



The Effect of Giving Cinnamon Decoction Water on The Healing of Perineal Wounds of Postpartum Women at Sri Wahyuni's PMB and Erlia Saraswati's PMB

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A B S T R A C T

The puerperium is a sensitive time for mothers because they must care for themselves while recovering after giving birth and caring for their babies. So, a good and effective postpartum healing process can help the mother get through the puerperium. Perineal infection is a common infection in mothers after giving birth. Some literature shows that cinnamon has ingredients that can heal wounds. This study aims to see how the influence of cinnamon cooking water on the healing of perineal wounds in postpartum women. This quantitative study used a quasi-experimental design and a nonequivalent control group design approach. The population in this study were postpartum women who gave birth in March and April 2023, respectively. Using a purposive sampling approach, 60 respondents were selected and were divided into two groups. Observation sheets and checklists were used to collect data. Wilcoxon Signed Rank Test, and Mann Whitney U Test was used to analyze the data. The results showed that the average perineal wound healing in the control group was 1.60, while the average in the intervention group was 1.87. The Wilcoxon Sign Ranked Test results obtained a p-value (0.000), namely <math><0.05</math>, which means there was a difference in wound healing before and after being given treatment for each group. Then, the results of the Mann-Whitney U Test obtained a p-value (0.021) <math><0.05</math>, meaning there was a difference in wound healing between the treatment and control groups. So, the conclusion that can be made in this study is that giving cinnamon-boiled water affects the healing of perineal wounds in postpartum mothers.

INTRODUCTION

The postpartum healing process that is not maximized will affect the mother's health and the baby's health care. So, a good and effective healing process can help mothers get through the postpartum period. Cioffi Jane stated that the mother of Kala II experienced a tear in the birth canal while giving birth to a baby. Wounds can arise naturally or because of episiotomy (Darukshan and Grover, 2022). Based on (RCOG), 85% of women giving birth will experience perineal injury and will get perineal repair or suturing (60%-70%) (D'Souza, 2020).

Wound healing is the process of renewing and improving the function of damaged tissue (Rodrigues *et al.*, 2019). In postpartum women, many components need repair at different rates. Both internal and external causes influence perineal wound healing. Nutrition, personal hygiene, medical history, heritage, age, bleeding, hypovolemia, local edema, dietary deficiency, oxygen deficit, and excessive exercise are examples of internal variables. While external factors such as the environment, traditions, knowledge, society, economy, how to handle officers, how to handle tissues, and how to take drugs (Mukherjee, 2019). The process of repairing pre-pregnancy conditions, including healing episiotomy wounds, is usually only compressed with warm water, and many traditional plants and plants are helpful for wound

healing, such as binahong leaf decoction and kersen leaf decoction (Christiani and Pane, 2023). In this study, researchers are interested in utilizing cinnamon.

Synthetic and natural medicines are forms of treatment that can be used to stop injured tissue from recovering from wounds. According to Khan and Ahmad (2019), natural drugs provide advantages over synthetic drugs, such as fewer side effects and cheaper rates. They are also easier to identify and purchase. In addition, some choose alternative therapies such as natural or herbal remedies to prevent side effects that are not anticipated by most synthetic drugs available on the market (Saggar *et al.*, 2022). Cinnamon is a widely used spice around the world. Cinnamon's many benefits include anti-inflammatory, antioxidant, and antimicrobial properties, as well as anti-pain and wound healing (Girsang and Elfira, 2023). The effects of its ethanol extract have been demonstrated in laboratory rats. Also, no significant adverse effects of cinnamon have been found in human studies (Hajimonfarednejad *et al.*, 2019). Secondary metabolite compounds contained in cinnamon plants, including flavonoids, tannins, saponins, alkaloids, and phenols, have medicinal uses for treating wounds (Saggar *et al.*, 2022).

Based on the above background, the study aims to determine the effect of giving cinnamon boiled water on the healing of perineal wounds in postpartum women.

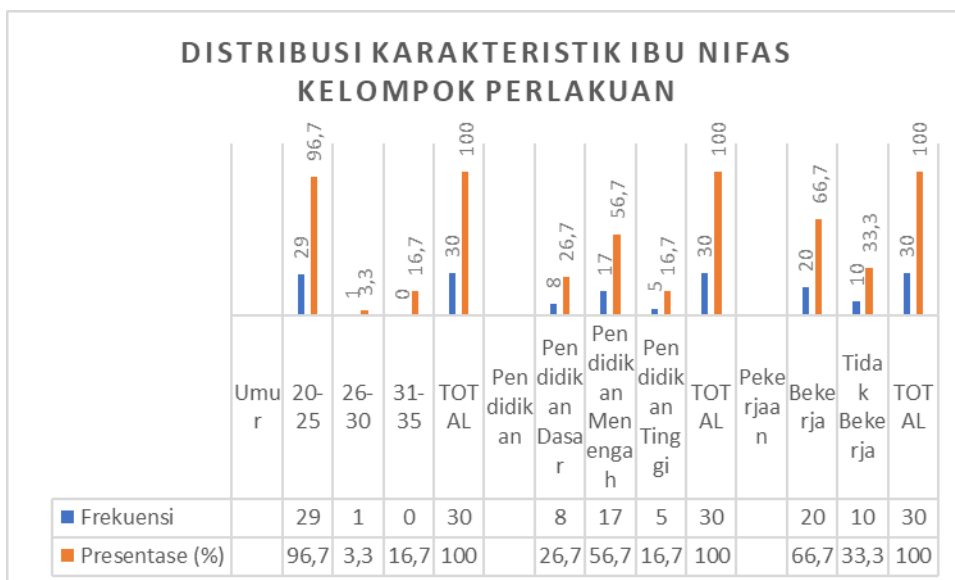
METHOD

This quantitative research used a Quasi-Experimental design with a Non-Equivalent Control Group Design approach. The population of this study were postpartum mothers or mothers who met the inclusion criteria at PMB Sri Wahyuni and PMB Erlia Saraswati. Data was collected using a purposive sampling technique, which obtained a sample of 60 respondents divided into an intervention group of 30 people given cinnamon-boiled water. A control group of 30 people would be assigned wound care. The instruments used to collect data are observation sheets and checklists. To process the data that has been obtained, the analysis uses the Wilcoxon Sign Ranked Test and the Mann-Whitney U-Test test.

RESULT

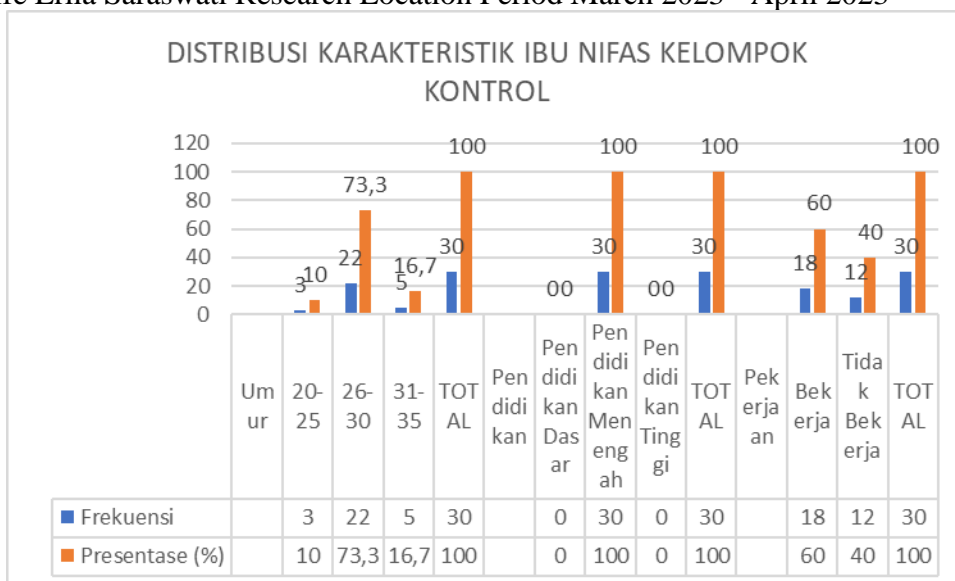
General Data

Table 1. Frequency Distribution of Respondent Characteristics of Postpartum Women in the Treatment Group at Sri Wahyuni Midwife Independent Practice March 2023 - April 2023



It is known that the characteristics of the respondents of the postpartum women in the treatment group in this study are almost entirely aged 20-25, namely 29 mothers (96.7%), and a small proportion of others aged 26-30 years, namely one mother.

Table 2. Frequency Distribution of Respondents Characteristics of Postpartum Women Independent Practice Midwife Erlia Saraswati Research Location Period March 2023 - April 2023



It is known that the characteristics of postpartum women in the control group in this study were mostly aged 26-30 years, namely 22 postpartum women (73.3%).

Special Data

Table 3. Wound Healing of Postpartum Women Before and After Giving Cinnamon Decoction Water at PMB Sri Wahyuni

Perineal Wound Healing	Treatment Group			
	Before		After	
	N	(%)	N	(%)
Good	0	0	26	86,7
Not Good	2	6,7	4	13,3
Bad	28	93,3	0	0
Total	30	100	30	100

It showed that poor wound healing decreased by (93.3%) after being given cinnamon-boiled water. For good wound healing, there was an increase of (86.7%), while for poor wound healing, there was an increase of (6.6%).

Table 4. Wound Healing of Postpartum Women Before and After Wound Care at Erelia Saraswati Maternity Hospital

Perineal Wound Healing	Control Group Wound Care			
	Before		After	
	N	(%)	N	(%)
Baik	0	0	18	60
Kurang baik	3	10	12	40
Buruk	27	90	0	0
Total	30	100	30	100

It showed that poor wound healing decreased by (90%) after wound care was given. For good wound healing, there was an increase of (60%), while for poor wound healing, there was an increase of (30%).

Table 5. Normality Test

Results	Statistic	Df	Sig.
Pre-Observation Treatment	0,537	30	0,000
Post Observation Treatment	0,517	30	0,000
Pre-Observation Control	0,528	30	0,000
Control Post Observation	0,389	30	0,000

In this study, the Kolmogorov Smirnov normality test obtained significant results on the pre and post-observation results in the treatment group, namely 0.000 and 0.000, which are <0.005. Hence, the data distribution is not normal. While the significance results on the pre and post-observation results in the treatment group are 0.000 and 0.000, the data distribution of this group is also not normal, so the *Wilcoxon Signed Rank Test* and *Mann-Whitney* test can be done.

Table 6. Wilcoxon Sign Ranked Test

	Treatment Group		Control Group	
	Before	After	Before	After
Mean	0,07	1,87	0,20	1,60
Standard Deviation	0,254	0,346	0,61	0,498
Wilcoxon Signed Rank Test	p= 0.000		p= 0.000	

Based on the results of research processed analytically with the *Wilcoxon Sign Ranked Test* in the treatment group given cinnamon boiled water, the *p-value* = 0.00 (<0.05) was obtained, indicating a

significant effect on the perineal wound healing process after giving cinnamon boiled water. Similarly, p -value = 0.00 (<0.05) was found in the control group (wound care), indicating a significant effect on perineal wound healing after perineal wound care.

Table 7. Mann-Whitney U Test

Respondent Group	Mean	SD	p
Treatment Group	1,87	0,346	0,021
Control Group	1,60	0,498	

The difference in perineal wound healing between the treatment and control groups can be seen by comparing the mean post-observation scores in each group. The Mann-Whitney test calculates the mean difference since the samples were not normally distributed. Based on the table, the significance value was 0.021. Since the significance level is less than 0.05, the H_0 option is rejected. This indicates that there is a substantial difference in perineal wound healing between the intervention group given cinnamon boiled water and the control group given perineal wound care in *postpartum* women.

DISCUSSION

1. Healing of Perineal Wounds of Postpartum Women Before and After Giving Cinnamon Decoction Water at PMB Sri Wahyuni in March-April 2023

The results showed that of the 30 respondents before being given cinnamon boiled water, most of the wound healing was poor and a small proportion of the wound healing was good. After being given cinnamon boiled water, it was found that almost all respondents experienced good healing and a small portion of the wound healing was not good.

In this study, researchers used a 3g dose of cinnamon, twice that of previous researchers concerning the maximum dose; the amount of cinnamon used in several studies ranges from 1 to 6 grams. So, in the treatment group, in addition to being given antibiotics, analgesics, and wound care, cinnamon-boiled water will be provided, which must be consumed every day from day 1 to day 5 of the first postpartum period before eating in the morning. An evaluation of perineal wound healing will be carried out on day 6 of the postpartum period.

This can help postpartum women who experience episiotomy wounds to relieve pain and heal perineal wounds because this cinnamon spice has various health benefits, including analgesics and wound healing (Girsang and Elfira, 2023).

2. Healing of Perineal Wounds of Postpartum Women Before and After Giving Perineal Wound Care at PMB Erlia Saraswati in March-April 2023

The results showed that of the 30 respondents before wound care, most wound healing was poor, and a small proportion was good. After being given wound care, half of the respondents experienced good

healing, and almost half had poor wound healing. In the control group, after the respondent's consent, antibiotics, analgesics, and perineal wound care will be given as treatment for perineal wound healing of postpartum women on the 1st to 5th day of the postpartum period, then on the 6th day, the perineal wound healing of postpartum women will be evaluated. In this study, there was only a slight increase in favorable wound healing. The most popular medications to treat episiotomy pain are non-steroidal anti-inflammatory drugs, although these may have some adverse side effects, such as gastric ulcers. Iodine (Povidine) is also often. Betadine is used to treat episiotomy wounds and prevent infection. However, many studies have proven that betadine has no meaningful impact on the risk of infection (Slullitel *et al.*, 2020).

3. The Effect of Cinnamon Decoction Water on the Healing of Perineal Wounds of Postpartum Women

Based on the results of the analysis showed that the level of perineal wound healing in the group that had been given cinnamon decoction water almost entirely experienced good wound healing, and a small portion experienced poor wound healing. While in the group that had been given wound care most experienced good wound healing and almost half experienced poor wound healing.

The results of the analysis using the Wilcoxon Signed Rank Test obtained a value of p -value = 0.00 (<0.05), meaning that there is an influence on perineal wound healing before and after being given cinnamon boiled water as well as for the control group obtained p -value = 0.00 (<0.05), meaning that there is an influence on perineal wound healing before and after being given wound care.

Based on the results of the Mann-Whitney test, which is a non-parametric test used to determine the median difference between two independent groups if the dependent variable data scale is ordinal or interval/ratio but not normally distributed. The statistical results obtained an Asymp.sig (2- 2-tailed) value of 0.021. The results of this study showed that the average healing of maternal perineal wounds before being given cinnamon-boiled water was 0.07 and the average healing of maternal perineal wounds after being given cinnamon boiled water was 1.87, while the average healing of maternal perineal wounds before being provided wound care was 0.20. The average healing of maternal perineal wounds after being given wound care was 1.60, so that means there is a difference of 0.4 healing in the group providing cinnamon boiled water compared to the group given perineal wound care.

CONCLUSION

There is a difference in perineal wound healing of postpartum women before and after being given cinnamon boiled water. There is a difference in perineal wound healing of postpartum women before and after wound care is given. There is an effect of giving cinnamon boiled water on perineal wound healing in postpartum women.

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