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RESEARCH ARTICLE

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The Effect of Torbangun Leaves Consumption on the Improvement of Breastmilk Volume in Post Partum Women in Ononamolo Village, Gunungsitoli City

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ABSTRACT

Introduction: Insufficient volume of breastmilk production is the most common inhibiting factor leading to cessation of breastfeeding practice. This study aims to determine the effect of torbangun leaves (*Coleus amboinicus lour*) on the increase in breast milk volume in postpartum mothers in Ononamolo Village, Gunungsitoli Selatan District, Gunungsitoli City. **Methods**: The research design used a pre-experimental design with a pretest-posttest control group design. The population was post partum mothers in Ononamolo I Lot Village, Gunungsitoli Selatan District, Gunungsitoli City with a ratio of 1: 1. The sample size was 20 post partum mothers, selected using purposive sampling technique, with 1 intervention group given torbangun leaves for consumption for 14 consecutive days and 1 control group given booster milk to be consumed at the same time as the intervention group. The instrument used to measure milk production is to use a measuring cup. The results of data collection were analyzed by using the paired sample t-test. **Results**: Based on the research results obtained were the pre-test mean value of 6.10 with a standard deviation of 3.227, while in the post-test the average value was 10.95 with a standard deviation of 3.720. From the results of t-test with a confidence level of 95%, a p-value of 0.000 was obtained. **Conclusion**: There is an effect of the consumption of torbangun leaves on increasing the volume of breast milk in Ononamolo Village, Gunungsitoli Selatan District, Gunungsitoli City.

Keywords: breastmilk volume production; torbangun leaves; post partum mothers

INTRODUCTION

Background

Breastfeeding is very important for optimal growth and development both physically and mentally and for the intelligence of babies so that babies can grow perfectly as healthy humans, besides breastfeeding can reduce the risk of infant death [(1)].

Breast milk is an emulsion of fat in a solution of protein, lactose and inorganic salts secreted by the mother's mammary glands, and is useful as baby food [(2)].

The release of breast milk is greatly influenced by many factors. The main factors that influence it are hormonal factors, namely prolactin which plays a role in the production of breast milk and oxytocin which plays a role in stimulating the release of breast milk. The hormone prolactin is produced by the pituitary gland in the brain and affects various physiological functions of the body [(3)].

Insufficient milk production is the most common inhibiting factor leading to cessation of breastfeeding practice. One of the efforts to increase the rate of breast milk secretion and production is through the use of traditional medicines in the form of stew and extract of torbangun leaves (*Coleus amboinicus lour*) [(4)].

Torbangun leaves are a common type of plant that is consumed by mothers who have just given birth in North Sumatra, especially the Batak people. Torbangun leaves are believed to increase milk production. Torbangun leaves have high nutrient content, especially iron and carotene [(5)].

Not only in the Batak tribe, Torbangun is also present in almost all parts of Indonesia and several countries in tropical regions, both in Asia, Australia, Africa, and America. It's just that the uses vary. Only the Batak people consume it to increase milk production [(6)].

The consumption of torbangun leaves is very common and is well known by most of the Batak tribe community, but this is not the case with other tribal people. As in the Nias tribe, torbangun leaves are considered only ordinary plants, not plants known for their properties to increase breast milk production.

Based on the results of interviews conducted by researchers with 10 post-partum mothers, it was known that 7 out of 10 postpartum mothers said they had little breast milk, of the 7 mothers who had little breast milk admitted that they had never consumed torbangun leaves as an effort to increase milk production.

The formulation of the problem in this study is whether there is an effect of the consumption of torbangun leaves on increasing the volume of breast milk in Ononamolo Village, Gunungsitoli Selatan District, Gunungsitoli City. This study aims to determine the effect of torbangun leaves (*Coleus amboinicus lour*) on the increase in breast milk volume in postpartum mothers in Ononamolo Village, Gunungsitoli Selatan District, Gunungsitoli City.

METHODS

This research was conducted in Ononamolo I lot Village, Gunungsitoli Selatan District, Gunungsitoli City. The research began by submitting a Higher Education Service Institutions (LLDIKTI) Beginner Lecturer Research (PDP) grant proposal in August 2019 until data collection was carried out in August 2020. The population in this study were all post partum mothers with 40 post partum people. The sample in this study was drawn using purposive sampling technique. Comparison of 1: 1, where 20 respondents were treated with torbangun leaves, 20 respondents as a control group were given ASSI Booster. The sample inclusion criteria were willingness to be a respondent, post partum mothers who had difficulty breastfeeding their babies.

In the intervention group before the study, the volume of breast milk was first measured and then given torbangun leaves to be consumed as a side vegetable menu for rice for 14 days. On the 15th day the volume of breast milk is again measured in cc. The same thing also applies to the control group before the study, the volume of breast milk was first measured and then given booster milk in the form of Asifit to be consumed once a day after eating for 14 days. On the 15th day the volume of breast milk is again measured in cc.

Collecting research data in collaboration with 2 village midwives who worked at the research location. The statistical test used was the paired sample t-test to measure the difference in the average milk production in the intervention group and the control group with a significance level of 95% (0.05).

RESULTS

Respondent Characteristics

Respondents in this study were post partum mothers with the highest age of 35 people (87.5%) in the 20-35 year old group, with the most male babies, 23 (57.5%) and with their second child as much as 20 people (50%), as shown in Table 1.

Table 1. Characteristics of Respondents

Characteristics	Category	Frequency	Percentage
Age	<20 years	3	7.5
	20-35 years	35	87.5
	> 35 years	2	5
Baby's sex	Male	23	57.5
	Female	17	42.5
Employment	1	13	32.5
	2	20	50
	3	7	17.5

Hypothesis Testing

Requirements test before the paired sample-t test was carried out, first the data normality test and the data homogeneity test were carried out. It was found that in the intervention group torbagun leaves 0.184 and the control group 0.343. All the p-values were >0.05, which means that the data was normally distributed.

The p-value of t-test was 0.000 (<0.005), so there was a difference in the average volume of breast milk before and after consumption of torbangun leaves in the intervention group (Table 2).

Table 2. Differences in average breastfeeding before and after consumption of torbangun leaves in the intervention group in Ononamolo I Lot Village, Gunungsitoli Selatan District, Gunungsitoli City in 2020

Group	Paired sample t-test		
	Mean	Std. deviation	p-value
Pretest	6.10	3.227	0,000
Posttest	10.95	3.720	

Table 3.The difference in average breastfeeding before and after consumption of breast milk booster drugs in the control group in Ononamolo I Lot Village, Gunungsitoli Selatan District, Gunungsitoli City, 2020

Group	Paired sample t-test		
	Mean	Std. deviation	p-value
Pretest	6.60	3.050	0.000
Posttest	11.10	3.865	

Table 3 shows that p-value of t-test in control group was 0.000 (<0.05), so there was a difference in the average volume of breast milk before and after consumption of booster breast milk in the control group.

Table 4. Difference in the average posttest results of breast milk production volume after consumption of Torbangun leaves and after consuming booster breast medicine in the control group in Ononamolo I Lot Village, Gunungsitoli Selatan District, Gunungsitoli City in 2020

	Group	n	Mean	Std. deviation	p-value
Group posttest results	Intervention group	20	12.55	2.038	0.000
	Control group	20	8.30	1.380	0.000

Table 4 shows that the posttest results of the intervention group and the control group have the same significance.

DISCUSSION

Based on the results, there is a difference in the average volume of breast milk before and after consumption of torbangun leaves in the intervention group. This results is in line with Ariescha's research "The Effect of Giving Bangun-Bangun Leaves (*Coleus ambonicus lour*) on Breast Milk Production in Candirejo Village, Biru-Biru District, Deli Serdang Regency in 2018" which states that based on the p-value of 0.000, there is an effect of giving leaves of shapes on milk production [(7)].

Lovita's [(8)] research shows the same research results as this research, where the research entitled "The Effect of Steeping Bangun-Bangun Tea on Breastmilk Production in Selayang Village, Puskesmas Finish Subdistrict Selesai Langkat Regency in 2018" shows the effect of steeping the waking leaves. Build on breast milk production obtained from p-value = 0.000 by a quasy experimental research design using a non-equivalent control group approach.

Torbangun leaves have three main components which are lactogenic compounds, namely components that can stimulate the production of milk glands in lactating mothers. The second component is nutrition, while the third component is pharmacoseutics, namely compounds that are buffer, antibacterial, antioxidant, lubricants, stretchers, dyes and stabilizers [(9)].

The leaves of the risers also contain potassium which functions as a blood purifier, fights infection, relieves pain and creates a sense of calm so that milk secretion becomes smooth cows that experience stress will need an additional 1% potassium to prevent a decrease in milk secretion. Potassium deficiency can cause loss of appetite, weight loss and decreased milk secretion [(9), (10)].

Based on the results, there is a difference in the average volume of breast milk before and after consumption of booster breast milk in the control group. This research is in line with Mardiani's [(11)] research "The Effect of Booster Breastfeeding on Post Sectio Caesarea Mother's Breast Milk Production at Majalengka Hospital in 2018" which shows that prior to breastfeeding Booster was 5.2% smooth and 94.7% not smooth. Average milk production 17.9 ml. After breastfeeding Booster was 57.9% smooth and 42.1% not smooth with an average milk production of 25.8 ml. The results of this study state that there is a significant effect of booster breastfeeding on increasing breast milk production in post-Sectio Caesarea mothers at Majalengka Hospital in 2018 with p-value of 0.000[(11)].

Breast milk Booster is a food that can increase milk supply. According to dr. Margaret Sugondo, Lactation Counselor at Pondok Indah Hospital, stated that the use of booster breast milk is more recommended for mothers who want to breastfeed adopted babies (induction of breastfeeding), breastfeed again after stopping (relactation) or to increase milk production in mothers with low milk supply. due to the condition of the mother or baby being sick or after being separated for certain reasons (for example: a baby born prematurely / sick in the NICU) [(9)].

The results shows that that the posttest results of the intervention group and the control group have the same significance. Consumption of torbangun leaves in postpartum mothers in order to increase the volume of breast milk production is highly recommended because it has high effectiveness and is also more economical and practical if consumed because torbangun leaves are used as vegetables as additional rice which can be consumed

every day compared to booster breast milk, which is the same way of consuming as consuming drugs so most Postpartum mothers are lazy to consume them and often forget.

CONCLUSION

There is an effect of torbangun leaf consumption on the increase in breast milk volume in postpartum mothers in Ononamolo Village, Gunungsitoli Selatan District, Gunungsitoli City.

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