



Effectiveness of a Decoction of Binahong Leaves and Red Betel Leaves in Healing Perineal Wounds

Nurzah Akmaliah^{1*}, Irma Jayatmi¹, Rita Ayu Yolandia¹

¹Universitas Indonesia Maju, Indonesia

Abstract

The incidence of perineal rupture in Garut Regency in 2020 was 61% of the number of mothers who gave birth, while in Sukasenang Community Health Center in 2022 there were 314 postpartum mothers (33.04%) who experienced perineal wounds and there were 5 cases of perineal infection. Non-pharmacological therapy that can be given to speed up the healing of perineal wounds to prevent infection is using red betel leaf extract and binahong extract. The aim of this research was to determine the effectiveness of boiled binahong leaves and red betel leaves in healing perineal wounds. The type of research in this research is qualitative with a case study approach. The sample used was 2 people using purposive sampling technique. The research results obtained by Mrs. S and Mrs. L Before giving the binahong leaf decoction to the perineal wound there was a grade 2 tear with a reeda score of 6 and after giving the binahong decoction to the perineal wound there was a birth canal wound on the 2nd visit with a score of 4 and on the 3rd visit there was no pain. In conclusion, there is no difference in effectiveness between boiled binahong leaves and boiled red betel leaves in healing perineal wounds in postpartum women. It is hoped that health workers, especially midwives, will continue to improve education and care for perineal wounds by using boiled water from binahong leaves and boiled water from red betel leaves so that postpartum mothers can do it independently.

Keywords

red betel leaves, binahong leaves, perineal wounds

*Corresponding Author: Nurzah Akmaliah (E-mail: akmaliahnurzah@gmail.com)

Introduction

Labor or giving birth to a baby is something that every married couple and the extended family really hopes for and is also a normal thing that happens to women of childbearing age. Welcoming the birth of a baby is a joy for every couple and is something that every family is waiting for, so all moral and material support is poured out by the husband, family, and even all members of society for the welfare of the mother and fetus, but in the birthing process there are quite a few that cause injuries. One of the ways of birth in postpartum mothers is a tear in the perineum. This condition is more at risk in mothers who are giving birth for the first time, giving birth to a large fetus, undergoing a long labor process, or requiring birth assistance, such as forceps or vacuum (Manuntungi, 2019).

According to the World Health Organization (WHO), in 2020 the incidence of perineal rupture in women giving birth in the world was 2.7 million cases, where this figure is estimated to reach 6.3 million in 2050. On the Asian continent alone, 50% of women giving birth experience rupture perineum (Misrina & Silvia, 2022). Based on 2018 Basic Health Research (RISKESDAS) data, it shows that in Indonesia perineal lacerations or ruptures are experienced by 75% of mothers giving birth vaginally. The prevalence of pregnant women experiencing perineal tears in Indonesia in the 25-30 year age group is 24%, and in mothers aged 32-39 years it is 62%. In 2017, it was found that of a total of 1951 spontaneous vaginal births, 57% of mothers received perineal sutures, 28% due to episiotomy and 29% due to spontaneous tearing (Kemenkes RI, 2018).

Based on reports from the West Java Provincial Health Service, the incidence of perineal rupture in West Java in 2020 was 54% of the total number of births, while the incidence of perineal rupture in Garut Regency in 2020 was 61% of the number of mothers giving birth (Dinkes Jabar, 2021).

Sukaenang Community Health Center is one of the community health centers in the Banyuwangi District Area. Based on the Sukasenang Community Health Center's annual report in

2020, there were 237 cases of postpartum mothers (28.7%) who experienced perineal wounds from 823 mothers giving birth, in 2021 there were 231 cases of postpartum mothers (29.3%) who experienced perineal wounds from 786 mothers giving birth (Puskesmas Sukasenang, 2021). Meanwhile, in the monthly report for 2022, there were 314 postpartum mothers (33.04%) who experienced perineal wounds out of all mothers who gave birth and experienced 5 cases of perineal wound infections (Puskesmas Sukasenang, 2022). One of the direct causes of maternal death is postpartum infection, one of which is caused by perineal wounds that arise due to lack of maintaining perineal hygiene. Complications that occur from perineal lacerations are delayed wound healing and even infection. The symptoms are quite easy to see, namely in the form of a burning and sore feeling in the infected area. Pain when urinating, fever, and smelly vaginal discharge. To prevent perineal wound infections from occurring, efforts are needed to treat the wound by using a bath seat by squatting or sitting then washing the perineal wound with antiseptic fluid (SUKMARANI, 2018). The pain felt by postpartum mothers in the perineum is caused by stitching wounds during childbirth due to severed tissue. Each individual's pain response is unique and relatively different. This is influenced, among other things, by individual experience, perception and social culture. Every postpartum mother has unique perceptions and assumptions about pain during the postpartum period, namely about pain and how the ability to deal with pain. The pain felt by postpartum mothers will affect the mother's mobilization, rest patterns, eating patterns, sleep patterns, the mother's mood, ability to defecate (BAB) or urinate (BAK), daily activities, among others. others in terms of taking care of babies, doing household work, socializing with the environment and society, and inhibiting when mothers start working (Jayatmi et al., 2022).

Efforts to prevent perineal wound infections can be provided with pharmacological therapy and non-pharmacological therapy. Pharmacological therapy is by administering antibiotics and antiseptic drugs (povidone iodine) to treat perineal wounds, however these drugs and ingredients have side effects such as allergies, inhibiti-

ng the production of collagen which functions for wound healing. Meanwhile, non-pharmacological therapy that can be given to speed up wound healing to prevent infection is using betel leaf extract, red betel leaf extract, soursop leaf extract, binahong extract (Siti Amiatin, 2019).

Research conducted by Teti Rostika (2020) regarding the healing of perineal wounds in respondents who used betel leaves tended to heal faster compared to respondents who did not use betel leaves, this was due to the chemical content of betel leaves which can speed up the healing process of perineal wounds. The difference between the research carried out by Teti Rostika and the research plan that will be carried out by the researcher is in the way the betel leaf is applied or applied, in Teti Rostika's research the method of use is by extracting the betel leaf and then applying it to the wound, while the researcher's plan is to use the leaf. Betel leaves are boiled, then the boiled water from the betel leaves is used to clean the perineum wound by washing it or using it as a washcloth (Rostika et al., 2020).

According to Saidah (2022) in the Journal for Quality in Public Health, it was concluded that there was a difference in the effectiveness of healing time for perineal wounds in the intervention group which was given binahong leaf infusion and the control group was not given so that binahong leaf infusion was proven to be effective in accelerating the healing process of perineal wounds so that the binahong plant could be used as an alternative to speed up the healing of perineal wounds and reduce the risk of infection in postpartum mothers. In line with research conducted by Rina Hanum (2020) which states that there is an effect of the effectiveness of boiled water from binahong leaves on healing perineal wounds in postpartum mothers (Hanum & Liesmayani, 2020).

TPMB N is a network in the working area of the Sukasena Health Center. Based on the results of a preliminary survey on 24 September 2023 among 10 postpartum mothers. Based on the results of interviews with 10 postpartum mothers who visited the community health center, all of them said that they did not know the benefits of boiled red betel leaves and binahong leaves for treating perineal wounds and had never tried it.

Based on this background, this research

aims to "Effectiveness of a decoction of Binahong Leaves and Red Betel Leaves on Healing Perineal Wounds in Postpartum Women in PMB N Garut Regency in 2023".

Method

This research uses a qualitative research design with a case study approach. Qualitative research methods are research procedures that produce descriptive data in the form of written or spoken words from people and behavior that can be observed as it is. Case study is understanding a case, specific people or situation in depth. Qualitative research uses open interview and observation methods to understand individual attitudes, views, feelings and behavior in depth. Researchers tried to explore the responses that emerged in patients in an effort to speed up the healing process of perineal wounds in postpartum mothers. This activity was carried out on 2 babies in TPMB N Garut Regency in 2023. Determining the sample in this study used a purposive sampling technique. The research instruments used were checklists and observation sheets made by researchers to determine the acceleration of perineal wound healing using boiled red betel leaf water.

Result and Discussion

Table 1. Comparison of Midwifery Care Results Between Case 1 and Case 2

Visit	Case 1 (Binahong)	Case 2 (Red Betel Leaf)
Visit I	Perineal wound with a score of 6 (REEDA)	Perineal wound with a score of 6 (REEDA)
Visit II	Birth canal wound with a score of 4 (REEDA)	Birth canal wound with a score of 4 (REEDA)
Visit III	Birth canal wound with a score of 0	Birth canal wound with a score of 0

Effectiveness of Binahong Leaf Decoction in Healing Perineal Wounds in Postpartum Women

Based on the results of research on Mrs. S gave birth to her first child one day ago and complained that the birth canal wound was a little painful and there was a grade 2 tear with a REEDA score of 6. The management given to Mrs. S, namely by providing non-pharmacological therapy using boiled binahong leaves for 5 days which can speed up the process of healing the birth canal, namely 10 binahong leaves boiled in 800 ml water using medium heat until reduced by 600 ml then washed in warm (not hot) conditions. 2 times, namely every morning and evening.

The results of the second visit after being given boiled water from binahong leaves showed that the birth canal wound no longer felt painful and they were still using boiled binahong leaves as a treatment for birth canal wounds. The birth canal wound was scored 4 and at the third visit the birth canal wound was no longer painful and the condition was getting better. Birth canal wounds with a score of 0. This shows that there is a decrease in the wound scale from 6 to 0.

According to Herliman's (2022) study, the statistical test results showed a p-value of less than 0.000, indicating a difference in the effectiveness of air purification for binahong and air purification for sirih compared to the perineum purification of a newborn at Puskesmas Saketi, Pandeglang in 2020 (Herliman et al., 2022).

According to Pratiwi (2020), there is a significant difference in the speed at which the process of perineum whitening may be completed when airbrushing is used. This is especially true for postpartum women (Kusuma, 2020). The results of this study are in line with research by Susanti et al. which showed that mothers with perineal wounds who were given boiled water from binahong leaves recovered on average on the 5th day with an average healing time of 5.46 (Yamin & Nurcahyani, 2022). Similar results were provided by Liesmayani et al.'s research regarding the effectiveness of boiled water from binahong leaves in healing perineal ruptures. The result was 90.9% healing of

perineal ruptures in the good category with an average healing time of 5 days (Liesmayani et al., 2021) The results of this study are in line with the theory that treatment for perineal wounds can be carried out using pharmacological and non-pharmacological methods. Pharmacologically, namely by giving antiseptic drugs. Antiseptic or antibiotic treatment for the treatment of perineal wounds currently tends to be avoided. Some antibiotics should be avoided during lactation, as they are very significant and risky. This is the reason why midwives advise postpartum mothers to use binahong leaves as a medicine that speeds up the healing of perineal wounds (Endang & Elisabeth, 2013).

Postpartum mothers who consumed a glass of binahong leaf boiled water once in the morning experienced faster healing of perineal wounds (Surjantini & Siregar, 2018). According to research conducted by Gusnimar (2021), the saponin contained in Binahong has the ability to act as an antiseptic which can prevent the growth of microorganisms in wounds so that they do not experience infection. The flavonoids in the Binahong plant have anti-inflammatory properties which can prevent oxidation in wounds. Flavonoids can also cause damage to the structure and changes in the permeability mechanism of bacterial cell walls. Applying binahong leaves to wounds helps wound healing by forming more granulation tissue and healing occurs more quickly compared to wounds that were not given binahong leaves. (Gusnimar et al., 2021). Giving boiled water from binahong leaves is also able to inhibit the growth of bacteria in vitro, namely salmonella typhi bacteria, Escherichia coli bacteria and Propionibacterium acnes bacteria (Ariani, Syikir, et al., 2022).

The researcher's assumption is that perineal wounds are wounds in the birth canal experienced by mothers after giving birth. If they are treated properly, one of which is using boiled water from binahong leaves, the perineal wounds will begin to improve within a week. This can be seen from observations of wounds in postpartum mothers where

the score obtained is 6 to 0, meaning the condition of the perineal wound is in good condition. Therefore, health workers, especially midwives, can provide midwifery care by providing complementary therapy to help speed up the healing of perineal wounds using boiled water from binahong leaves and can provide education to postpartum mothers so they can do it independently.

Effectiveness of Red Betel Leaf Decoction in Healing Perineal Wounds in Postpartum Women

Based on the results of research on Mrs. L gave birth to her first child one day ago and complained that the birth canal wound was a little painful and there was a grade 2 tear with a REEDA score of 6. The management given to Mrs. L, namely by providing non-pharmacological therapy using boiled red betel leaves for 5 days which can speed up the healing process of the birth canal, namely 10 red betel leaves boiled in 800 ml water using medium heat until reduced by 600 ml then washed warm (not hot). 2 times, namely every morning and evening.

The results of the second visit after being given boiled water from binahong leaves showed that the birth canal wound no longer felt painful and they were still using boiled red betel leaves as a treatment for birth canal wounds. The birth canal wound was scored 4 and at the third visit the birth canal wound was no longer painful and the condition was getting better. Birth canal wounds with a score of 0. This shows that there is a decrease in the wound scale from 6 to 0.

Treating perineal wounds using betel leaf water can reduce discomfort, cleanliness, prevent infection and improve wound healing (Milah, 2021). The results of this study are in line with Yuliaswati and Kamidah's research which showed that the use of green betel can accelerate the healing of perineal wounds, with the average healing time for perineal wounds being 6.85; meaning that the mother recovered on the 6-7th day after being given boiled betel leaf water

(Yuliaswati, 2018). This is strengthened by the research results of Christina and Kurniyanti which show that betel leaves are effective in healing perineal wounds with an average recovery period for perineal wounds of 6 days This is in line with research conducted by Teti Rostika (2020) regarding the healing of perineal wounds in respondents who used betel leaves tended to heal faster compared to respondents who did not use betel leaves, this is due to the chemical content of betel leaves which can speed up the wound healing process. perineum. The difference between the research carried out by Teti Rostika and the research plan that will be carried out by the researcher is in the way the betel leaf is applied or applied, in Teti Rostika's research the method of use is by extracting the betel leaf and then applying it to the wound, while the researcher's plan is to use the leaf. Betel leaves are boiled, then the boiled water from the betel leaves is used to clean the perineum wound by washing it or using it as a washcloth. (Rostika et al., 2020).

In the journal Ari Christiana Mizam Ari Kurniyanti "Effectiveness of boiled water from betel leaves in accelerating the healing of perineal wounds" data was obtained that perineal suture wounds in postpartum mothers healed and dried on the 3-4th day post partum and there were no signs of infection (Ariani, Oktafiani, et al., 2022). The results of this research are in line with the results of research by Yuliaswati (2018) at the Depok City Health Center, West Java, which showed that it was proven that the use of betel can accelerate the healing of perimium wounds ($p=0.010$). This is also in line with the results of research by Mariati (2018) at the Independent Practicing Midwife, Baros Sukabumi District, showing that red betel leaves are more effective than iodine in treating perineal wounds during the postpartum period. Also in Christiana's (2017) research, boiled water from betel leaves is effective in the speed of healing of perineal wounds in postpartum women with $p = 0.000$ (Karlina et al., 2023).

According to researchers' assump-

tions, perineal wounds will actually heal by themselves by caring for the wounds independently, such as cleaning the perineal area every time you shower, after urinating or defecating, but this takes quite a long time and is susceptible to infection, based on the results of field research. Giving boiled water from soursop leaves turned out to be effective in helping the healing process of perineal wounds, so the researchers assumed that post partum mothers who treated perineal wounds using boiled water from red betel leaves mostly experienced a faster healing process for perineal wounds compared to normal wound care. This is because the red betel plant contains antiseptics which can kill germs and can increase resistance to infection and speed up wound healing.

Comparison of the Effectiveness of Decoction of Binahong Leaves and Red Betel Leaves in Healing Perineal Wounds in Postpartum Women

Based on the results of research on Mrs. S had a grade 2 tear with a REEDA score of 6. The results of the second visit after being given boiled water from binahong leaves showed that the birth canal wound was no longer painful and he was still using binahong leaf boiled water as a treatment for birth canal wounds. The birth canal wound was scored 4 and at the third visit the birth canal wound was no longer painful and the condition was getting better. Birth canal wounds with a score of 0. This shows that there is a decrease in the wound scale from 6 to 0.

Meanwhile, Mrs. L had a grade 2 tear with a REEDA score of 6. The results of the second visit after being given boiled water from red betel leaves showed that the birth canal wound was no longer painful and the binahong leaf decoction was still used as a treatment for birth canal wounds. The birth canal wound was scored 4 and at the third visit the birth canal wound was no longer painful and the condition was getting better. Birth canal wounds with a score of 0. This shows that there is a decrease in the wound

scale from 6 to 0.

This is reinforced by the results of research by Gupta et al. in India, which shows that there is a difference in effectiveness between boiled water from binahong leaves and boiled water from betel leaves in healing perineal ruptures ($p=0.001$). Boiled water from Malabar spinach leaves (binahong leaves; Indonesia) shows better results in healing perineal wounds compared to boiled water from betel leaves (piper betle) (Amini, 2023). It is supported by research by Zerani-kaet al. that there is a difference in effectiveness between betel leaf boiled water and betel leaf boiled water in healing perineal ruptures ($p=0.000$). The group given boiled water from binahong leaves recovered on the 6th day, while the control group recovered on average on the 7th day (Zerani-ka et al., 2022).

From these two results, the researchers assumed that the use of boiled water from binahong leaves and boiled water from red betel leaves was equally effective in healing perineal wounds for respondents so that there was no difference between the two because they both healed in the same reactive time.

Conclusion

Based on the results of research on Mrs. S and Mrs. L with a grade 2 birth canal injury, the results are as follows: There is effectiveness of boiled binahong leaves in healing perineal wounds in postpartum women with a perineal wound score before being given boiled water from binahong leaves of 6 and after being given boiled water from binahong leaves of 0. There is effectiveness of red betel boiled water on healing perineal wounds in postpartum women with a score of 6 before being given red betel leaf boiled water and 0 after being given red betel leaf boiled water. There is no difference in effectiveness between boiled binahong leaves and boiled red betel leaves in healing perineal wounds in postpartum women.

It is hoped that the results of this research can help increase family or community knowledge about the treatment and care of perineal wounds using boiled water from binahong leaves and red betel leaves by washing or cleaning the wounds so that people can do it independently according to the instructions.

References

- Amini, R. W. Z. (2023). Efektivitas Air Rebusan Daun Binahong Dengan Air Rebusan Daun Sirih Terhadap Penyembuhan Ruptur Perineum Pada Ibu Bersalin Di Puskesmas: The Effectiveness of Water Decoction of Binahong Leaves with Water of Betel Leaf Decoction for Healing Perineal Rupture in Mothers Giving Birth at Banjarsari Community Health Center. *Indonesian Scholar Journal of Nursing and Midwifery Science (ISJNMS)*, 2(11), 969–977.
- Ariani, A., Oktafiani, H., Praghlapati, A., Studi Kebidanan, P., Ilmu Kesehatan, F., Bhakti Kencana, U., Studi Keperawatan, P., & Pendidikan Olahraga dan Kesehatan, F. (2022). Pengembangan Komplementer Pada Ibu Nifas Dengan Pendekatan Terapi Menggunakan Daun Sirih Dan Daun Binahong Untuk Mempercepat Penyembuhan Luka. *Jurnal Paradigma (Pemberdayaan & Pengabdian Kepada Masyarakat)*, 4(2), 1–5.
- Ariani, A., Syikir, M., Sumiyati, S., Fadli, M., & Yusuf, B. (2022). Pengaruh Air Rebusan Daun Binahong Terhadap Penurunan Asam Urat. *Nursing Arts*, 16(2), 60–68.
- Dinkes Jabar. (2021). *Profil Kesehatan Tahun 2014*.
- Endang, E., & Elisabeth, W. S. (2013). *Asuhan Kebidanan Masa Nifas dan Menyusui*. Yogyakarta. Pustaka Baru Press.
- Gusnimar, R., Veri, N., & Mutiah, C. (2021). Pengaruh Air Rebusan Daun Binahong Dalam Mempercepat Penyembuhan Luka Perineum Masa Nifas. *Sel Jurnal Penelitian Kesehatan*, 8(1), 15–23.
- Hanum, R., & Liesmayani, E. E. (2020). Efektivitas Air Rebusan Daun Binahong Dengan Kesembuhan Luka Perineum Pada Ibu Nifas Di Klinik Sri Diana Lubis Tahun 2019. *Jurnal Kesehatan Almuslim*, 6(11), 12–21.
- Herliman, F. Y., Indrayani, T., & Suralaga, C. (2022). Perbedaan Efektivitas Air Rebusan Daun Binahong Dengan Air Rebusan Daun Sirih Terhadap Penyembuhan Ruptur Perineum Pada Ibu Bersalin Di Puskesmas Saketi Kabupaten Pandeglang Tahun 2020. *Asian Research of Midwifery Basic Science Journal*, 1(1), 85–95.
- Jayatmi, I., Nurjanah, I., & Prima, E. (2022). Efektifitas metode sitz bath dengan rebusan daun belimbing wuluh terhadap penurunan nyeri luka perineum pada ibu post partum. *SIMFISIS Jurnal Kebidanan Indonesia*, 1(3), 151–157.
- Karlina, E., Ciptiasrini, U., & Gaidha, G. (2023). Efektivitas Rebusan Daun Sirih Merah Terhadap Penyembuhan Luka Perineum Pada Ibu Postpartum Di Puskesmas Karangpawitan Kabupaten Garut Tahun 2023. *Sentri: Jurnal Riset Ilmiah*, 2(10), 4107–4117.
- Kemenkes RI. (2018). Laporan Hasil Riset Kesehatan Dasar (Riskesdas) Indonesia tahun 2018. In *Riset Kesehatan Dasar 2018* (pp. 182–183).
- Kusuma, S. D. P. (2020). *Perawatan Luka Perineum Dengan Menggunakan Air Rebusan Daun Binahong Pada Ibu postpartum*. Poltekkes Tanjungkarang.
- Liesmayani, E. E., Sulastri, S., & Oriza, N. (2021). Efektifitas Air Rebusan Daun Binahong Dengan Kesembuhan Luka Perineum Pada Ibu Nifas Tahun 2019. *JIDAN: Jurnal Ilmiah Kebidanan*, 1(2), 143–152.
- Manuntungi, A. E. (2019). Faktor-faktor yang mempengaruhi lamanya penyembuhan luka perineum pada ibu nifas di ruang perawatan Rumah Sakit Mitra Manakarra Mamuju. *Nursing Inside Community*, 1(3), 96–103.

- Milah, I. I. (2021). Literatur Review: Pengaruh Rebusan Daun Sirih Terhadap Penyembuhan Luka Perineum pada Ibu Nifas. *Jurnal Sosial Dan Sains*, 1(11), 1–386.
- Misrina, M., & Silvia, S. (2022). Hubungan Paritas Ibu dan Berat Badan Bayi Lahir dengan Ruptur Perineum Pada Ibu Bersalin di PMB Hj. Rosdiana, S. Sit Kecamatan Jeunib Kabupaten Bireuen. *JOURNAL OF HEALTHCARE TECHNOLOGY AND MEDICINE*, 8(1), 111–119.
- Puskesmas Sukasenang. (2021). *Laporan Kesehatan Puskesmas Sukasenang Bulanan*.
- Puskesmas Sukasenang. (2022). *Laporan Kesehatan Puskesmas Sukasenang Bulanan*.
- Rostika, T., Choirunissa, R., & Rifiana, A. J. (2020). Pemberian Penggunaan Air Rebusan Daun Sirih Merah Terhadap Waktu Penyembuhan Luka Perineum Derajat I Dan II di Klinik Aster Kabupaten Karawang. *Jurnal Ilmiah Kesehatan*, 12(2), 196–204.
- Siti Amiatin. (2019). *Aplikasi Rebusan Air Daun Sirih (Piper Betle) Untuk Mengatasi Resiko Infeksi Perineum Pada Ibu Post Partum*. Universitas Muhammadiyah Magelang.
- Sukmarani, S. (2018). *Penerapan Pendidikan Kesehatan Perawatan Luka Perineum Pada Ibu Postpartum Dengan Pemenuhan Kebutuhan Belajar Di Puskesmas Godean I. Poltekkes Kemenkes Yogyakarta*.
- Surjantini, R. R. S. H., & Siregar, Y. (2018). Efektifitas air rebusan simplisia daun binahong (*Anredera cordifolia* (Tenore) Steen) untuk penyembuhan luka perineum pada ibu nifas di Klinik Murniati Kecamatan Kota Kisaran Barat. *Jurnal Penelitian Kesehatan" SUARA FORIKES"(Journal of Health Research" Forikes Voice"*), 9(3), 170–175.
- Yamin, M., & Nurcahyani, A. (2022). Penerapan Rebusan Air Daun Binahong Untuk Mempercepat Penyembuhan Luka Perineum Pada Ibu Post Partum. *Jurnal Kesehatan Saelmakers PERDANA*, 5(1), 1–10.
- Yuliaswati, E. (2018). Upaya Mempercepat Penyembuhan Luka Perineum Melalui Penggunaan Air Rebusan Sirih Hijau. *Indonesian Journal on Medical Science*, 5(1).
- Zeranika, N., Suprihatin, S., & Indrayani, T. (2022). Efektivitas Air Rebusan Daun Binahong terhadap penyembuhan Luka Perineum pada Ibu Nifas di Klinik MMC Kabupaten Tulang Bawang Lampung. *Journal for Quality in Women's Health*, 5(1), 120–128.