts carbohydrates into energy because breastfeeding mothers need more energy than during pregnancy. When a lack of thiamine makes the mother irritable, difficult concentrate to and less enthusiastic. A good mood will trigger the hormone oxytocin to secrete breast milk (Hapsari, I, 2011).

Based on the results of the 2018 Semarang City Health Service report, the coverage of exclusive breastfeeding for infants aged 0-6 months was 8,534 (64.68%) of the total number of 13,194 babies (100%). While the target to be achieved is 80%, so it has not reached the expected target. At the Kedungmundu Health Center, exclusive breastfeeding coverage was obtained for infants aged 0-6 months as many as 301 babies (30.42%) of the total number of babies 8,534 babies (100%), so it has not reached the expected target of 80% (Semarang City Health Office, 2019).

Based on a preliminary study in the Kedungmundu Health Center Work Area in 2019, in 2018 the coverage of exclusive breastfeeding for infants aged 0-6 months was 46 babies (69.6%) and in 2017 there were 32 babies (56.2%). From these results it can be concluded that the achievement of exclusive breastfeeding in the working area of the Kedungmundu Health Center has decreased by 13.4% with the reason that many mothers work so that many replace breast milk using formula milk to make it more practical, alternate breastfeeding with formula milk, about mother's concern exclusive breastfeeding. less even though it has been given an understanding by health workers (Puskesmas Kedungmundu, 2019).

The purpose of this study was to determine the effect of green bean consumption on breast milk production in breastfeeding mothers in the Work Area of the Kedungmundu Health Center, Tembalang District, Semarang City in 2019.

Method

The design in this study is a static group comparison / posttest only control group design. The sampling technique used in this research is non-probability sampling with accidental sampling. The

Result

1. Univariate Analysis

sample in this study was postpartum mothers (1-7 days after giving birth) in the Work Area of the Kedungmundu Health Center, Tembalang District, Semarang Regency with an estimated 37 people (mothers with HPL in March 2019) as many as 34 people. The research instrument that will be used in this study is a questionnaire containing questions about the identity of the mother and child, containing questions about the production of breast milk in the treatment group and the control group.

The independent variable in this study was the consumption of green beans. The dependent variable in this study was breast milk production. Univariate analysis was conducted to describe the characteristics of the respondents. Bivariate analysis was conducted to determine the effect of green beans on breast milk production in breastfeeding mothers in the Kedungmundu Health Center Semarang working area in the control and treatment groups. The statistical modal used is the t-testindependent test if the data is normally distributed and the Mann Whitney u test is used if the data is not normally distributed.

a. Distribution of the frequency of milk production in breastfeeding mothers in the intervention group

 Table 1 Distribution of respondents based on breast milk production in breastfeeding mothers in the intervention group

Variablr	Ν	SD	Mean	Min	Max
Breast milk production in nursing mothers (Intervention group)	17	0,712	8,59	7	9

Based on the 17 respondents, it can be seen that the average milk production of breastfeeding mothers in the intervention group was 8.59 with a standard deviation of 0.712. The lowest amount of milk production is 7 and the highest is 9.

 Table 2. Frequency distribution of respondents based on milk production in breastfeeding mothers in the intervention group

Mother's Milk Production	Frequency (f)	Percentage (%)
A little	5	29,4

Lots	12	70,6
Amount	17	100

Based on the results of the data above, it shows that the production of breast milk in breastfeeding mothers in the interv milk production was small as many as 5 respondents (29.4%).

b. Distribution of the frequency of milk

Variable	Ν	SD	Mean	Min	Max
Breast milk production in nursing mothers	17	1,364	8,12	5	9
Control group					

mostly 12 respondents (70.6%) and breast

feeding mothers in the control group

Table 3 Distribution of respondents based on milk production in the control group

Based on the 17 respondents, it can be seen that the average milk production after the control group was 8.12 with a standard deviation of 1.364. The amount of breast milk production in breastfeeding mothers in the control group was the lowest 5 and the highest was 9.

Table 4. Frequency distribution of respondents based on milk production of breastfeeding mothers in the control group

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Mother's Milk Production	Frequency (f)	Percentage (%)
A little	6	35,3
Lots	11	64,7
Amount	17	100

Based on the results of the data above, it shows that the milk production of breastfeeding mothers in the control group is mostly 11 respondents (64.7%) and 6 respondents (35.3%) have little milk production. In this study, the data normality test was used first. The normality test of the data using the saphiro wilk obtained the results of breast milk production with P value = 0.000 (not normally distributed). Because the data is not normally distributed, the statistical test uses the Mann Whitney test.

2. Bivariate Analysis

Table 5 The effect of green bean consumption on breast milk production in breastfeeding mothers in the Work Area of the Kedungmundu Health Center, Tembalang District, Semarang City

Variable		Mean P-value
Breast milk production in nursing mothers	Group	8,59
Intervention		0,005
		8,12
Breast milk production in breastfeeding moth	hers in the control group	

Based on table 5 it can be seen that p value = 0.005 (p value 0.05) so it can be concluded that there is an effect of green bean consumption on breast milk production in breastfeeding mothers in the working area of Kedungmundu Health Center, Tembalang District, Semarang City.

Discussion

The formation of breast milk is strongly influenced by the hormone prolactin and lactation control. Circumstances that can inhibit prolactin secretion include poor maternal nutrition and drug consumption (Pramashanti, 2019).

Breast milk production is also influenced by several factors, both direct, for example, breastfeeding behavior, mother's psychology, mother's physiology, or indirectly, for example, socio-cultural and infant, which will affect the mother's psychology. Another factor that can affect milk production is the baby's birth weight. Babies with low birth weight or less than 2,500 grams have a risk of breastfeeding problems due to a weak suction reflex (Nurliawati, 2010).

Factors that are also related to breast milk production are dietary factors where the daily caloric needs of the mother must consist of 60-70% carbohydrates, 10-20% protein, and 20-30% fat. These calories are obtained from the food consumed by the mother in a day (Nutrisi Bangsa, 2013).

The food consumed is one of the factors that can affect the production of breast milk. According to Krisnatuti & Hastoro (2019), during breastfeeding, the additional energy needed by the mother aims to increase production. To produce quality breast milk, breastfeeding mothers are encouraged to consume foods that contain complete energy and nutrients. If the mother's food continuously does not

contain enough nutrients needed, of course in the end the milk-making glands will not be able to work perfectly, and will eventually affect the production of breast milk.

Nuts, especially green beans, are a healthy source of protein and can support breast milk production. Almonds, cashews and green beans are the best nuts for breastfeeding mothers which can be added to sweet drinks or dishes to make them more savory, if you are bored of consuming them directly (Limpomo, B.A. Sudaryanto, 2014).

According to Hapsari, I (2011) Mung beans are rich in protein, thiamine magnesium, iron. (vitamin B1). phosphorus, potassium and manganese. Good for vegetable protein sources. Thiamine or vitamin B1 converts carbohvdrates into energy because breastfeeding mothers need more energy than during pregnancy. When a lack of thiamine makes the mother irritable, difficult to concentrate and less enthusiastic. A good mood will trigger the hormone oxytocin to secrete breast milk.

Summary

The average milk production of breastfeeding mothers in the intervention group was 8.59 with a standard deviation of 0.712. The lowest amount of breast milk production was 7 and the highest was 9. The average milk production in the control group was 8.12 with a standard deviation of 1.364. The amount of milk production in breastfeeding mothers in the control group was the lowest was 5 and the highest was 9. There was an effect of green bean consumption on breast milk production in breastfeeding mothers in the Kedungmundu Health Center Work Area, Tembalang District, Semarang City in 2019 (P value = 0.005).

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