

## THE EFFECT OF SOYBEAN MILK FEEDING ON INCREASING BREAST MILK PRODUCTION IN PUBLIC MOTHERS AT NASYWA CLINIC IN 2022

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### ABSTRACT

Low milk production is the main problem for new mothers, besides the problem of sinking or flat nipples, swollen breasts, the baby is reluctant to suckle due to improper technique or the baby has a short tongue. The purpose of this study was to determine the effect of giving soy milk (soybean milk) to increasing breast milk production in postpartum mothers at the Nasywa Clinic in 2022. This study used the method pre-experimental design by design one group pretest-posttest without control. Sampling was done by purposive sampling method. Respondents who were used as samples were 30 postpartum mothers who had problems with insufficient breast milk. The bivariate analysis used in this study was a nonparametric difference test with the Wilcoxon test. The results of this study showed that from 30 respondents, 21 people (70%) complained of not having soy milk before being given the intervention. The increase in breast milk production after being given soy milk was 19 people (63.3%) in the category of smooth breastfeeding and 11 people (36.7%) with non-fluent breast milk. The results of the bivariate analysis showed that there was a significant effect of giving soy milk (soybean milk) to increasing breast milk production in postpartum mothers at the Nasywa Clinic in 2022, with a value of  $p = 0.002$  ( $p < 0.05$ ).

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### 1. Introduction

In 2016 the coverage of exclusive breastfeeding in the world was only 36%. According to the World Health Organization (WHO) breastfeeding is one of the most effective methods for determining child health and survival, but almost 2 out of 3 infants do not breastfeed exclusively for 6 months as recommended and this figure continues to be unimproved within 2 months. second . WHO and UNICEF recommend that children start breastfeeding within the first hour after birth and be exclusively breastfed for the first 6 months of life which means no other food or drink is provided including water. Babies must be breastfed according to demand and as often as possible during the day and night and the use of bottles or pacifiers should not be used (Puspita M, 2021).

Mother's Milk (ASI) is the perfect food for babies because this food is guaranteed clean and has antibodies that can protect against various common childhood diseases. Breast milk has provided all the energy and nutrients needed for babies from the first month of life to the second year. Breast milk will always be available and affordable to help babies get adequate nutrition (Puspita M, 2021).

In 2016 the coverage of exclusive breastfeeding in the world was only 36%. This achievement is still below the target of breastfeeding coverage set by WHO, which is 50%. According to Riskesdas data taken from 2014-2018, the coverage of exclusive breastfeeding in Indonesia in 2014 was 37.3%, in 2015 it was 55.7%, in 2016 it was 54%, in 2017 it was 61.33%, and in 2018 experienced a significant decrease in the amount of 37.3%. When compared with the target set by the Indonesian Ministry of Health, which is 80%, the achievement of exclusive breastfeeding at the Indonesian level still does not meet the target (Valentine N. R, et al 2019).

North Sumatra Province is one of the provinces that has not yet reached the national target of exclusive breastfeeding coverage in Indonesia. the percentage of children who were exclusively breastfed from 2010-2015 tended to decrease significantly, the coverage of exclusive breastfeeding in 2010 was 55.1% increased to 56.6% in 2011 and in 2012 the coverage decreased again to 32.2%, in in 2013 it increased to 41.3%, then in 2014 it decreased to 37.6% while in 2015 it decreased to 33% (Lubis I, 2017).

Profile of the District Health Office Asahan is one of the districts in North Sumatra. The coverage of children who were exclusively breastfed from 2010-2015 was very volatile because the coverage of exclusive breastfeeding in 2010 was 25.57% increased to 28.79%, in 2011 and in 2012 the coverage decreased again to 28.45%, in 2013 decreased to 12%, then in 2014 there was a slight increase to 15.45% while in 2015 there was also a slight increase to 15.62% (2,305 people) of the total 14,761 children (Lubis I. 2017).

Breastfeeding has many benefits for both mother and baby. Some of the benefits of breastfeeding for infants are to prevent infant malnutrition, increase body resistance, increase cognitive intelligence in infants, prevent gastrointestinal infections (vomiting and diarrhea), prevent respiratory tract infections and prevent the risk of death. While the benefits of breastfeeding for mothers, namely the baby's sucking on the breast will stimulate the formation of oxytocin by the pituitary gland. Oxytocin works by helping uterine involution and preventing postpartum bleeding in mothers, as well as delaying menstruation so that it can reduce the prevalence of iron deficiency anemia in new mothers, the incidence of mammary carcinoma in breastfeeding mothers (Valentine N. R, et al 2019).

One way to increase breast milk production is by consuming soy milk made from soybeans. Soy milk was chosen to increase breast milk production because soybeans contain 35% protein which can help increase breast milk production because soy milk contains isoflavones, alkaloids, polyphenols, steroids, and other substances that stimulate the hormones oxytocin and prolactin which are effective in increasing and facilitating breast milk production. (Sustainable A. 2021).

## 2. Method

This type of research uses a quasi-experimental research design with a pretest posttest control group design.

1. Population and Research Sample The population in this study were all postpartum mothers who had problems with insufficient milk production as many as 30 people at the Nasywa clinic. The sampling technique used is purposive sampling.
3. Data collection  
The data collected is primary data, namely data taken directly by researchers. At the preparatory stage, the researcher first asked permission from the institution where the research was conducted. At the implementation stage, the researcher first explained the research objectives to the respondents who met the inclusion criteria and then the respondents were asked to sign an informed consent form. Respondents were given soy milk to be consumed for 7 days.
4. Processing and data analysis  
The data will be processed using SPSS version 20 software. Data analysis will be carried out using quantitative analysis to obtain research results.

## 3. Results and Discussion

### Univariate Analysis

#### Characteristics of Respondents

Characteristics of respondents in Nasywa Clinic The year 2022 in this study is grouped by age, education, occupation and parity. Characteristics of respondents are described in table 4.1 as follows:

Table 1.  
CHARACTERISTICS OF RESPONDENTS IN NASYWA CLINIC 2022

No	Demographic Data	Frequency	Percentage (%)
1	Age		
	<25 years old	11	36.7

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26-35 years old	16	53.3
>35 years old	3	10.0
Amount	30	100
<b>2 Education</b>		
Elementary/Junior High (Low)	10	33.3
High School (Intermediate)	18	60.0
D-III/ S-1 (High)	2	6.7
Amount	30	100
<b>3 Work</b>		
Working	11	36.7
Doesn't work	19	63.3
Amount	30	100
<b>4 parity</b>		
Primipara	16	53.3
Multipara	14	46.7
Amount	30	100

Based on table 1 above, it is known that the characteristics of respondents based on the age of the majority of respondents aged between 25-35 years are 16 respondents (53.3%), with the education level of the majority of respondents graduating from high school (SMA) as many as 18 respondents (60.0%)., and seen the occupation of the majority of respondents Housewives (not working) as many as 19 respondents (63.3%). Judging from parity, most of them were primiparous mothers, as many as 16 respondents (53.3%).

## Breast Milk Production in Postpartum Mothers Before Consuming Soybean Milk at Nasywa Clinic in 2022

Table 2.

MILK PRODUCTION IN POSTPARTUM MOTHERS BEFORE CONSUMING SOYBEAN MILK AT NASYWA CLINIC IN 2022

Breast milk production (Pre-test)	Frequency	Percentage (%)
Fluent	9	30.0
Not smooth	21	70.0
Amount	30	100

Based on Table 4.2 above, it is known that the breast milk production in postpartum mothers before consuming soy milk (SoyBean Milk) the majority had non-smooth milk production as many as 21 people (70.0%), while postpartum mothers who had smooth breast milk production as many as 9 people (30,0%)

## Increased Milk Production in Postpartum Mothers After Consuming Soybean Milk at Nasywa Clinic in 2022

Table 3

INCREASED MILK PRODUCTION IN POSTPARTUM MOTHERS AFTER CONSUMING SOYBEAN MILK AT NASYWA CLINIC IN 2022

Increased Milk Production (Posttest)	Frequency	Percentage (%)
Fluent	19	63.3
Not smooth	11	36.7
Amount	30	100

Based on Table 4.3 above, it is known that the production of breast milk in postpartum mothers after consuming soy milk (SoyBean Milk) the majority had an increase in smooth milk production as many as 19 people (63.3%), while postpartum mothers who still had non-fluent milk production were 11 people. (36.7%).

## Bivariate Analysis

### The Effect of Soybean Milk on Increasing Breast Milk Production in Postpartum Mothers at Nasywa Clinic in 2022

Table 4

THE EFFECT OF SOYBEAN MILK ON INCREASING BREAST MILK PRODUCTION IN POSTPARTUM MOTHERS AT NASYWA CLINIC IN 2022

Increased Milk Production	Treatment		Ranking Change	p value	
	Before	After			
	F	F		F	
Fluent	9	19	Negative Rating	10	0.002*
Not smooth	21	11	Positive Rating	0	
			Ties	20	

Based on the results of the analysis through the Wilcoxon test in the rank table, it was obtained Negative rank: 10, it means that there is a change in the increase in breast milk production in postpartum mothers after consuming Soybean Milk from non-smooth to smooth, namely as many as 10 respondents so that the number of postpartum mothers who have production Breastfeeding smoothly as many as 19 respondents.

#### 4.3 Discussion

##### Increased Milk Production in Postpartum Mothers Before Consuming Soybean Milk at Nasywa Clinic in 2022

The study found that before giving soy milk to postpartum mothers (pre-test), most of the subjects had non-fluent milk production (70%). This condition shows that at the beginning of breastfeeding, many mothers experience problems in milk production so that milk production is not smooth. Many factors influence the success of breast milk production shortly after giving birth, one of which is the participation of mothers in carrying out Early Initiation of Breastfeeding (IMD).

##### Increased Milk Production in Postpartum Mothers After Consuming Soybean Milk at Nasywa Clinic in 2022

Based on the results of the study, it is known that the production of breast milk in postpartum mothers after consuming soy milk (SoyBean Milk) the majority have an increase in smooth milk production as many as 19 people (63.3%), while postpartum mothers who still have non-fluent milk production are 11 people (36.7%).

The results of this study are in line with research conducted by previous research conducted by Puspitasari (2018), entitled "the effect of giving soy milk to increasing breast milk production in postpartum mothers in RB Bina Sehat Bantul". The results of this study indicate that 40 respondents, before being given the soy milk intervention, 14 people (35%) complained that their breast milk was a little smooth. The increase in breast milk after being given soy milk was 35 people (77.5%) with very smooth breast milk category and 5 people (12.5%) smooth breastfeeding. The results of the bivariate analysis by comparing the pre and posttest values showed  $p = 0.000$  ( $p < 0.05$ ). In conclusion, giving soy milk has a positive effect on increasing breast milk production in postpartum mothers.

##### The Effect of Soybean Milk on Increasing Breast Milk Production in Postpartum Mothers at Nasywa Clinic in 2022

Based on the results of the study, it was found that there was an increase in breast milk production in postpartum mothers after consuming soy milk (Soybean Milk) at the Nasywa Clinic in 2022 where 19 respondents (63.3%) experienced an increase in breast milk production, while 11 respondents who had not experienced an increase in breast milk production (36.7%).

The results of the Wilcoxon test showed that the p value was 0.002 where the value of  $< 0.05$ , then  $H_0$  was rejected and  $H_a$  was accepted. This means that there is a significant effect of giving soy milk (soybean milk) to increasing breast milk production in postpartum mothers at the Nasywa Clinic in 2022. Thus, it can be concluded that giving soy milk (soybean milk) is effective in increasing breast milk production in postpartum mothers at the Clinic. Nasywa in 2022. The effect of soy milk on

increasing breast milk production shows a positive effect where as many as 19 respondents experienced an increase in breast milk production.

#### 4. Conclusions

The conclusions of this study are as follows: The production of breast milk in postpartum mothers before consuming soy milk (SoyBean Milk) at the Nasywa Clinic in 2022 the majority had non-smooth milk production (70%). The increase in breast milk production in postpartum mothers after consuming soy milk (SoyBean Milk) at Nasywa Clinic in 2022, the majority had smooth milk production (63.3%). There is an effect of giving soy milk (soybean milk) to increase breast milk production in postpartum mothers at Nasywa Clinic in 2022, with p value = 0.000, where p value <0.05, which means  $H_a$  is accepted. These results prove that the provision of soy milk (soybean milk) has proven to be effective in increasing breast milk production in postpartum mothers at the Nasywa Clinic in 2022.

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