

Effectiveness of Giving Papaya Leaf on The Fluence of Breast Milk in Breastfeeding Mothers at Nimasi Health Center at The Year of 2022

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ABSTRACT

Mother's Milk (ASI) is the best life liquid that is needed by babies. Breast milk contains various substances that are important for the growth and development of babies and according to their needs. Papaya leaf extract contains high protein and calories, thus affecting the volume of breast milk produced. To find out the description before and after giving papaya leaf vegetable to the smoothness of breastfeeding in breastfeeding at the Nimasi Health Center in 2022. This type of research is a *quasi-experimental research* with a *One Group Pretest-Posttest Design approach* without control. The location of this research was carried out at the Nimasi Health Center which started from April 1-April 5 by visiting residents' houses. The sample in this study were 15 breastfeeding mothers. Frequency the smoothness of breast milk before given papaya leaf vegetable is obtained score average 5,33 and breastfeeding frequency after giving papaya leaves obtained average 12.0 There influence gift papaya leaf vegetable on the smoothness of breast milk in nursing mothers obtained *P-value* = 0.000. There is effectiveness of giving papaya leaf vegetable before and after the intervention of giving papaya leaf vegetable. Therefore it is recommended for breastfeeding who experience breast milk is not smooth to consume papaya leaf vegetables to facilitate breast milk.

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INTRODUCTION

The *World Health Organization* (WHO) and the *United Nations of Children's Fund* (UNICEF) recommend that children should only be given Mother's Milk (ASI) for at least 6 months and continued breastfeeding until the child is 2 years old. Based on WHO data (2018), as many as 136.7 million babies are born worldwide and only 32.6% of them are exclusively breastfed in the first 6 months, while in developing countries only 39% of mothers give exclusive breastfeeding (WHO, 2018). In 2020 WHO again presented data in the form of the number of exclusive breastfeeding globally, although there has been an increase, this figure has not increased significantly, namely around 44% of infants aged 0-6 months worldwide who received exclusive breastfeeding during the 2015-2020 period from 50% target of exclusive breastfeeding according to WHO. The low level of

exclusive breastfeeding will have an impact on the quality and quality of life of the next generation (WHO, 2019) .

The rate of exclusive breastfeeding in Indonesia from 29.5% in 2017 to 35.7% in 2018, even though there has been an increase, this figure is still low because it is still below the national target of 50% (Ministry of Health RI 2018). Research conducted by Lambantaruan in 2018 shows that exclusive breastfeeding is influenced by several factors such as sociodemographic factors such as age, occupation, socio-economic education and place of residence, psychosocial factors (husband support, family support, beliefs, desires, perceptions), pre/postnatal factors (parity, type of delivery, complications, counselling) (Lumbantoruan, 2018). The success of exclusive breastfeeding today is also heavily influenced by technological advances. The amount of information circulating, especially about breastfeeding will affect mothers in giving exclusive breastfeeding to their babies.

Based on data from the Directorate General of Public Health, nationally the coverage of exclusive breastfeeding in Indonesia in infants aged less than 6 months is 55.7%. The most process of starting breastfeeding occurred 1-6 hours after birth (35.2%) and less than 1 hour (early initiation of breastfeeding) of 34.5%. Meanwhile, the process of starting breastfeeding was lowest at 7-23 hours after birth, which was 3.7% (Profile of the Indonesian Ministry of Health, 2015) . Based on Indonesia's 2018 health profile, the coverage of infants at the provincial level who receive exclusive breastfeeding in Indonesia is 68.74% . (Indonesian health profile 2018). The results of the 2018 Basic Health Research showed that mothers living in rural areas had a lower coverage of exclusive breastfeeding for children aged 0-5 months, namely 33.6% compared to mothers living in urban areas, namely 40.7% (Riskesdas, 2018). The psychological factor of the mother in breastfeeding has a very large influence on breastfeeding mothers and smooth milk production. Mothers who are stressed and worried can cause less milk production, breast milk is very important for baby's brain development. If you want large amounts of breast milk, you must think positively that you are able to produce enough milk (Stuebe *et al.* , 2018) . Another factor that needs to be considered is working hours, where mothers who work 7-8 hours a day are 19.93 times more likely to give exclusive breastfeeding than mothers who work more than 8 hours a day (Muyassaroh *et al.* , 2018) .

The NTT Provincial Government issued the KIA Revolution policy through NTT Governor Regulation No. 42 of 2009. This policy was issued to anticipate problems experienced by the people of East Nusa Tenggara (NTT) Province . It has become a habit in a small number of people in NTT, that deliveries are carried out at home with the help of their own family members who are not professionals. The results of this study >50% of birth attendants are not health workers, namely their own family, such as biological mothers, mother-in-law, husbands, or sisters , even though they do not have a profession such as traditional birth attendants. However, more respondents who were helped by traditional birth attendants or families gave exclusive breastfeeding (11.1%) compared to those assisted by health workers (6.2%). Efforts to overcome the lack of smooth breastfeeding can be done in a simple way, such as trying traditional ingredients. One plant that can increase milk production is papaya leaves. Papaya leaf extract has been around for a long time and through several studies is indeed useful for increasing breast milk production (Dwi Putra, 2019). Papaya leaves, which are raw materials, contain high protein and calories, which affect the volume of breast milk produced. To produce sufficient amounts of breast milk, mothers need an additional 500 calories of energy each day. The recommended amount of protein is 25 grams in the first 6 months and 18 grams in the next 6 months. If the amount of energy and protein consumed by the mother is insufficient, it will greatly affect the volume of breast milk produced but does not affect its quality (Ria Riksani, 2018) .

Related to the form of compassion for others , the word of God reminds us that breastfeeding is a good deed for mother and child. Honoring, looking after, nurturing and caring for one's parents are virtues that bring blessings and longevity. So the researcher also wants to add a feature of the AKBID Santa Elisabeth Kefamenanu namely the Healing Power of Christ's Love which is shown in the quotation from the holy book 1 Peter 2: 2 which says " *The Word of God is the staple food of a Christian*

family, and be like a newborn baby, who always wants pure and spiritual milk, so that by it you may grow and gain salvation." In the quotation from the holy book, the author wants to convey that a newborn only needs three things, namely to feel warm in his mother's arms, food from her breasts, and to feel safe when he knows his mother's presence. And, breastfeeding provides those three things'. Breastfeeding is the instinct of mother's affection for her child. And breast milk is the main and important intake for a baby. There is no other food that is more nutritious for a baby than mother's milk. Besides that, breastfeeding is very important for babies, it is also beneficial for mothers such as overcoming trauma and preventing breast cancer, therefore there is one green vegetable plant, namely papaya leaf which is beneficial in the smooth process of breastfeeding for nursing mothers which is very very useful, giving peace comfort for both mother and baby.

Papaya leaf extract contains saponins, alkaloids, mineral, vitamins and enzymes papain. Papaya leaf sap which contains papain enzyme has the same effect as oxytocin. The hormones prolactin and oxytocin play a role in increasing milk production. Research on giving papaya leaves to breastfeeding mothers has previously been carried out and the results of these studies have had a significant effect. The research was carried out by giving herbs and papaya leaves to the respondent's breasts. However in previous studies have not applied the group with no intervention (control). In addition, the group distribution is based on age, the number of groups that displayed no classifying based on parity information which is quite influential in the process of exclusive breastfeeding to infants, besides that, groups based on age are also not exactly the same between one group and another so the researchers aim to retest this study. (Kusumaningrum, 2017). Research conducted by Lilin Turlina, (2015) concerning the effect of giving papaya leaf powder on the smoothness of breastfeeding in postpartum mothers at BPM Ny. Hanik daisyem, Amd.Keb in Kedungpring, Lamongan Regency, it was found that most or 57.14% in the control group expressed milk 3 days after delivery, and most or 71.4% in the treatment group breastfeeding on the second day. Preliminary studies have been carried out from January to April at the Nimasi Health Center In 2022, data on 30 postpartum mothers were obtained. Based on Based on the background above, the writer is interested in To do study about " Effectiveness of Giving Papaya Leaf Vegetables to Smooth Breast Milk in Breastfeeding Mothers. "

RESEARCH METHOD

The research design is a Quasi Experiment with the *One Group Pretest-Posttest Design approach* without control. In this design before the treatment is given, the sample is first given a pretest (initial test) and after the experiment the sample is given a posttest (final test). This design is used in accordance with the objectives to be achieved, namely wanting to know the effectiveness of giving papaya leaf vegetables for smooth breastfeeding in nursing mothers. (Sugiyono, 2017).

The place for this research was carried out at the Nimasi Health Center which started from April 1-April 5 by visiting residents' homes before the research by conducting informed consent, filling out and signing the respondent's consent form and filling in the respondent's characteristic data, namely in the form of a questionnaire and giving a checklist sheet. Then the research was carried out for 5 weeks from April 9 to April 13 2022 in the Working Area of the Nimasi Public Health Center, North Central Timor Regency.

The population is the entire object of research or the object being examined. The population in this study were all postpartum mothers and breastfeeding mothers in the Nimasi Health Center area who visited the Nimasi Health Center on March 24 - May 5, 2022. The sample is part or representative of the population studied if the number of respondents is less than 100 samples are taken all so that the research is a population study. Whereas if the number of respondents is more than 100 then the sampling is 10%, 15%, or 20% -25% or more. (Arikunto, 2012). Sampling is 50% of the 30 population, namely 15 samples.

The sample in this study were 15 breastfeeding mothers and the researchers carried out the research using a sampling technique *Purposive Sampling* based on inclusion and exclusion

criteria.(1)Inclusion criteria: breastfeeding mothers whose milk is not smooth, (2) Exclusion Criteria: Resigned during the study.

RESULTS AND DISCUSSIONS

Description of the Characteristics of Breastfeeding Mothers at the Nimasi Health Center

Age is the age of 20-35 years, where age can affect a person's way of thinking, acting, and emotions. Usually the mother's age will also affect the mother's readiness to provide breast milk for her baby (Hurlock, 2017). The results of this study revealed that the age of the breastfeeding mother was 27.33 (statistical result), with a standard deviation of 6.64 (statistical result), the youngest age of the breastfeeding mother was 17 years and the oldest was 40 years. The results of the analysis can be concluded that 95% believed that the average age of breastfeeding mothers was between 23.6 to 31 years. This research is in accordance with Jannah's theory (2016) which explains that a mature/more mature age has better emotional control when compared to a younger age. The age of breastfeeding mothers who are too young can also result in the physiological and psychological conditions of the mother not being ready (Jannah, 2018).

The results of this study are in contrast to research conducted by Nurusalam (2021) which says that there is no relationship between maternal age and breastfeeding which can be explained because age is not a direct factor that can be influenced by exclusive breastfeeding. Age is often associated with a person's emotional maturity to think and behave. Another possibility is that the respondent gained experience or information from family or cadres (Nursalam, 2021).

The parity variable showed that more mothers were primiparous at the Nimasi Health Center, namely 11 respondents (73.3%). According to Luh Putu Sukma Pratiwi's research (2020), it explains that multiparity mothers have experience from previous lactation. This makes mothers more prepared to breastfeed when they have another baby so breastfeeding becomes more effective. Previous lactation experiences also help mothers relieve anxiety about breastfeeding their babies. In multiparity mothers with older ages (> 35 years) have a risk of decreased anatomical and hormonal functions that are disturbed. Decreased hormone levels affect the process of removing breast milk so that it can cause mothers to experience a long onset of lactation. Primiparity mothers have no previous lactation experience, which can cause stress. The stress experienced by primiparity mothers can increase the level of the hormone cortisol in the blood. This increase in the hormone cortisol will cause a decrease in the level of the hormone oxytocin which results in a delay in the onset of lactation (Mododahi J, et al, 2018).

The postpartum period (puerperium) is the six-week period from when a baby is born until the reproductive organs return to their normal pre -pregnancy state (Widia, 2015). The puerperium is a period of recovery, starting from the completion of labor until the uterine devices return to pre-pregnancy. The length of the puerperium is 6-8 weeks. (Mochtar, 2016). This period is very important to monitor because The puerperium is a period for cleansing the uterus, just like menstruation (Saleha 2013).

This study found that postpartum mothers had an average of 3 (statistical results), with a standard deviation of 3.5 (statistical results), the minimum postpartum mothers were 1 (statistical results) and the maximum postpartum mothers were 10 (statistical results). The results of the analysis can be concluded that 95% it is believed that the mean of mothers according to statistical results is between 1 to 5.

According to Roito, breast milk production ranges from 600 cc-1 liter a day, thus mothers can exclusively breastfeed their babies for up to 6 months, and continued breastfeeding with other foods until the child is 2 years old. When the baby is later weaned, the prolactin reflex will stop so that milk secretion also stops, which will result in alveoli undergoing apoptosis (destruction). During the menstrual cycle, with estrogen and progesterone starting to play a role, the alveoli will reform (Roito, 2013).

The Effectiveness of Giving Papaya Leaves to Breastfeeding Mothers Nimasi Health Center Work Area in 2022.

Papaya leaves which are plants that contain vitamin A 1850 SI , vitamin BI 0.15 mg , vitamin C 140 mg , calories 79 calories , protein 8.0 grams , fat 2 gram , hydrate charcoal 11.9 gram , calcium 353 mg , 63 mg phosphorus , 0.8 mg iron , 75.4 grams of water , carposide , papayotin , karpai , carposite , lactogogum , and vitamins needed for baby growth and mother's health, so they can be potential sources of nutrition. The content of high protein, high fat, vitamins, calcium (Ca), and iron (Fe) in papaya leaves functions to increase the formation of hemoglobin in the blood, it is hoped that O₂ in the blood will increase, metabolism will also increase so that brain cells function properly (Turlina, 2014) .

In this research was obtained smooth breastfeeding after the intervention of giving papaya leaf vegetable on the first day an average of 6.73% meaning there was a change in the first day of intervention, giving papaya leaf vegetable on the second intervention got an average of 8.0% meaning there was a change in giving papaya leaf vegetable on the first day of intervention to the second day of intervention. The third day of intervention was giving papaya leaf vegetable, an average of 9.3%, meaning that there was a change in giving papaya leaf vegetable on the second day of intervention to the third day of intervention, on the fourth day giving papaya leaf vegetable, an average of 10.0%, which means there was change in giving papaya leaf vegetables on the third day of intervention to the fourth day of intervention. The fifth day posttest was given papaya leaf vegetable and obtained an average of 12.0%, meaning that there was a change in giving papaya leaf vegetable from the fourth day of intervention to the fifth day posttest.

The results of this study indicate that giving papaya leaf vegetable can increase the frequency of breastfeeding fluency in breastfeeding mothers at posttest by 6.67, from 5.33 (before giving papaya leaf vegetable) to an increase of 12.0 (after giving papaya leaf vegetable). The results of the T test obtained a *p value* of 0.000, meaning that statistically there is a significant difference between before and after giving papaya leaf vegetable to the smoothness of breastfeeding in nursing mothers. This research is supported by research conducted by Reni Aprilia, et al (2020) The results of the statistical test obtained a *p-value of 0.000* (<0.05), which means that there is an effect of giving papaya leaf vegetable on the smoothness of breastfeeding in postpartum mothers in the Working Area of the Kotabumi II Health Center, North Lampung Regency, in 2019. This is also in line with the research conducted by Nara Lintan, et al (2021) which shows the results of an analysis of *p value 0.001* <0.05, which means that there is an effect of giving papaya leaves on the smooth production of breast milk in postpartum mothers in the Working Area of the City Health Center in the Southern Region of Kediri City . It is hoped that with the results of this study giving papaya leaves to the smooth production of breast milk can be an alternative to dealing with non-ancar breast milk.

In line with the theory put forward by Fikawati (2015). Breast milk is the best food for babies in the first 6 months of life. All nutritional needs, namely protein, carbohydrates, fats, vitamins, and minerals are fulfilled from breast milk. Early breast milk contains immune substances from the mother which can protect babies from diseases that cause infant death worldwide such as diarrhea, ARI and pneumonia. In adulthood it is proven that babies who are breastfed have a lower risk of developing degenerative diseases, such as high blood pressure, type 2 diabetes, and obesity. So that since 2001 WHO has recommended that babies get exclusive breastfeeding until the age of 6 months.

The success of breastfeeding mothers is largely determined by diet, both during pregnancy and after delivery. In order to guarantee the quality and quantity of mother's breast milk, highly nutritious and balanced food needs to be consumed every day. That is, the mother must increase the consumption of carbohydrates, fats, vitamins, minerals and water in an amount according to the body's needs during breastfeeding. If this need is not met, apart from the quality of breast milk and the mother's health being disrupted, it will also affect the period of time the mother produces breast milk (Fikawati et al, 2015).

Lactagogum is a drug that can increase or facilitate milk production. Synthetic lactagogums are little known and relatively expensive. This causes the need to look for alternative lactagogum drugs. Efforts to increase milk production can be done by doing early and routine breast care, improving breastfeeding techniques, or by consuming foods that can affect milk production. Papaya as a fruit that contains *lactagogum* is a tropical fruit known as *Caricapaya* (Istiqoma, 2015).

The same research was conducted by Lestari Puji Astuti (2015) regarding the effect of leaf extract papaya on the adequacy of breast milk in postpartum mothers in the working area of the Gondang Health Center, Sragen Regency, the research results showed that there was the effect of papaya leaf extract on the adequacy of breast milk ($p = 0.038$, $\alpha = 0.05$). Similar research conducted by Reni Aprilia (2020) which explains in his research that there was a significant increase in the production of breast milk before and after breast milk, an increase of between 2-3 points in the results before the intervention, the increase after consumption of papaya leaf vegetable proved that processed papaya leaves and used as a food menu for breastfeeding mothers can improve fluency Breast milk, a *lactogagum* compound in papaya leaves which helps expedite the mother's milk production, besides that the frequency of breastfeeding the baby also affects the smoothness of the milk, because when the baby suckles the mother, the hormone oxytocin will automatically be stimulated, and causes the oxytocin reflex so that breast milk can go out.

According to the assumptions of researchers, health problems are an important aspect that must be considered, one of which is exclusive breastfeeding for infants. By giving exclusive breastfeeding to babies can provide a strong body defense compared to those who do not get breast milk, besides that breast milk also forms brain tissue because it contains omega 3 for the maturation of brain cells. The factors that affect the production of breast milk is the mother's diet. The food consumed by a breastfeeding mother does not directly affect the quality or amount of milk produced.

CONCLUSION

Provide a statement Based on the results of research that has been carried out in the Work Area Public health center Nimasi as well outlined on discussion which exposed to the previous chapter, the researcher can provide conclusions as following:

1. The characteristics of the respondents were almost all mothers aged 17-40 years who experienced non-fluent breastfeeding. The majority of parity primiparous breastfeeding mothers experienced non-fluent breastfeeding as many as 11 respondents and for multiparous mothers as many as 4 respondents in the working area of the Nimasi Health Center in 2022.
2. There is a decrease in the average score of the ASI level Not current before being given papaya leaf vegetable on mother breast-feed In Region Work Nimasi Health Center in 2022.
3. there is smoothness of breast milk after giving papaya leaf vegetable to nursing mothers Region Work Public health center Year 2022 Year.

That giving papaya leaf vegetable can increase the frequency of smooth breastfeeding in breastfeeding mothers at the posttest of 6.67, from 5.33 (before being given papaya leaf vegetable) to an increase of 12.0 (after giving papaya leaf vegetable). The results of the T test obtained a *p value* of 0.000 meaning that statistically there is a significant difference between before and after giving papaya leaf vegetable to the smoothness of breast milk in nursing mothers.

The research also give suggestion as below :

1. For the Santa Elisabeth Kefamenanu Midwifery Academy
With this Research can add student references about increasing production ASI, so that students can improve their ability to be skilled in providing counseling about the importance of helping breastfeeding mothers in increasing milk production so as to increase exclusive breastfeeding .
2. For postpartum mother
Postpartum mothers in particular mother postpartum _ experience *Breast milk is not smooth* It is hoped that they can consume papaya leaf vegetables as one of the vegetables that is easy to get and can expedite breast milk production.

3. For the Nimasi Public Health Center

For health workers, especially midwives, to further improve their skills through the latest literature, training and counseling at every examination of pregnant women, so that they have sufficient knowledge about the benefits of papaya fruit in increasing milk production.

4. For Other Researchers

It is hoped that other researchers can continue this research with other factors that can increase breast milk production such as: katuk vegetables, chayote, long beans and fruits that contain lots of water will help mothers produce abundant breast milk, such as melons, watermelons, pears, and many more juicy fruits as well as many other factors, such as psychology, implementation of Early Breastfeeding Initiation (IMD), nutritional status and use of contraceptives.

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Limitations study this, researcher still find limitations like there are some respondents who don't want to be visited at every house day because period pandemic covid-19 so researcher To do monitoring via whatsapp and researchers conducted home visits, and there were several respondents who did not understand the language conveyed and the researchers also did not understand the local language so they had to be accompanied by a senior midwife to translate Indonesian into regional languages (Dawan Language).

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