The Effect of Giving Sukkari Date Juice on Breast Milk Volume in Postterm Mothers, 2025

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Abstract

According to World Health Organization (WHO) data in 2018, exclusive breastfeeding reached 38%. This is still below the WHO target of 50% Exclusive Breastfeeding achievement. Sukkari dates have rich nutritional content, including carbohydrates and energy, vitamin B6, folic acid, minerals (calcium, magnesium, potassium), fiber, and antioxidants. These contents play a role in increasing the energy and nutrients needed by mothers during breastfeeding. The purpose of this study was to determine the effect of giving sukkari date juice (Phoenix Dactylifera L) on the volume of breast milk in postpartum mothers in the obstetric room of Arosuka Hospital in 2025. The research design employed was a pre-experimental design with a one-group pre-test and post-test. The research sample involved 14 breastfeeding mothers. The research was conducted from March 2025 to April 2025. The average volume of breast milk before being given Sukkari date juice was 27.79 and the average volume of breast milk after being given Sukkari date juice was 59.86. The p-value of the research data is 0.000 (<0.05). Based on statistical analysis, it was concluded that there was an effect of giving Sukkari date juice (Phoenix Dactylifera L) on the volume of breast milk in postpartum mothers in the obstetrics room of Arosuka Hospital in 2025. This study implies that breastfeeding mothers can be encouraged to consume Sukkari date juice as an alternative before using drugs and supplements to stimulate breast milk production.

Kata KunciKeywords:Status gizi, masa kerja, kebiasaan merokok, lingkungan: Sukkari date juice, breast milk volume, postpartum period

Introduction

Breastfeeding is a physiological process that is useful in providing optimal nutrition to babies. For a child, there is nothing more valuable than receiving quality nutrition from the beginning of their birth. Various studies over the past two years have increasingly shown that breast milk is the best and most complete source of nutrition that babies can receive.[1] The nutritional value of breast milk itself is much greater than formula milk.[2] Children's health needs attention, especially children who do not like to eat so it requires direction to increase their appetite. Children who experience stunting due to a lack of food intake and recurrent illnesses, especially infectious diseases, can increase metabolic needs and reduce appetite.[3]

The content of breast milk itself is a nutrient that contains lactose, calcium, phosphate, colostrum, carbohydrates, protein, fat, carnitine, vitamins and minerals.[4] The contents of breast milk certainly have very important benefits, for example colostrum is the first breast milk that is released 1-5 days after birth and contains high levels of immunoglobin A so that it is useful as an antibody for babies.[5] As well as the nutritional content in the form of protein, carnitine, vitamins and minerals that are useful as the main intake that supports the growth of the brain and bones and vital organs of children during growth, of course all of these contents cannot be obtained in formula milk.[6]

According to data from the World Health Organization (WHO) (2018), around 38% of exclusive breastfeeding is given. This achievement has not yet reached the WHO target of 50% total coverage of exclusive breastfeeding. The coverage of exclusive breastfeeding is 25% in Central Africa, 32% in Latin America and the Caribbean, 30% in East Asia, 47% in South Asia, and 46% in developing countries. Overall, less than 40% of children under six months of age receive breast milk [9]. This is not in accordance with the WHO goal of setting a minimum of 50% exclusive breastfeeding in the first 6 months and this is the fifth goal of the World Health Organization in 2025.[7]

Over the past six years, there has been a surge in exclusive breastfeeding in Indonesia for the first 6 months of a child's life from 52% in 2017 to 68% in 2023. However, significant challenges remain at the newborn stage. The National Health Survey found that only 27% of newborns received breast milk in the first hour, that one in five infants were given food or fluids other than breast milk in the first three days,

and that only 14% had skin-to-skin contact for at least one hour immediately after birth. Early initiation of breastfeeding – breastfeeding a newborn within the first hour of life – is critical for newborn survival and establishing long-term breastfeeding. Delaying breastfeeding after birth can be fatal.[7]

Based on data obtained from the Central Statistics Agency (BPS) in 2024, the percentage of babies under 6 months who received exclusive breastfeeding in Indonesia was only 74.73%. And the percentage of babies under 6 months who received exclusive breastfeeding in West Sumatra was 76.44%. Quoted from the medical and breastfeeding treatment journal published by Dr. Wening Wijaya in 2020, the factors that influence the provision of exclusive breastfeeding are the mother's work status, breast milk does not come out immediately, the mother's wrong perception that formula milk is better than breast milk, and birth by cesarean section. Meanwhile, the frequency of breastfeeding, the baby's birth weight, gestational age at birth, the mother's age and parity, stress and acute illness, smoking and alcohol consumption are factors that influence breast milk production. Birth control pills and foods that increase breast milk production.[8]

One of the foods that can be consumed by pregnant and breastfeeding mothers to facilitate the production of breast milk is dates, dates are fruits that are rich in nutrients. They contain carbohydrates, fiber, calcium, potassium, vitamin B complex, magnesium and iron. And no less important, dates contain a hormone that is often called the hormone potuchin, which according to medical experts, this hormone functions to increase the uterus and uterine muscles so that it can help reduce postpartum bleeding. In addition, there is the hormone oxytocin which can help stimulate contractions in the muscles of the uterus so that labor is easier. This hormone will also help stimulate contractions in the veins around the mother's breasts, thus stimulating the milk glands to produce breast milk.[9]

Dates have the characteristics of being easily digested, entering the bloodstream in a relatively short time and can be used by all organs of the body, especially the brain, because sugar is an important nutrient for the brain. Dates are rich in nutrients and hormones. Dates contain a hormone called patuchin, which functions to help contract the uterus and uterine muscles, thereby helping to reduce postpartum bleeding. This hormone helps stimulate contractions of the veins around the mother's

breasts, thus stimulating the mammary glands to produce breast milk.[10]

In line with the research conducted by Sutrani Syarif in 2020 "Effectiveness of Giving Date Palm Juice on the Smoothness of Breast Milk for Postpartum Mothers at the Minasa UPA Makassar Health Center 2020". Concluded that from 30 respondents who were divided into 2 groups, namely the control group and the intervention group, data analysis using the Chi-Square test (a = 0.05). Based on the results of the statistical test in the intervention group, the mean value before (1.60) and the mean after (2.93) had a difference of (1.33), while in the control group, the mean value before (1.80) and the mean after (1.93) had a difference of (0.13). Based on the Chi-Square test, the smoothness of breast milk for postpartum mothers obtained a p value = 0.00 <0.05, which means that there is effectiveness in giving date palm juice on the smoothness of breast milk for postpartum mothers at the Minasa UPA Health Center in 2020.[11]

Based on the results of interviews with Mrs. Widiawati, S.Tr.Keb, Head of the Obstetrics Room of Arosuka Regional Hospital on January 3, 2025 and with patients directly, it was found that out of 14 mothers who gave birth, around 7 mothers had low or little breast milk production, this was influenced by several things, apart from postpartum pain factors, fatigue, good nutrition is also the main cause of low breast milk production.

Method

The method should be structured as follows:

1. Research design

    This type of research is experimental research or trial (experimental research).The design of this research is pre-experiment pre-test and post-test using a one group pre-test post-test design.

2. Setting and samples

    The research was carried out in the Obstetrics Room of Arosuka Regional Hospital in March-April 2025. The sampling method used by researchers is non-probability with purposive sampling, namely a sampling method based on certain considerations such as population characteristics or characteristics that are already known. The sample in this study was 14 people.

3. Intervention (applies to experimental studies)

The intervention given in this study was to see the effect of giving Sukkari date juice (Phoenix Dactylifera L) on the volume of breast milk in postpartum mothers in the obstetrics room of Arosuka Regional Hospital in 2025.

4. Measurement and data collection

Measurements were carried out twice, starting with measuring the volume of breast milk before the intervention, after that the sample was given intervention for 1 week, then after that the breast milk volume was measured again. The data collection tools used by the researcher were Electric Breast Pumps, standard operating procedures and Breast Milk Volume Observation sheets. In filling it out, the author measured the volume of breast milk. Data obtained indirectly or data collected from the Arosuka Regional General Hospital.

5. Data analysis

Data analysis is processed using a computerized system, then analyzed using univariate analysis and bivariate analysis. Univariate analysis is all variables processed based on frequency distribution. The purpose of this analysis is to explain the characteristics of each variable studied.[13] The data analysis presented in the form of descriptive statistical values includes the mean (average) and standard deviation for both measurements (before and after the measurement of breast milk volume. Bivariate Analysis Data is processed by computer to determine the effect of independent variables on the dependent variables studied. Before testing the hypothesis, the researcher conducted a normality test using the Saphiro Wilk test, obtained normally distributed data with significance $(p) > 0.05$, then the data is normally distributed and the hypothesis test used is a parametric test, namely the dependent T test, and obtained a significance value $(p) < 0.05$, namely 0.001, it is concluded that there is an effect of giving Sukkari date juice (Phoenix Dactylifera L) on breast milk volume in postpartum mothers in the obstetrics room of Arosuka Hospital in 2025.

Results

Univariate analysis

1. Average volume of breast milk of postpartum mothers before being given Sukkari

date juice (Phoenix Dactylifera L)

Tabel 1

Average volume of breast milk of postpartum mothers before being given Sukkari date juice (Phoenix Dactylifera L) in the obstetrics room of Arosuka Regional Hospital in 2025

Variabel	N	Mean	SD	Maximum	Minimum
Pre test	14	27,79	5,74	20-35	14

Based on table 1, it was found that from 14 respondents with an average volume of breast milk of postpartum mothers before being given Sukkari date juice (Phoenix Dactylifera L), the results obtained were an average of 27.79 ml, a minimum value of 20 ml, and a maximum value of 35 ml.

2. Average volume of breast milk of postpartum mothers after being given Sukkari date juice (Phoenix Dactylifera L)

Tabel 2

Average volume of breast milk of postpartum mothers after being given Sukkari date juice (Phoenix Dactylifera L) in the obstetrics room of Arosuka Regional Hospital in 2025

Variabel	N	Mean	SD	Maximum	Minimum
Post test	14	59,86	7,78	50-80	14

Based on table 2, it was found that from 14 respondents with an average volume of breast milk of postpartum mothers after being given Sukkari date juice (Phoenix Dactylifera L), the results obtained were an average of 59.86 ml, a minimum value of 50 ml, and a maximum value of 80 ml.

3. Normality Test

By conducting a data normality test using the Shapiro-Wilk parameter, the data is said to be normally distributed if the significance value (p) > 0.05. The following are the results of the normality test of the average volume of breast milk before and after the Sukkari date juice intervention.

Tabel 3

Distribusi Normal Berdasarkan Parameter Shapiro-Wilk

	Shapiro-Wilk		
	Statistic	df	Sig.
Pre-test	.893	14	.089
Post-test	.903	14	.124

Based on table. 3, it is found that the results of the normality test analysis are the pre-test obtained a significance value of 0.089 and the significance of the post-test results is 0.124, where the normality test value is due to a normal distribution when > 0.05. Thus, both groups of data (Pre-test and Post-test results) are normally distributed. Furthermore, data analysis can be done by parametric analysis paired-sample T test.

4. Bivariate analysis

The effect of giving sukkari date juice (Phoenix Dactylifera L) on breast milk volume in postpartum mothers in the obstetrics room of Arosuka Regional Hospital in 2025.

Tabel 4

The effect of giving sukkari date juice (Phoenix Dactylifera L) on breast milk volume in postpartum mothers in the obstetrics room of Arosuka Regional Hospital in 2025

Variabel	Paired Differences					df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference			
				Lower	Upper		
Pretest - Postest	32.07	4.10	1.09	34.44	29.70	13	.000

Based on table 4, the significance value (sig.) of the paired sample t-test analysis is 0.000 (<0.05), thus it can be concluded that there is a significant difference between the pre-test and post-test values, so it can be said that there is an effect of giving sukkari date juice (Phoenix Dactylifera L) on the volume of breast milk in postpartum mothers in the obstetrics room of Arosuka Regional Hospital in 2025.

Discussion

According to the assumption of the researcher in this study there are various variations in the increase in the volume of breast milk of postpartum mothers from the pre-test and post-test on the results of the pre-test breast milk volume before being given Sukkari date juice, the highest breast milk volume of the mother was 35 ml while the lowest was 20 ml, after being given Sukkari date juice for 7 days, the results of the post-test obtained the highest breast milk volume of the mother was 80 ml and the lowest was 50 ml. The difference in the increase in the volume of breast milk of the mother was that there were those whose breast milk increased by 30 ml, 32 ml, 33 ml, 34 ml, 45 ml during the study. From the characteristics of the respondents, namely age, education and parity, that mothers whose pre-test breast milk volume results were both 20 ml after being given Sukkari date juice for 7 days had different pre-test results, namely 54 ml and 50 ml, according to the researcher this happened because of the mother's education level and parity which can also affect the volume of breast milk, where the mother's education level is closely related to knowledge, where the average respondent's education level is junior high school and some only graduated from elementary school. And also the average respondent is a primiparous mother whose knowledge and experience also affect the volume of breast milk. In addition, the peace of mind and soul and the type of food she eats, as well as postpartum pain also affect the volume of breast milk.

Conclusion

Based on the results of the study entitled The Effect of Giving Sukkari Date Juice (Phoenix Dactylifera L) on Breast Milk Volume in Postpartum Mothers in the Obstetrics Room of Arosuka Regional Hospital in 2025, with a total sample of 14 people, it can be concluded that:

1. The average volume of breast milk of postpartum mothers before being given sukkari date juice (Phoenix Dactylifera L) in the obstetrics room of Arosuka Hospital in 2025 was 27.79 ml

2. The average volume of breast milk of postpartum mothers after being given sukkari date juice (Phoenix Dactylifera L) in the obstetrics room of Arosuka Hospital in

2025 was 59.86 ml

3. The results of the statistical test obtained a significance value (sig.) from the paired sample t-test analysis of 0.000 (<0.05). Thus, it can be said that there is an effect of giving sukkari date juice (Phoenix Dactylifera L) on the volume of breast milk in postpartum mothers in the obstetrics room of Arosuka Hospital in 2025.

Author contribution

Contributions in writing this article were carried out by the main author and member writers, we work together in making this article according to the template provided.

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