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The Beneficial of Green Beans Extract on Production of Postpartum Breast Milk in East Langsa Public Health Center 2019

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ABSTRACT

Green bean extract is believed to have a beneficial on the health and production of post-partum maternal milk. To prove this advantage, a series of experimental studies have been carried out with the aim of analyzing the effect of giving green bean extract on mother's milk production. This study used a quasi-experimental approach involving the second day, postpartum mothers, with inclusion and exclusion criteria. Sampling was done by purposive sampling totaling 32 people divided into control and intervention or experimental groups. The results showed there were differences in the average value of breast milk production in the intervention and control groups with a p-value of 0.012. The provision of green bean juice affects the production of maternal milk for postpartum mothers in the work area of the Eastern Langsa Public Health Center. While the maternal age factor and the frequency of breastfeeding infants proved to be no difference in the average difference in maternal milk production in the intervention and control groups with a p-value of 0.154 and a p-value of 0.381.

Keywords: *Experimental Study, Giving Green Bean Extract, Production of Breast's Milk.*

I. INTRODUCTION

The main objective of national development is to improve the quality of Indonesian human resources (HR) which is carried out in a sustainable and systemized manner. Efforts to improve the quality of human resources begin with the fulfillment of basic needs, namely the fulfillment of nutrition. One important process in fulfilling nutrition is the provision of breast milk and complementary foods to support breast milk. Breast milk is the most suitable food for babies because it contains nutrients needed for growth and development. Exclusive breastfeeding provides many benefits, one of which is protecting children from various acute and chronic diseases. The first five weeks of birth are important periods to influence the duration of exclusive breastfeeding (Kronborg

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2004). Exclusive breastfeeding and the age of introduction of complementary foods are the main interventions in achieving the MDGs goals in an effort to overcome mortality and malnutrition in children (Dadhich 2009).

Exclusive breastfeeding for 6 months and continued until children are 2 years old is highly recommended because the nutritional content of complete milk such as protein, carbohydrates, fats, minerals, electrolytes, trace elements, vitamins, and water needed by infants is in a balanced amount. in breast milk (Kent 2007). Breastfeeding has a positive impact on the nutritional status and health of children, this is due to the antibody content found in breast milk in accordance with the child's physiological conditions. Besides breastfeeding can improve brain development, children who are given ASI have intelligence levels of breastfeeding and complementary feeding are influenced by several important factors including maternal nutritional knowledge (Pascale 2007, Riordan 2011). Mothers with good nutritional knowledge will pay more attention to children's food intake from the womb to birth. Other factors that greatly influence the nutritional status of children are the level of knowledge related to nutrition and the importance of maintaining nutrition from the fetus to the golden period or the first two years of life (Akeredolu 2004). Aceh Province is one of the regions with the lowest coverage of exclusive breastfeeding by 38% and is ranked 15th out of 33 provinces (Balitbang Kemenkes RI 2018). Regencies / Cities in Aceh Province ranked with low coverage in the number of babies receiving exclusive ASI in 2017 based on the 2017 Nutrition Monitoring Survey (PSG), namely Simelue District at 7.6% and Southeast Aceh at 8.4%. The coverage of exclusive breastfeeding in Langsa City in 2017 was reported at 44%. Regencies with high achievements are Aceh Singkil at 62.9% and Aceh Jaya at 45.5% (Dinkes Provinsi Aceh 2018).

The Regional Technical Implementation Unit (RTIU) of the East Langsa Public Health Center is classified as not yet optimally achieving exclusive breastfeeding. The exclusive breast milk target for 2017 in 197 babies and the achievement is 73 babies with a percentage of 37%. This achievement has increased in 2018 with a target of 209 infants and the achievement of 94 infants or 44.9%. There were 314 reported maternal mothers in 2017 and in 2018 it increased to 356 people. Data obtained from the Langsa Timur Public Health Center in Langsa City shows that most mothers with children under five do not know how to increase milk production through the consumption of nutritious foods such as green beans. High protein content in this type of beans can help increase milk production. giving green beans can be an alternative to increase milk production, remembering that there are still many cases of RTIU working areas, there are still many cases of mothers who experience shortages of milk production after giving birth. For this reason, the purpose of this study is to analyze the effect of giving green bean extract on breast milk production for postpartum mothers in the Eastern Langsa Health Center.

II. METHODS

This research used a quasi-experimental approach. Quasi-experimental research has the ability to identify an intervention's identity and create strong research evidence because it is objective, systematic, and controlled. Data collection was carried out from 23 May to 30 June 2019 in the working area of the East Langsa Public Health Center. The population were all postpartum mothers (postpartum mothers in the work area of Public Health Central East Langsa City. Samples were postpartum mothers on the second day with inclusion and exclusion

criteria. Sampling was carried out with a purposive sampling of 32 people divided into two gropups; the control and intervention groups. Data analysis used the Wilcoxon test statistical approach for bivariate analysis, then presented the data and drawn conclusions

III. RESULTS

Univariate

Demographic data in this study include age, education, and a number of breastfeeding children in mothers for 24 hours from each observation group, namely intervention, and control as shown in the table below:

Table 1 Frequency Distribution of Demographic Data Intervention Groups in the Work Areas of UPTD Health Center in East Langsa in 2019 (n = 16)

1.	Respondent Age:	Intervention	%	Control	%
	a. ≤ 20 ys	1	6	1	6
	b. 20-25 ys	3	19	3	19
	c. 26-30 ys	9	56	10	63
	d. ≥ 30 ys	3	19	2	12
2.	Education :				
	a. SMP	9	56	1	6
	b. SMU	4	25	15	94
	c. D III	1	6	0	0
	d. S1	2	13	0	0
3.	Number of breastfeeding in 24 hours				
	a. often (≥ 8 times a day)	14	87	12	75

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b. not often (< 8 times a day)	2	13	4	25

The results of the table show that the majority of respondents in the intervention group were in the age range of 26-30 years by 9 people (56%), while the control group was 10 people (63%). The education level of the intervention group was mostly junior high school, which was 9 respondents (56%), while the control group had a high school education level of 15 respondents (94%). The intervention group mostly had the number of children breastfeeding mothers for 24 hours (≥ 8 times a day), 14 people (87%), while the control group was 12 people (75%)

Bivariate

The bivariate analysis aims to look at the effect of giving green bean extract on breast milk production in postpartum mothers. Bivariate analysis was performed using the Independent T-test at the level of significance () <0.05. Aspects analyzed include differences in milk production between the intervention group and the control group. The results obtained from the statistical test on the effect of Mother Postpartum Breast Milk Production in the Intervention and Control Group in the Work Area of the East Langsa Public Health Center can be seen in the following table:

Table 4 Analysis of Independent T-Tests of Mother's Milk Production in the Intervention and Control Group (n = 32)

	N	Mean	Confidence Interval		Difference	p-value
			Upper limit	Difference		
Intervention	16	123.00	25.932	Difference	14.375	0.016
Control	16	108.63				

Source : Primary Data (2019)

Table 4 above shows that there is a difference in the volume of postpartum mother's milk in the intervention and control group of 14.375. The results of the research are normally distributed so that they meet the T dependent test requirements. T-test results obtained a p-value of 0.016 where the value <: 0.05 so that it was statistically concluded that there was an effect of green bean extract on breast milk production in postpartum

mothers in the Work Area of the East Langsa Public Health Center. Then an analysis of the maternal age factor for the postpartum breastfeeding production in the intervention group and the control group in the working area of the Eastern Langsa Public Health Center was carried out.

Table 5 Independent Test T-Test for Maternal Age Factors for Breast Milk Production in the Intervention and Control Group (n = 32)

	N	Mean	Confidence Interval		Difference	p-*value*
			Upper limit	Lower limit		
Intervention	16	29.38	5.538	0.913	2.313	0.154
Control	16	27.06				

Source : Primary data (2019)

Based on table 5 above shows that there is no effect of age on the volume of postpartum mother's milk, in the control and intervention groups with a p-value of 0.154 where the value>: 0.05. The statistical results can be concluded that there is no effect of age on the production of breast milk in postpartum mothers in the Work Area of the Eastern Langsa Health Center. Furthermore, the Frequency of Breastfeeding Infants Factor Test on Nifas Mother Breast Milk Production was carried out in the intervention and control groups in the work area of the East Langsa Public Health Center.

Table 6 Independent Test T-Test for Frequency Factors of Breastfeeding Infants to Postpartum Breast Milk Production in the Intervention and Control Group (n = 32)

	N	Mean	Confidence Interval		different	p-*value*
			Upper limit	Lower limit		
Intervention	16	6.00	6.597	2.597	2.00	0.381
Control	16	4.00				

Source: Primary Data (2019)

Table 6 shows that there is no effect of the frequency of breastfeeding for 24 hours on the volume of postpartum breastfeeding, in the control and intervention groups with a p-value of 0.381 where the value>: 0.05. Statistically, it was concluded that there was no effect of the frequency of breastfeeding for 24 hours on the production of breast milk for postpartum mothers in the Work Area of the East Langsa Health Center.

IV. DISCUSSION

There are many factors that cause babies not to get both exclusive and sustainable breastfeeding until the age of 2 years. One report includes the production of breast milk that is not sufficient for the needs of children. The volume of breast milk is strongly influenced by various factors such as baby sucking on the breast of the mother, the frequency of administration, the existence of individual variations including the amount of nutrition that the mother consumes in her daily diet. T-test results obtained p-value 0.016 where the value <: 0.05. statistically, it was concluded that there was an effect of green bean extract on breast milk production in postpartum mothers in the work area of the Eastern Langsa Public Health Center. Lack of calorie sources such as carbohydrates can cause malnutrition. Green beans are one of the food sources with high carbohydrate and protein content, followed by a variety of other essential nutrient content. Regular consumption of mung beans will be able to meet the nutritional needs of mothers to produce a sufficient volume of milk (Faradilla 2012). Nursing mothers who consume enough nutritious food will increase levels of the hormone prolactin which functions in the release of breast milk. The results of the study note that the age factor does not provide a significant difference in the production of breast milk in postpartum mothers from both the intervention and control groups. Age of mothers who are at risk can have an influence on the volume of breast milk that can come from mental stress which causes decreased confidence due to pregnancy at nearing risk. Mental stress is one of the causes of a reduction in the volume of milk. This psychological condition affects around 7-15% of postpartum mothers in the first three months and can result in feelings of anxiety, depressed mood, and indifference to self (Gaynes 2005). This psychological disorder can affect the relationship between mother and baby and breastfeeding patterns. Early identification of risks to postpartum mothers is very important to reduce the negative influence of this psychological condition and has the potential to increase the success of breastfeeding (Taveras 2003). Mothers who are depressed have a 1.25 times greater risk of stopping breastfeeding (Riordan 2005). The frequency factor of breastfeeding infants did not make a significant difference in the production of breast milk in postpartum mothers from both the intervention and control groups. The frequency factor of breastfeeding which results in baby sucking on the nipple which causes milk production and expenditure.

Complaints on postpartum maternal health are closely related to the health of infants who are being breastfed (Ahn S 2007). The influence of the frequency of breastfeeding with the production of breast milk can be due to many factors such as knowledge of nutrition and health, health complaints, and the psychological condition of postpartum mothers. Knowledge and support affect exclusive breastfeeding (Bowman 2013). Health workers play an important role in providing the information needed to mothers in the provision of Asi (Almatsier 2011).

V. CONCLUSION

There is an effect of green bean extract on breast milk production in postpartum mothers in the work area of the East Langsa Public Health Center, with the T-test results obtained p-value 0.016 where the value <: 0.05. Mothers who consume green bean extract as a companion for breast milk have increased milk production in the intervention and control groups in the Eastern Langsa PublicHealth Center. Green bean extract is effective in increasing milk production. Maternal age factors and frequency of breastfeeding infants. There was no difference in the average difference in milk production in the intervention and control groups.

Conflict of interests: On behalf of all authors the corresponding author states that there is no conflict of interest

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