

Review

Literature Review: The Effect of Consumption *Vigna radiata*, *Carica papaya*, and *Sauropus androgynous* Leaves on Breast Milk Production

Nurul Pujiastuti^{1*}

¹Nursing Major, Poltekkes Kemenkes Malang

***Corresponding author:**

Nurul Pujiastuti

Nursing Major, Poltekkes Kemenkes Malang

Jl. Besar Ijen No. 77C Malang, Indonesia, Telp: 0341-427847

Email: nurul_pujiastuti@poltekkes-malang.ac.id

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ABSTRACT

The lack of understanding about enhancing breast milk production is a challenge that many mothers confront after giving delivery. The hormones oxytocin and prolactin naturally affect breast milk release and production. To improve milk production, however, the production of these two hormones must be increased by consuming certain foods. This study aimed to gather and analyze articles about the effect of *Vigna radiata*, *Carica papaya*, and *Sauropus androgynous* leaves on breast milk production. The articles used in this literature review met specific criteria, such as publishing in a peer-reviewed journal from databases such as DOAJ, Science Direct, Copernicus, SINTA, ResearchGate, GARUDA, and Google Scholar. The articles were chosen based on their publication dates, ranging from 2015 to 2020. The PICOS framework is used to select articles chosen subsequently using the JBI Critical Appraisal tools. According to the article reports, ingesting *Vigna radiata*, *Carica papaya*, and *Sauropus androgynous* leaves influences breast milk production by stimulating the hormones oxytocin and prolactin, which can enhance breast cancer milk production. Suggestions for more research, particularly on the time and amount of *Sauropus androgynous*, *Vigna radiata*, and *Carica papaya* leaves given to postpartum moms to improve breast milk production.

Introduction

The perfect nutrition for a baby's growth and development is breast milk (Pujiastuti & Wahyuningsih, 2019). Breast milk is the primary source of nutrition for newborns, which is exclusive because it is given to babies when they are 0-6 months old (Kemenkes, 2018). Food other than breast milk should not be given to babies, especially when they are 0-6 months old. Breastfeeding is one of the best life investments, health improvement, growth, development of babies, and the family economy (Kemenkes, 2019). All women have the potential to give breast milk to their children, but not all mothers after giving childbirth can express their milk immediately (Saputri *et al.*, 2019). The physical, psychological, and condition health of the mother's breasts can affect the lactation process, affecting the production and excretion of breast milk (Sulaeman *et al.*, 2019).

Breastfeeding mothers often face problems such as worrying if their milk production is not enough and does not come out, lack of support from family, physical and emotional problems, and lack of public awareness in exclusive breastfeeding (Indrayani & Ph, 2019; Kemenkes, 2019). It can increase the infant mortality rate caused by infection. The most common infectious diseases are diarrhea and pneumonia (Jalilah Ritonga *et al.*, 2019). The infant mortality rate is one of the substantial indicators to determine the health status country, even to measure the level of progress of the nation (Kemenkes, 2019).

Currently, in the world, it is found that the nutritional situation of toddlers is 155 million under the category of stunting, 52 million under-fives are wasting, and 41 million under-fives are obese. Basic health research data in 2018 shows that in Indonesia, it was found that 17.7% of toddlers were malnourished, 30.8% of toddlers were stunting, 10.2% of toddlers were very wasting, and 8% were obese. This condition is related to breastfeeding (Kemenkes, 2018). The 2019 Indonesian Health profile explained that the coverage of exclusive breastfeeding was 67.74% (Kemenkes, 2019). The low range of

exclusive breastfeeding is because the baby is given food before the age of 6 months, the mother's knowledge is lacking, and the mother's motivation is low to give exclusive breastfeeding.

Breast milk production is affected by oxytocin and prolactin. Oxytocin affects the excretion process of breast milk, and prolactin affects the amount of milk production. Prolactin is related to maternal consumption of the nutrition, intake of the nutritional mother so that milk production will increase. Factors affecting breast milk production are the food consumed by the mother, stress, breast care, breast anatomy, physiological factors, rest patterns, child sucking factors, breastfeeding frequency, birth weight, the mother's gestational age at delivery, cigarette consumption, and contraceptive pills taken by the mother. If the mother gets enough food that contains nutrients, then breast milk production will also be smooth (Elison *et al.*, 2020; Meihartati, 2020; Aryani & Alyensi, 2019; Maritalia, 2012).

Efforts that can be made to increase the coverage of exclusive breastfeeding include providing correct and appropriate information about the various benefits of breastfeeding to increase public awareness about the importance of exclusive breastfeeding (Saputri *et al.*, 2019). Meanwhile, facilitating breast milk production includes consuming *Vigna radiata* juice, *Carica papaya* leaf extract, or *Sauropus androgynous* leaf biscuits. *Vigna radiata* juice contains various nutritional compositions such as protein, iron, and vitamin B1 (Widia *et al.*, 2018). The nutritional content of *Vigna radiata* is relatively high, and the composition is complete. Protein is the second main constituent after carbohydrates in *Vigna radiata*. *Vigna radiata* contain 20-25% protein. Mothers need high protein during lactation. Proteins that contain amino acids can stimulate the secretion of breast milk. *Vigna radiata* also contain active compounds, namely polyphenols and flavonoids, increasing prolactin. Milk secretion will increase when the hormone prolactin increases so that the quantity of breast milk will also increase. The nutritional content

contained in *Vigna radiata* juice can increase the nutritional content in breast milk (Jalilah Ritonga *et al.*, 2019). Ritonga *et al.* (2019) showed that *Vigna radiata* juice could increase milk production. Breastfeeding mothers feel an increase in milk production on average after six days of consuming *Vigna radiata* juice.

Carica papaya leaves contain flavonoids and polyphenols that play a role in the prolactin reflex to produce breast milk and stimulate the hormone oxytocin to stimulate milk production. *Carica papaya* leaves also contain alkaloids that act as alpha-adrenergic receptor agonists in the mammary gland ducts that work synergistically with the hormone oxytocin, especially lactotrophic cells for prolactin secretion (Setyono *et al.*, 2016). Research conducted by Pratiwi *et al.* (2018) and Ikhlasih & Winarni (2020) showed that was an affected to giving *Carica papaya* leaf extract on the secretion of the hormone prolactin. *Sauropus androgynous* leaves contain polyphenols and steroids that can increase the secretion of the hormone prolactin (Aminah, 2019). Research conducted by Juliastuti (2019) showed an effect on giving *Sauropus androgynous* leaf extract and *Sauropus androgynous* leaf decoction on the increase in baby weight in breastfeeding mothers. Based on the description above, the researcher was interested in conducting a literature study on the effect of intake of *Vigna radiata*, *Carica papaya* leaves, and *Sauropus androgynous* leaves on breast milk production.

Method

The study design used a literature review. The literature review is a method to identify, assess, and interpret all findings on topic research. Answer research questions are determined previously. Article searches were conducted from September to November 2020. The databases used included DOAJ, Science Direct, COPERNICUS, SINTA, ResearchGate, GARUDA, and Google Scholar. Furthermore, in determining the inclusion and exclusion criteria using the PICO framework.

Table 1. Inclusion and Exclusion Criteria

Criteria	Inclusion	Exclusion
Population	Breast milk	No breast milk
Intervention	<i>Sauropus androgynous</i> leaf <i>Carica papaya</i> leaf <i>Vigna radiata</i>	Breast massage
Comparison	-	-
Outcome	Breast milk excretion	No breast milk excretion

Determination of keywords using Medical Subject Heading (MeSH). Keywords include (((breastfeed) OR lactation) AND *Vigna radiata*) AND breast milk) OR Milk, Human dan (((((effect) AND *Carica Papaya*) OR *Carica Papaya* leaf) AND *Sauropus androgynous*) AND breast milk production) OR breastfeed. Determine the articles that meet the inclusion and exclusion criteria using the PRISMA checklist. Then, rate the article using The Joanna Briggs Institute's Critical Appraisal Tools.

Based on the results of a literature search in seven databases using keywords adapted to MeSH, the researchers obtained 434 articles. Subsequently, an examination of duplicate articles was carried out, and 53 duplicate articles were founded so that they were removed and the remaining 381 articles. Then the researchers screened articles to look for articles containing only titles and abstracts found 274 articles. The article that has full text is 107. Researchers use PICO to determine articles that meet the inclusion and exclusion criteria. The results found 80 articles that did not match. Twenty-seven articles following the PICO were analyzed for quality using a critical appraisal checklist by The Joanna Briggs Institute. The final screening results obtained 22 articles, achieving more than 50%. Next, the article analysis was carried out.

Results and Discussion

Twenty-two articles met the inclusion criteria, which discussed the intake of *Vigna radiata*, *Carica papaya* leaves, and *Sauropus androgynous* leaves on breast milk production. The research designs used in the article were cross-sectional (4), quasi-experimental (16), and randomized control trials (2) with a sample size of 10-50 respondents. There were 15 international journals and seven national journals.

Respondents in this study were breastfeeding mothers who experienced problems with decreased milk production, such as little or no milk coming out, which generally occurred on the first day postpartum, postpartum mothers from day four onwards (Sulaeman *et al.*, 2019; Hesti *et al.*, 2017; Yahya *et al.*, 2020; Maita, 2016; Saputri *et al.*, 2019; Indrayani & Ph, 2019; Ritonga *et al.*, 2019; Meihartati, 2020; Lestari, 2017; Yuniarti, 2020; Widia *et al.*, 2018). The average number of respondents was 10-50 breastfeeding mothers. The age of breastfeeding mothers was between 20-35 years. The majority were multiparous, not working, and had no breast abnormalities (Triananingsi, Andryani, and Basri, 2020; Situmorang and Singarimbun, 2019; Juliastuti, 2019; Turlina and Wijayanti, 2015; Pratiwi, Suwondo, and Mardiyono, 2018; Kusumaningrum, 2017; Novi *et al.*, 2020; Ikhlasiah *et al.*, 2020; Aprilia, Rilyani, and Arianti, 2019; Indrayani *et al.*, 2020).

The Effect of *Vigna radiata* Intake on Breast Milk Production

The research results by Ritonga *et al.* (2019) showed an effect of giving *Vigna radiata* juice on breast milk production. The average milk production before being given *Vigna radiata* juice was 0.045 (not smooth), and the average milk production after being given *Vigna radiata* juice was 0.82 (smooth). Research conducted by Yuniarti (2020) showed that the average volume of breast milk before being given mung bean juice was 56.82 ml and after being given *Vigna radiata* juice was 69.55 ml. The difference in the average volume of breast milk before and after being given *Vigna radiata* juice was 12.424 ml. This

can be a suitable recommendation for breastfeeding mothers to consume *Vigna radiata* juice drinks to increase milk production.

The content of vitamin B1 contained in mung bean juice converts carbohydrates into energy. Breastfeeding mothers require more energy than during pregnancy. If the mother is deficient in vitamin B1 (thiamine), then the mother becomes irritable, has difficulty concentrating, and lacks enthusiasm. The thiamine in mung bean juice is functions to strengthen the nervous system and is responsible for increasing breast milk production. Thiamine stimulates the work of neurotransmitters that will convey messages to the posterior pituitary to release the hormone oxytocin so that it stimulates smooth muscle contraction of the breast and pumps out breast milk (Widia *et al.*, 2018). The most vitamin content in *Vigna radiata* is B1 and B2. The body cannot produce thiamine, so additional food intake is needed. Vitamin B1, as the food hormone, has a vital role in the oxidation of carbohydrates to be converted into energy. Vitamin B1 in the body will help break down carbohydrates. Pregnant and lactating women need more vitamin B1 intake than non-lactating women (Yuniarti, 2020; Widia *et al.*, 2018).

Researchers argue that the vitamin B1 content in *Vigna radiata* can help stimulate the release of the hormones oxytocin and prolactin to increase breast milk production and flow smoothly. Thiamine has an essential role in the oxidation of carbohydrates to be converted into energy. Breastfeeding mothers need more energy than when not breastfeeding, so they need adequate food intake that contains thiamine.

The Effect of *Carica papaya* Leaf Intake on Breast Milk Production

Research by Pratiwi *et al.* (2018) showed the effect of *Carica papaya* leaf intake on breast milk production. Before giving *Carica papaya* leaves, breastfeeding mothers experienced an inability to breastfeed. After being given *Carica papaya* leaf extract capsules for seven days with a dose of 2x400 mg, breastfeeding mothers experience an

increase in breast milk production by 98%. That is more effective than when giving a dose of 2x300 mg because it only increased milk production by 27.2%. Research by Aprilia *et al.* (2019) showed that the intake of *Carica papaya* leaf decoction had a positive effect in increasing breast milk production. Study by Turlina & Wijayanti (2015) showed that there was a significant effect of giving *Carica papaya* leaf drinks on the smoothness of breast milk with a value of $p=0.004$ ($p<0.05$) (Ikhlasiah *et al.*, 2020). One of the criteria is used to measure the amount of milk production or not is the baby's weight. The baby's weight (pre-test) was on average 2946.67gr, and during the post-test, there was an average weight increase of 3206.67 gr (Novi *et al.*, 2020).

Breastfeeding mothers need nutrients to help increase and launch breast milk production. *Carica papaya* leaves contain vitamins, calcium, flavonoids, polyphenols, and steroids which have a role in stimulating the prolactin hormone to produce breast milk and stimulating the oxytocin hormone to secrete breast milk (Kusumaningrum, 2017). *Carica papaya* leaves contain papain and potassium enzymes which break down potassium during breastfeeding (Ayuni, 2012). Signs of increased milk production in breastfeeding mothers by monitoring the baby's weight. The baby's weight will increase more than 10% in the first week or between 2000-2500 grams per week (Anggaraini, 2017).

Researchers argue that various preparations such as *Carica papaya* leaf extract, *Carica papaya* leaf juice, *Carica papaya* leaf vegetables can be a menu of choice for nursing mothers. The content of vitamins, calcium, polyphenols, and steroids contained in *Carica papaya* leaves has various benefits to increase breast milk production so as to optimize the growth and development of babies.

The Effect of Sauropus androgynous Leaf Intake on Breast Milk Production

The research by Situmorang & Singarimbun (2019) showed that giving *Sauropus androgynous* leaf stew three times a day with a dose of 150cc can increase breast

milk production. Suwanti's (2016) research showed that *Sauropus androgynous* leaf extract consumption could increase breast milk production. Giving *Sauropus androgynous* leaf extract was carried out for thirty days with a dose of 2 times one capsules per day, and the results showed that most of the breast milk the baby needs (70%). Research conducted by Triananinsi *et al.* (2020) showed a relationship between consuming *Sauropus androgynous* leaf vegetables and the smoothness of breast milk. This is because *Sauropus androgynous* leaf vegetables contain polyphenols and steroids, which have a role in stimulating the alveoli to produce breast milk. Research conducted by Indrayani *et al.* (2020) showed that giving *Sauropus androgynous* leaf intake in the form of biscuits could increase breast milk production. This is because the content of steroids and vitamin A can encourage the proliferation of the alveolar epithelium, thereby increasing the number of alveoli in the mammary glands, automatically increasing milk production. Research conducted by Juliastuti (2019) showed that giving *Sauropus androgynous* leaf decoction for seven days can meet the adequacy of breast milk. Assess the adequacy of breast milk by measuring the baby's weight gain for one week. Baby's weight increases by 140-200 grams per week. The results showed that the intake of *Sauropus androgynous* leaves increased the baby's weight by 259 grams.

One causes of giving breast milk are not enough milk production, so the baby feels dissatisfied with breastfeeding. Therefore, it is necessary to consumption support increased milk production. Breast milk production is to influenced by prolactin and oxytocin hormones. Prolactin affects milk production, while oxytocin affects the excretion of breast milk. Prolactin is related to maternal nutrition. If the mother's nutritional consumption improves, more milk production will be (Maryunani, 2012).

The protein content of *Sauropus androgynous* leaves is efficacious to stimulate milk production, while steroids and polyphenols function to increase prolactin levels (Situmorang & Singarimbun, 2019). *Sauropus androgynous* leaves contain

polyphenols and steroids that have a role in the prolactin reflex or stimulate the alveoli to produce breast milk and stimulate the hormone oxytocin to stimulate milk production. *Sauropus androgynous* leaves contain several aliphatic compounds that increase breast milk production. That is thought to come from the hormonal effects of sterol compounds which are estrogenic (Elshabrina, 2018).

Researchers believe that the *Sauropus androgynous* leaves processed into vegetables, biscuits, or an extract can stimulate the prolactin hormone, and breast milk production increases. However, it will be expected that the process of *Sauropus androgynous* leaves will not affect nutritional content so that it will use for nursing mothers.

Conclusion

Intake of *Vigna radiata* can stimulate the release of the oxytocin and prolactin hormone so that it helps increase breast milk production and facilitates milk production. This is due to the presence of thiamine which helps meet the energy needs of nursing mothers. The intake of mung bean juice as 250 ml per day for six days can increase milk production.

Carica papaya leaf intake in the form of the extract can increase the prolactin reflex to stimulate breast milk production. *Carica papaya* leaves contain vitamins, flavonoids, and polyphenols. *Carica papaya* leaf extract intake for seven days with a dose of 2 x 400 mg effectively increased breast milk production by 98%.

Intake of *Sauropus androgynous* by boiling and drinking three times a day with a dose of 150cc is efficacious to stimulate milk production. The content of steroids and polyphenols in *Sauropus androgynous* increases prolactin levels. The three types of intakes mentioned above are helpful to increase milk production and expedite the excretion of breast milk. The most dominant was the intake of *Carica papaya* leaves, which achieved increasing breast milk production up to 98%.

Limitations of the study

This literature review compared and analyzed the research results using a cross-sectional approach. Thus, it is still necessary to use a qualitative approach to obtain more in-depth research results regarding the intake of *Vigna radiata*, *Sauropus androgynous* leaves, and *Carica papaya* leaves on breast milk production.

The journals analyzed in this literature review take data with the instrument using existing data sources from several journals. This allows the data obtained may be less valid because the research was not carried out directly.

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Conflict of Interest

There is no conflict of interest in this study.

References

- Anggaraini, Y. (2017). *Asuhan Kebidanan Masa Nifas*. Yogyakarta: Pustaka Rihama.
- Aprilia, R., Rilyani, R., & Arianti, L. (2020). Pengaruh pemberian sayur daun pepaya terhadap kelancaran produksi ASI pada ibu nifas. *Wellness And Healthy Magazine*, 2(1), 5-12. <https://doi.org/10.30604/well.66212020>.
- Aryani, Y., & Alyensi, F. (2019). Penerapan Pijat Oksitosin Dalam Upaya Memperbanyak Produksi ASI Melalui Pelatihan Bagi Para Bidan. *Dinamisia : Jurnal Pengabdian Kepada Masyarakat*, 3(2), 361-367. <https://doi.org/10.31849/dinamisia.v3i2.3680>.
- Ayuni, R. (2012). *Khasiat Selangit Daun-Daun Ajaib Tumpas Beragam Penyakit*. Salatiga: Araska.
- Elison, N. K., Dhillon, D. A., Hastuty, M., & Wahyuni, W. S. (2020). Penyebab Rendahnya Cakupan ASI Eksklusif di Kabupaten Kampar Provinsi Riau. *Jurnal Doppler Universitas Pahlawan Tuanku*

- Tambusai*, 4 (1), 43–48.
- Elshabrina. (2018). *33 Daun Dahsyat Tumpas Berbagai Macam Penyakit*. Yogyakarta: C-KLIK MEDIA.
- Suwanti, E., & Kuswati, K. (2016). Pengaruh Konsumsi Ekstrak Daun Katuk Terhadap Kecukupan ASI Pada Ibu Menyusui Di Klaten. *Interest : Jurnal Ilmu Kesehatan*, 5(2), 132–135. <https://doi.org/10.37341/interest.v5i2.42>.
- Hesti, K. Y., Pramono, N., Wahyuni, S., Widyawati, M. N., & Santoso, B. (2017). Effect of Combination of Breast Care and Oxytocin Massage on Breast Milk Secretion in Postpartum Mothers. *Belitung Nursing Journal*, 3(6), 784–790. <https://doi.org/10.33546/bnj.293>
- Ikhlasiah, M., Mei, L., Poddar, S., & Bhaumik, A. (2019). The Effects of Carica Papaya leaf juice for breastfeeding and working mothers on increasing prolactin hormone levels and infant ' s weight in Tangerang The effects of Carica Carica Papaya leaf juice for breastfeeding and working mothers on increasing prolactin hormone levels. *Jurnal Kesehatan*, 1(2), 1-8. <https://doi.org/10.1016/j.enfcli.2019.1.054>.
- Ikhlasiah, M., & Winarni. (2020). Pemberian jus daun pepaya bagi ibu menyusui yang bekerja terhadap peningkatan kadar hormon prolaktin dan berat badan bayi di tangerang. *Jurnal Kesehatan*, 6 (1), 89–94.
- Indrayani, D., Shahib, M. N., & Husin, F. (2020). The Effect of Katuk (*Sauropus androgynus* (L) Merr) Leaf Biscuit on Increasing Prolactine Levels of Breastfeeding Mother. *KEMAS: Jurnal Kesehatan Masyarakat*, 16(1), 1–7. <https://doi.org/10.15294/kemas.v16i1.11324>.
- Indrayani, T., & Ph, A. (2019). Pengaruh Pijat Oksitosin dan Pijat Payudara terhadap Produksi ASI Ibu Postpartum di RB Citra Lestari Kecamatan Bojonggede Kota Bogor Tahun 2018. *Journal for Quality in Women's Health*, 2(1), 65–73.
- Ritonga, N. J., Mulyani, E. D., Anuhgera, D. E., Damayanti, D., Sitorus, R., & Siregar, W. W. (2019). Sari Kacang Hijau Sebagai Alternatif Meningkatkan Produksi Air Susu Ibu (ASI) Pada Ibu Menyusui. *Jurnal Keperawatan dan Fisioterapi (JKF)*, 2(1), 89–94. <https://doi.org/10.35451/jkf.v2i1.272>
- Juliastuti, J. (2019). Efektivitas Daun Katuk (*Sauropus androgynus*) Terhadap Kecukupan ASI Pada Ibu Menyusui Di Puskesmas Kuta Baro Aceh Besar. *Indonesian Journal for Health Sciences*, 3(1), 1–5. <https://doi.org/10.24269/ijhs.v3i1.1600>.
- Kemenkes RI. (2018). *Manfaat ASI Eksklusif untuk Ibu dan Bayi*. Jakarta: Kemenkes RI.
- Kemenkes RI. (2018). *Pusat Data dan Informasi Kementerian Kesehatan RI*. Jakarta: Kemenkes RI.
- Kemenkes RI. (2019). *Begini Cara Pemberian ASI yang Benar*. Jakarta: Kemenkes RI.
- Kemenkes RI. (2019). *Berikan ASI untuk Tumbuh Kembang Optimal*. Jakarta: Kemenkes RI.
- Kemenkes RI. (2019). *Profil Kesehatan Indonesia*. Jakarta: Kemenkes RI.
- Kusumaningrum, I. D. (2017). Potensi Daun Pepaya (*Carica Papaya L*) Sebagai Alternatif Memperlancar Produksi ASI. *Surya Medika: Jurnal Ilmiah Ilmu Keperawatan Dan Ilmu Kesehatan Masyarakat*, 12(2). <https://doi.org/10.32504/sm.v12i2.86>.
- Lestari, N. (2017). Oxytocin Massage on Postpartum Primipara Mother to the Breastmilk Production And Oxytocin Hormone Level. *Jurnal Ners Dan Kebidanan (Journal of Ners and Midwifery)*, 4(2), 120–124. <https://doi.org/10.26699/jnk.v4i2.art.p120-124>
- Maita, L. (2016). Pengaruh Pijat Oksitosin Terhadap Produksi ASI. *Jurnal Penelitian Kesehatan "SUARA FORIKES" (Journal of Health Research "Forikes Voice")*, 3,(3). <https://doi.org/10.33846/SF.V7I3.47>.
- Maritalia, D. (2012). *Asuhan Kebidanan Nifas dan Menyusui* (ed. 1st). Makassar: Balai Pustaka.
- Maryunani, A. (2012). *Inisiasi Menyusui Dini*,

- ASI Eksklusif dan manajemen Laktasi. Jakarta: Trans Info Media.
- Meihartati, T. (2020). Hubungan Pijat Oksitosin Terhadap Kelancaran Produksi ASI Ibu Post Partum. *Jurnal Kebidanan dan Keperawatan Aisyiyah*, 12(2), 193–197. <https://doi.org/10.31101/jkk.310>.
- Putri, R. N. A., Kurniati, D., & Novelia, S. (2020). Studi Pengaruh Pemberian Tumis Daun Pepaya (*Carica papaya* L.) terhadap Produksi ASI dan Peningkatan Berat Badan Bayi. *Health Information : Jurnal Penelitian*, 12(2), 142–151. <https://doi.org/10.36990/hijp.v12i2.204>.
- Pratiwi, T. E., Suwondo, A., & Mardiyono. (2016). Exclusive Breastfeeding Improvement Program Using Carica Carica Papaya Leaf Extract on the Levels of Prolactin Hormones. *International Journal of Science and Research (IJSR)*, 7(9), 548–551. <https://doi.org/10.21275/ART20191148>.
- Pujiastuti, N., & Wahyuningsih, B. D. (2019). Relationship Between Educational Level And Early Breastfeeding Side Meal In Gemurung Village Sidoarjo Regency. *International Conference of Kerta Cendekia Nursing Academy*, 1(1), Article 1. <https://ejournal-kertacendekia.id/index.php/ICKCNA/article/view/79>.
- Ritonga, N. J., Mulyani, E. D., Anuhgera, D. E., Damayanti, D., Sitorus, R., & Siregar, W. W. (2019). Sari kacang hijau sebagai alternatif meningkatkan produksi air susu ibu (ASI) pada ibu menyusui. *Jurnal Keperawatan Dan Fisioterapi (JKF)*, 2(1), 89–94.
- Ritonga, N. J., Mulyani, E. D., Anuhgera, D. E., Damayanti, D., Sitorus, R., & Siregar, W. W. (2019). Sari Kacang Hijau Sebagai Alternatif Meningkatkan Produksi Air Susu Ibu (ASI) Pada Ibu Menyusui. *Jurnal Keperawatan Dan Fisioterapi (JKF)*, 2(1), 89–94. <https://doi.org/10.35451/jkf.v2i1.272>
- Saputri, I. N., Ginting, D. Y., & Zendato, I. C. (2019). Pengaruh Pijat Oksitosin Terhadap Produksi ASI Pada Ibu Postpartum. *Jurnal Kebidanan Kestra (JKK)*, 2 (1), 68–73. <https://doi.org/10.35451/jkk.v2i1.249>.
- Setyono, F. S., Adi, A. C., & Ismawati, R. (2016). Galactogogue Instant Powder Combination of Carica Carica Papaya Leaves and Red Ginger for Breastfeeding Mother. 2(4), 32–36. <https://doi.org/10.17354/ijpphs/2016/44>
- Siti Aminah, W. P. (2019). Perbedaan Efektifitas Pemberian Buah Kurma Dan Daun Sauropus Androgynous Terhadap Kelancaran ASI Pada Ibu Menyusui Umur 0-40 Hari Di Kota Kediri. *JPH RECODE*, 3 (1), 37–43.
- Situmorang, Seriaty, T., & Singarimbun, A. (2019). Pengaruh Konsumsi Air Rebusan Daun Sauropus Androgynous Terhadap Pengeluaran Produksi ASI Pada Ibu Nifas Di Bidan Praktek Mandiri Manurung Medan Tahun 2018, 1 (2), 55–60.
- Sulaeman, R., Lina, P., Purnamawati, D. (2019). Pengaruh Pijat Oksitosin Terhadap Pengeluaran ASI Pada Ibu Postpartum Primipara. *Jurnal Kesehatan Prima*, 13 (1), 10–17. <https://doi.org/10.32.807/jkp.v13i1.193>
- Triananinsi, N., Andryani, Z. Y., & Basri, F. (2020). Hubungan Pemberian Sayur Daun Sauropus Androgynous Terhadap Kelancaran ASI Pada Ibu Multipara Di Puskesmas Caile The Correlation of Giving Sauropus Androgynous Leaves To The Smoothness of Breast Milk In Multiparous Mother At Caile Community Health Centers, 6 (1).
- Turlina, L., & Wijayanti, R. (2015). Pengaruh Pemberian Serbuk Daun Pepaya Terhadap Kelancaran ASI Pada Ibu Nifas Di Bpm Ny. Hanik Dasiyem, Amd.Keb Di Kedungpring Kabupaten Lamongan, 7 (1).
- Widia, L., Azhar, A. (2018). Efektivitas Konsumsi Sari Kacang Hijau (*Vigna Radiate*) Terhadap Kelancaran Produksi ASI Ibu Nifas. *Jurnal-Kesehatan.Id*.
- Yahya, F. D., Ahmad, M., Usman, A. N., Sinrang, A. W., Alasiry, E., & Bahar, B. (2020). Potential combination of back massage

therapy and acupressure as complementary therapy in postpartum women for the increase in the hormone oxytocin. *Enfermeria Clinica*, 30, 570–572.

<https://doi.org/10.1016/j.enfcli.2019.07.163>

Yuniarti. (2020). Efektivitas Pemberian Sari Kacang Hijau Terhadap Peningkatan Volume Asi pada Ibu Nifas di Praktek Bidan Mandiri Kota Palangka Raya. *Jurnal Forum Kesehatan : Media Publikasi Kesehatan Ilmiah*, 10.