JNK

JURNAL NERS DAN KEBIDANAN
(JOURNAL OF NERS AND MIDWIFERY)
http://ojs.phb.ac.id/index.php/jnk

Dates Palm Increases Breast Milk Production of Breastfeeding Mothers

[CA]Handayani[1], Mar'atus Sholichah Fitriah Hajar Kusnianto[1], Wahyu Wibisono[1], Entan Afriannisyah[2]
[1]Program Studi Kebidanan, STIKes Patria Husada Blitar
[2]Program Studi Kebidanan, STIKes Sapta Bakti Bengkulu
[CA]Corresponding Author

Article Information

History Article:
Received, 17/07/2024
Accepted, 05/08/2024
Published, 01/11/2024

Keyword:
dates palm, breastfeeding, breast milk

Abstract

Breastfeeding is the ideal step in providing breast milk that is good for newborns and babies. Good support and effort can influence success in the breastfeeding process. Breast milk production is the key to breastfeeding and baby health. This study aimed to analyze the effectiveness of dates palm in increasing breast milk production of breastfeeding mothers. This study used secondary data, which was searched through the Google Scholar and Research Gate databases, to discuss the effect of dates palm on breastfeeding mothers for breast milk production. The study design of this research was a Systematic Literature Review. The research results showed 2 research articles that met the criteria which stated that there was an effect of dates on breastfeeding mothers to increase breast milk production. The researchers concluded that dates palm can be considered as an alternative to increase breast milk production in breastfeeding mothers. Dates palm are safe for consumption by breastfeeding mothers and pregnant women. This research is expected to be a form of meta-analysis by adding more similar articles to update the results of the effect of giving dates palm on breast milk production.

©2024 Journal of Ners and Midwifery

✉Correspondence Address:
STIKes Patria Husada Blitar – East Java, Indonesia
Email: handayaniketut123@gmail.com
P-ISSN : 2355-052X
E-ISSN : 2548-3811
DOI: https://doi.org/10.26699/jnk.v11i2.ART.p216-222
This is an Open Access article under the CC BY-SA license (https://creativecommons.org/licenses/by-sa/4.0/)

INTRODUCTION

The postpartum period is the time after giving birth when the body returns to its pre-pregnancy state, both physically and emotionally. It's also known as puerperium. The postpartum period is the period after delivery and expulsion of the placenta to restore the reproductive organs to their pre-pregnancy state in approximately six weeks (Kumalasari, 2015). The postpartum period begins after the placenta is born and ends when the obstetric apparatus returns to what it was before pregnancy, usually lasting 6 weeks or 42 days, but overall it will recover within 3 months (Ritonga et al., 2022). Some of the literature reviews revealed that one of the most serious difficulties experienced by mothers within the first one or two weeks of BF in the postpartum period was breast problems. Of these problems, the leading ones were nipple pain and cracks (Buck et al., 2014).

Breastfeeding is the ideal step in providing breast milk that is good for newborns and babies. Extensive support and effort can influence breastfeeding success (Lawrence & Lawrence, 2015). Problems in breastfeeding mothers include several things, one of which is breast milk production (Utami, 2013). Some breastfeeding mothers complain that their breast milk production is low, and it hasn't even come out yet. The problem of low breast milk production is important and must be addressed immediately because it will affect the process of exclusive breastfeeding (Prasetyono, 2012).

The target of the Ministry of Health's Strategic Plan regarding exclusive breastfeeding in 2018 is 47%, but in Indonesia, six provinces have not reached the target, in addition, nine provinces have not collected data. Nationally, the coverage of infants receiving exclusive breastfeeding in 2018 is 68.74%, the highest percentage of coverage of exclusive breastfeeding is in West Java Province (90.79%), while the lowest percentage is in Gorontalo Province (30.71%) (Kusumaningtiar & Nurwahidah, 2023). This data has increased from the results of the 2018 Basic Health Research, but there are still several areas that have low coverage. Several factors that can interfere with the smooth process of breast milk production include breastfeeding techniques, the mother's psychological condition, and the mother's nutritional intake. To overcome this problem, it can be done by providing education from health workers, anamnesis on the mother's lifestyle and nutritional food interventions where these foods have the benefit of facilitating the flow of breast milk (Imasrani et al., 2017). The nutritional intake given to breastfeeding mothers must be properly considered, namely food ingredients that contain nutrients that are able to stimulate the breast milk production process. Dates are an intake that can be given to breastfeeding mothers. Dates are widely used by Indonesian people. Dates contain iron, protein, fiber, glucose, vitamins and minerals. Minerals in dates can block dopamine receptors which then stimulate the release of prolactin. Dates also contain protein which can increase breast milk production by increasing glucose metabolism for lactose synthesis (Yulinda & Azizah, 2017).

This research was carried out using a Systematic Literature Review (SLR) approach, where studies were analyzed on the subject of dates palm increasing breast milk production. This research focused only on the analysis of dates on breast milk production. It is hoped that this research will produce information that can be scientifically justified so that it can be returned and applied to the community.

METHODS

This research used a Systematic Literature Review (SLR) design with the Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) model. The article was searched in May 2024. The database sources were obtained from Google Scholar and PubMed. The use of keywords is based on the PICO-S (Population Intervention Compare Outcome-Study design) technique. The keywords used were: ”Dates palm, breastfeeding, and breastmilk”. Next, the identification is carried out to meet the inclusion criteria, screening is carried out, and the suitability score is carried out for a systematic review.

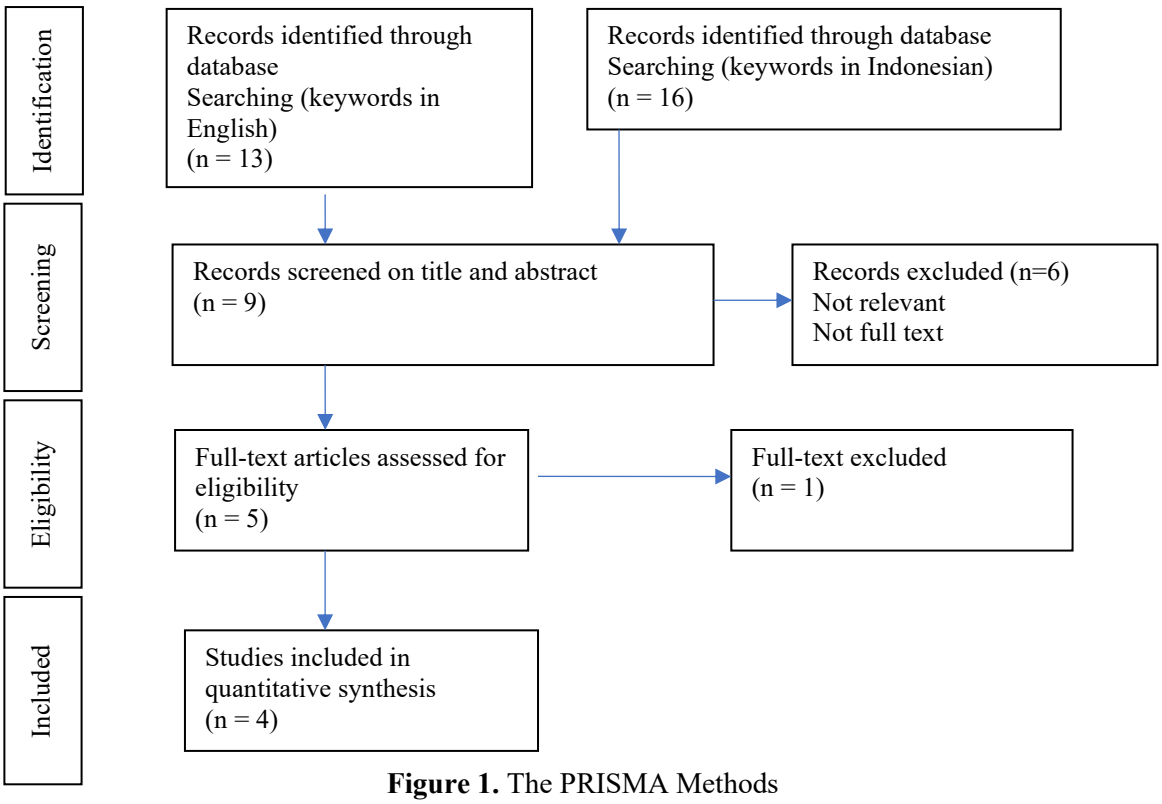

Figure 1. The PRISMA Methods

RESULTS

Table 1. Lists of the Reviewed Articles with the keywords ”dates palm, breastfeeding, and breastmilk”

No	Author	Title	Analysis	Result
1	Fitria, et. al (Fitria, 2024)	The Effect of Dates Palm Extract Consumption to the Breast Milk Production of Pospartum Mother.	This study used a quasi-experiment with one group pretest-posttest. The population was 12 postpartum mothers on days 10-14. The intervention was extracting ajwa dates juice 45ml/day for 5 days.	After consuming dates palm juice by 12 postpartum mothers based on the baby indicator, the minimum value was 5, maximum 6, mean 5.83, and SD 0.389, and ties 0. The statistical results of the Wilcoxon test based on the baby indicator showed a P-value = 0.002 <0.05. There is an effect of given dates extract on breast milk production.
2	Wahyuni R, et. al (Wahyuni et al., 2023)	The Effectiveness of Giving Dates on the Effectiveness of the First Day of Postpartum Expenditure.	This study used a quasi-experiment with post-test only control group design. The population is 40 postpartum mothers on day 1. The intervention is 7 dates/ day for pregnant women with a gestational age of over 38 weeks until the mother birth with frequency of 4 times.	The results of the study obtained a mean difference in the smoothness of breast milk in the experimental group and the control group of postpartum mothers of 0.75. where the t-value is 4.243> t table 2.119 and p-value 0.001<0.05. This means that there is an effectiveness of giving dates on the smoothness of breast milk production on the first day postpartum.
3	U.N Ramadhani & A Akbar	The Effectiveness of Dates Palm Juice (Phoenix	This study used a quasi-experiment	There is an effect of giving date palm juice on the smoothness of breast milk in breastfeeding mothers. The amount

No	Author	Title	Analysis	Result
	(Ramadhani & Akbar, 2022)	Dactylifera L.) to the Breast Milk Production of Breastfeeding Mother.	nonequivalent control group. The population is 30 postpartum mothers were divided into 2 groups, namely the control group and the intervention group. The intervention is dates palm juice for 10 days postpartum.	of breast milk after being given date palm juice in the intervention group on the fifth day was an average of 81.33 and the control group was 56.33. The average day of acquisition for the intervention group was 96.73 and the control group was 67.67.
4	Putriningtyas & Hidana (Putriningtyas & Hidana, 2016)	Giving Dates Juice to Breastfeeding Mothers Effectively Increases the Weight of Babies Aged 0-5 Months (Study in Semarang City)	This study used a quasi-experiment with pre post test control group. The population is 56 exclusive breastfeeding mothers. The intervention is dates palm extract and control group is sweetened condensed milk.	Infant weight in the dates palm juice group and the sweetened condensed milk group before treatment was 5117.9±1223.33 gr and 5125.0±1299.75 gr (p=0.124). The average weight gain of infants in the groups of mothers receiving dates palm juice and sweetened condensed milk was 1162.50±304.78 gr and 632.14±425.18 gr, respectively (p=0.001).

DISCUSSION

Breastfeeding is the best way to ensure the health and well-being of children (Maryuani, 2013). Breast milk is the best food for babies, because the baby's stomach is not yet able to accept food. Breast milk contains antibodies that can help protect against common childhood diseases. Breast milk contains many nutrients that babies need from the first month to two years of age. Breastfeeding is a crucial part of a child's early life and is considered one of the most effective strategy to improve the child's health and reduce the risk of morbidity and mortality. Early initiation of breastfeeding contributes significantly to reducing preventable neonatal and child deaths, improving child survival rates, enhancing immune system resilience against infections, and lowering the risk of diarrhea in neonates (Sarfo et al., 2024).

Breast milk is the best food for newborns (BBL) because it contains more than 100 types of nutrients, which any milk cannot match. Special protein content such as taurine, lactose, and omega-3, essential for growth and development, optimize the baby's nerve and brain cells, improve the immune system, and protect against various infectious diseases (Dror & Allen, 2018). This condition aligns with the research results, where most mothers say their children rarely get sick when they provide exclusive breastfeeding. Breast milk contains antibody-rich colostrum because it contains protein for the body's resistance and kills germs in large quantities. Breastfeeding lowers the risk of asthma or allergies in the baby. In addition, babies who are exclusively breastfed for the first six months without formula milk have a lower risk of ear infections, respiratory diseases, and diarrhea (Wijaya, 2019).

This literature research analyzes four studies. The first study was about Dates Palm Juice Consumption on Breast Milk Production in Postpartum Mothers with respondents from postpartum mothers on days 10-14, there was one trial group. The dates palm juice given was extra ajwa 45ml/day, given for five consecutive days. This research shows that postpartum mothers after consuming dates palm juice there are changes seen from the indicators. Based on the results of breast milk production before consuming dates palm juice, 12 people in postpartum mothers based on baby indicators are with a minimum value of 2, maximum 5, mean 3.75, SD 1.215, and ties 0. Based on the results of breast milk production after consuming dates palm juice by 12 postpartum mothers, based on the baby indicator, it is with a minimum value of 5, maximum 6, mean 5.83, and SD 0.389, and ties 0. The results of statistical tests using the Wilcoxon test based on the baby indicator can be seen P-value = 0.002 < 0.05 (Fitria, 2024).

The second study on the effectiveness of giving dates on the smoothness of breast milk in

postpartum mothers. Respondents were 40 people divided into two groups, 20 people in the intervention group and 20 people in the control group with inclusion criteria of primigravida, aged 25-30 years, pregnant women in the third trimester with a gestational age of >38 weeks, IMD was carried out, willing to be research respondents for >2 weeks, and low-risk pregnancy. The data collection technique was carried out by directly giving 7 dates per day to pregnant women with a gestational age of over 38 weeks until the mother gave birth with 4x frequency then breast milk was pumped with intervals: after 1 hour of IMD, 6 hours postpartum, 12 hours postpartum and 24 hours postpartum and then the results of breast milk expenditure were calculated if <5ml of breast milk was said to be not smooth and vice versa if breast milk obtained >5ml then breast milk was said to be smooth. based on the results of the study there was an effect on the smoothness of breast milk given dates (Wahyuni et al., 2023).

This study is in line with the study entitled the effectiveness of giving soy milk and date palm juice on breast milk production in breastfeeding mothers. The results of observations on respondents showed an effect on giving soy milk to increase the amount of breast milk production, namely 40 ml on the third day and 80 ml on the seventh day, while in the date palm juice group on the third day it was 80 ml and 140 ml on the seventh day. Based on these results, giving date palm juice is more effective in increasing breast milk production (Veni Kristi Ningsih, 2024).

The third study discusses the effectiveness of date palm juice (Phoenix Dactylifera L.) on breast milk production in breastfeeding mothers. There is an effect of giving date palm juice on the smoothness of breast milk in breastfeeding mothers. The amount of breast milk after being given date palm juice in the intervention group on the fifth day was an average of 81.33 and the control group 56.33. The average day of acquisition for the intervention group was 96.73 and the control group 67.67. The results showed that on the fifth day (post 1) with a p value of 0.025 < 0.05 and a good day (post 2) with a p value of 0.012 < 0.05, which means that date palm extract is effective in increasing breast milk volume (Ramadhani & Akbar, 2022). This research is in line with the research entitled the effect of date juice on breast milk production. The results of the research are p value = 0.001 which means that giving date juice has an effect on breast milk production (Hafid et al., 2023).

The last study was about Giving Dates Juice to Breastfeeding Mothers Effectively Increasing the Weight of Babies Aged 0-5 Months (Study in Semarang City). This research shows that giving dates juice at a dose of 45 mg for four weeks can have an effect on weight gain in babies aged 0-5 years. Giving dates juice and sweetened condensed milk to mothers who exclusively breastfeed has been proven to provide significant results in weight gain. This research shows that mothers who breastfeed exclusively in the group that received 45 grams of dates juice/day or 40 grams of sweetened condensed milk/day can increase their baby's weight. Mothers who breastfeed need additional calories and other nutrients for the breast milk production process. In this research, it can be concluded that dates are one of the fruits that can meet the needs of mothers while breastfeeding and play a role in helping breast milk production (Putriningtyas & Hidana, 2016). This study is in line with research on the provision of date palm juice to increase breast milk production in one of the Midwife Independence Practice in Pekanbaru. The results of the study were that there was a change in breast milk production after consuming date palm juice for 7 days with 3 meetings (Meilin Fitri insani & Risa Pitriani, 2022).

Around three-quarters or more of dates consist of sugar, apart from that there are many other nutritious components such as minerals, vitamins, antioxidants, and fiber food (Fungtammasan, Siraphat, 2021). The high carbohydrate content in dates, especially sugar, which reaches 88%, can give the impression that little is left to contribute to the nutritional value of dates (Prianti, Ani T., Rahayu K. Eryant, 2020). However, this fruit is full of important nutrients such as potassium, phosphorus, sodium, zinc, manganese, magnesium, copper, iron, fluorine, and selenium (M.S, 2011). Dates are a source of potassium which helps in maintaining a healthy nervous system and balances the body's nervous system. Phosphorus functions with calcium to help bone strength and growth. What's more, selenium is important for cell growth and repair. Iron is essential for the production of red blood cells, which carry all nutrients to cells throughout the body (Saeed Ebrahimi F, Hemmati M, 2018). So, dates are very suitable for a healthy lifestyle because they contain reduced sugars, low sodium, no fat or cholesterol, large potassium and calcium content in addition to dietary fiber (Halimah, Siti, Krisdiana Wijayanti, 2022). Judging from this research, dates

are a fruit that contains many nutrients and is suitable for a healthy lifestyle, so it can be linked to dietary interventions for breastfeeding mothers to facilitate breast milk production (Farag, 2016). Palm fruit has a high content of phytonutrients with antioxidant properties. So there is a possibility that palm fruit offers some health advantages by reducing lipid oxidation, oxidative stress, and free radical damage (El Sakka et al., 2014). In the Middle East, natural products such as fenugreek and palm dates often replace artificial drugs as they have one of the most widespread anecdotal benefits of increasing milk supply. Fenugreek has established itself as the most used natural galactagogue in the Middle East [1] due to its high anecdotal and cultural spread. However, some puerperal mothers occasionally consume palm dates as a supplement to increase their breast milk (Zuppa et al., 2010).

CONCLUSION

Based on the results of the study and discussion, it can be concluded that dates palm can be considered as an alternative in increasing breast milk production in breastfeeding mothers. Breast milk production is influenced by the food consumed by the mother. Dates are safe for consumption by breastfeeding mothers and pregnant women.

SUGGESTION

It is necessary to carry out a similar meta-analysis follow-up study regarding giving dates by adding more articles or adding new articles to update the results regarding the effect of giving dates palm on breast milk production.

ACKNOWLEDGEMENT

This research was not sponsored by anyone, but we would like to express our deepest gratitude to the Head of STIKes Patria Husada Blitar and colleagues for the support so that we can do this research and publish it.

FUNDING

This study was supported by the researcher's independent fund.

CONFLICTS OF INTEREST

The authors declared no conflict of interest in the study.

AUTHOR CONTRIBUTIONS

The duties of the Head of Researcher are to Coordinate the process of data collection, data analysis, and preparation of research reports. Other researchers are responsible for the preparation of progress reports, final research reports, and publication.

REFERENCES

Buck, M. L., Amir, L. H., Cullinane, M., & Donath, S. M. (2014). Nipple pain, damage, and vasospasm in the first 8 weeks postpartum. *Breastfeeding Medicine*, *9*(2), 56–62. https://doi.org/10.1089/bfm.2013.0106

Dror, D. K., & Allen, L. H. (2018). Overview of nutrients in humanmilk. *Advances in Nutrition*, *9*(23), 278S-294S. https://doi.org/10.1093/advances/nmy022

El Sakka, A., Salama, M., & Salama, K. (2014). The Effect of Fenugreek Herbal Tea and Palm Dates on Breast Milk Production and Infant Weight. *Journal of Pediatric Sciences*, *6*(0). https://doi.org/10.17334/jps.30658

Farag, K. . (2016). Date Palm: A Wealth of Healthy Food. *Academic Press*. https://doi.org/10.1016/B978-0-12-384947-2.00215-4

Fitria, A. (2024). Konsumsi Sari Kurma terhadap Produksi ASI pada Ibu Post Partum. *Jurnal Kebidanan Khatulistiwa*, *10*(1). https://doi.org/10.30602/jkk.v10i1.1261

Fungtammasan, Siraphat, and V. P. (2021). The Effect of Moringa Oleifera Capsule in Increasing Breastmilk Volume in Early Postpartum Patients: A Double-Blind, Randomized Controlled Trial. *PLoS ONE*, *16*. https://doi.org/10.1371/journal.pone.0248950

Hafid, R. A., Ridha, U., & Mariyana, M. (2023). Pengaruh Jus Kurma terhadap Produksi ASI. *Indonesia Berdaya*, *5*(1), 195–202. https://doi.org/10.47679/ib.2024682

Halimah, Siti, Krisdiana Wijayanti, T. (2022). *Minuman Greek-Ku (Kombinasi Biji Fenugreek Dan Kurma) Sebagai Inovasi Peningkatan Produkasi ASI*. Pustaka Rumah Cinta. https://books.google.co.id/books?id=ecuuEAAAQBAJ&printsec=frontcover&hl=id&source=gbs_ge_summary_r&cad=0#v=onepage&q&f=false

Imasrani, Utami, & Susmini. (2017). Kaitan Pola Makan Seimbang dengan Produksi ASI Ibu Menyusui. *Jurnal Unitri*. https://doi.org/10.33366/jc.v4i3.429

Kumalasari. (2015). *Panduan Praktik Laboratorium dan Klinik Perawatan Antenatal, Intranatal, Postnatal, Bayi Baru Lahir dan Kontrasepsi*. Salemba Medika.

Kusumaningtiar, D. A., & Nurwahidah. (2023). Behavior of Exclusive Breastfeeding and Associated Factor Among Mothers in the Formal Sector, Indonesia. *Indonesian Journal of Public Health*, *18*(2), 206–218. https://doi.org/10.20473/Ijph.v18i2.2023.206-218

Lawrence, R., & Lawrence, R. (2015). *Breastfeeding A Guide for The Medical Profession*. Elsevier.

M.S, B. (2011). *A Review of The Chemistry and Pharmacology Of The Date Fruits (Phoenix dactylifera L.)*. Elsevier.

Maryuani, A. (2013). *Ilmu Kesehatan Anak Dalam Kebidanan*. TIM.

Meilin Fitri insani, & Risa Pitriani. (2022). Midwifery care for postpartum mothers with date palm juice to increase milk production at MIDWIFE INDEPENDENCE PRACTICE Dince Safrina, SST, MKM Pekanbaru 2021. *Jurnal Kebidanan Terkini (Current Midwifery Journal)*, *2*(1), 82–85. https://doi.org/10.25311/jkt/vol2.iss1.607

Prasetyono, D. S. (2012). *Buku Pintar ASI Eksklusif*. DIVA Press.

Prianti, Ani T., Rahayu K. Eryant, and R. (2020). Efektivitas Pemberian Sari Kurma Terhadap Kelancaran Produksi ASI Ibu Post Partum Di Rskdia Siti Fatimah Makassar. *Jurnal Antara Kebidanan*, *3*(1).

Putriningtyas, N. D., & Hidana, R. (2016). Pemberian Sari Kurma pada Ibu Menyusui Efektif Meningkatkan Berat Badan Bayi Usia 0-5 Bulan (Studi di Kota Semarang). *Jurnal Medika Respati*, *11*(3). https:/doi.org/10.35842/mr.v11i3.115

Ramadhani, U. N., & Akbar, A. (2022). Efektivitas Sari Kurma (Phoenix Dactylifera L.) Terhadap Pengeluaran Air Susu Ibu (Asi) Pada Ibu Menyusui. *Jurnal Pandu Husada*, *2*(3), 163–169. https://doi.org/10.30596/jph.v2i3.9683.g9038

Ritonga, C. M. T., Sofinia, H., Viky, M., & Rokibullah. (2022). The Physiological Changes In The Postpartum Period After Childbirth. *Asian Journal of Social and Humanities*, *01*(03), 105–118. https://doi.org/10.59888/ajosh.v1i03.19

Saeed Ebrahimi F, Hemmati M, M. M. (2018). Effects of the date palm fruit (Phoenix dactylifera L.) on prolactin, IGF-1, and stress factors in lactating female rats and its impact on their litters' development. *Med J Nutrition Metab*. https://doi.org/doi:10.3233/MNM-17164

Sarfo, M., Aggrey-Korsah, J., Adzigbli, L. A., Atanuriba, G. A., Eshun, G., Adeleye, K., & Aboagye, R. G. (2024). Prevalence of early initiation of breastfeeding and its associated factors among women in Mauritania: evidence from a national survey. *International Breastfeeding Journal*, *19*(1), 69. https://doi.org/10.1186/s13006-024-00669-2

Utami, R. (2013). *Manajemen Laktasi*. IDAI.

Veni Kristi Ningsih. (2024). Efektivitas pemberian susu kedelai dan sari kurma terhadap peningkatan produksi ASI pada Ibu Menyusui. *2023*, *4*, 6204–6214. https://doi.org/10.31004/innovative.v4i3.11058

Wahyuni, R., Goretti Sinaga, E., Agustinigsih, D., Kesehatan, P., Kesehatan, K., & Timur, K. (2023). The Effectiveness Of Giving Dates On The Effectiveness Of The First Day Of Post Partum Expenditure. *Avicenna : Journal of Health Research*, *6*(1), 71–80. https://doi.org/10.36419/avicenna.v6i1.825

Wijaya, F. A. (2019). ASI Eksklusif: Nutrisi Ideal Untuk Bayi 0-6 Bulan. *Continuing Medical Education*, *46*(4), 296–300. https://doi.org/10.55175/cdk.v46i4.485

Yulinda, D., & Azizah, I. (2017). Pengaruh Sari Kurma terhadap Prolaktin dan Pengeluaran ASI pada Ibu Postpartum di BPM Pipin Heriyanti. *Media Ilmu Kesehatan*, *6*(3), 195–198. https:/doi.org/10.30989/mik.v6i3.246

Zuppa, A. A., Sindico, P., Orchi, C., Carducci, C., Cardiello, V., Romagnoli, C., & Catenazzi, P. (2010). Safety and efficacy of galactogogues: Substances that induce, maintain and increase breast milk production. *Journal of Pharmacy and Pharmaceutical Sciences*, *13*(2), 162–174. https://doi.org/10.18433/j3ds3r