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Effectiveness Of Young Areca Nut Simplisia On Healing Perineal Wounds In Post-Participant Mothers At The Midwife Wanti Clinic In Medan

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ABSTRACT

One of the organs that often experiences injury or wounds during childbirth is the perineum, which occurs due to forced pushing during childbirth. Nearly 90% of the childbirth process, mothers experience perineal tears, either intentionally or through an episiotomy. Complications that often occur from birth canal tears are characterized by long wound healing times and even infection. Preventive efforts to prevent infection can be done by providing morphological and non-morphological therapy. The purpose of this study was to determine the effectiveness of young Areca Nut fruit simplicia with perineal wound healing at the Wanti Medan Clinic in 2025. The design of this study used the True Experimental method, with a Posttest Only Control Group Design approach. The sampling technique used Population Sampling with a total of 20 postpartum mothers starting from day 1 postpartum with 10 people as the intervention group and 10 people as the control group. Univariate and bivariate data analysis. The results of the study showed statistical results using the Mann-Whitney test, with a p-value of 0.000 < α 0.05, indicating a significant effectiveness of using young areca nut extract on perineal wound healing. Healing occurred more quickly in the intervention group, with an average healing time of <6 days for 9 people (90.0%), classified as fast. Meanwhile, in the control group, an average healing time of 6-7 days for 6 people (60.0%), classified as normal. The conclusion of this study is the effectiveness of young areca nut extract on perineal wound healing in postpartum women at the Wanti Clinic in Medan in 2025. It is recommended that healthcare workers, especially at the Wanti Clinic in Medan, apply complementary therapy using young areca nut extract in perineal wound care.

Keywords: Young Areca Nut Extract, Perineal Wounds, Healing

INTRODUCTION

One of the organs that often experiences injury or wounds during childbirth is the perineum, which occurs due to forced pushing during childbirth, either spontaneously or through an episiotomy. Frequent complications from tears in the birth canal are characterized by delayed wound healing and even infection. Preventive efforts to prevent infection include providing morphological and non-morphological therapy, such as antibiotics, antiseptics, and traditional medicines containing compounds that can heal wounds. Good wound care can also be one

way to prevent infection, such as when bathing, after urinating, and after defecating. The influence of wound healing itself is influenced by several factors, such as the mother's age, the mother's knowledge of wound care, parity, and good nutritional fulfillment during the wound healing period. (Nurul et al., 2019).

Injuries to the birth canal can occur intentionally, such as with an episiotomy. A straight (even) incision is easier to repair and heals more quickly than a laceration, which tears irregularly and uncontrollably. Nearly 90% of births involve perineal tears, either accidentally or through an episiotomy. (Zeranika, 2022) (Liesmayani et al., 2020).

Based on data from the World Health Organization (WHO) in 2020, the direct cause of maternal death is post-natal, around 75%, which is caused by infection and the postpartum period.(4)According to the 2022 Indonesian Demographic and Health Survey (SDKI), the main causes of maternal mortality in Indonesia are (27%), eclampsia (23%), infection (11%), abortion (5%), prolonged labor (5%), obstetric embolism (3%), and perineal complications (8%). (WHO, 2020).

The betel nut is a type of palm that grows easily in tropical areas and can be planted in yards, gardens, or cultivated. Besides being used as a sweetener, betel nuts can also be used as a deworming agent, cough medicine, menstrual aid, for scabies, eczema, and wound medicine. Betel nuts can also be used as a wound remedy by crushing a sufficient amount of betel nuts and applying them to the injured area, or by boiling the seeds and using the resulting water to clean the wound.(Pharmacy A, 2023)

According to research conducted by Merry Hardiani in 2019 on the Effect of Chitosan Emulgel from Areca Nut Extract (Areca catechu. L.) on Burn Wound Healing in Mice, the results of the study were obtained from the phytochemical screening of areca nut extract containing alkaloid, flavonoid, tannin, and saponin compounds. The results of the post hoc test obtained an effective concentration with a significance value of 0.000 compared to the negative contrast and the most effective concentration was obtained, namely 20% emulgel, which was proven to reduce the area of burns. (Merry Hardiani, 2019).

Based on an initial survey conducted on January 3, 2025, researchers conducted interviews at the Wanti clinic, where 7 postpartum mothers were found in January who experienced first-degree and second-degree tears in the birth canal. The results of the study showed that 7 postpartum mothers said they did not know the benefits of areca nut simplicia for healing perineal wounds, they said that so far they had only used plain water for wound care, consumed medicines, egg whites and snakehead fish to accelerate the healing of birth canal

tears. The purpose of this study was to analyze the effectiveness of young areca nut simplicia with perineal wound healing in postpartum mothers at the Wanti clinic in Medan.

METHOD

This research began with a literature review, followed by an initial survey. The research design is the final result of a decision-making process. This study employed a True Experimental design with a Posttest Only Control Design approach. In this design, the researcher measured the effect of the treatment (intervention) on the experimental group by comparing it with the control group. The control group was not given young areca nut simplex, and the experimental group was given perineal wound care treatment using young areca nut simplex.(Wardani ET, 2023).

The design of this research is a Posttest Only Control Design study which can be described as in Figure 1.

Group	Treatment	Intervention	Posttest
Intervention	O1	X	O2
Control			O2

Figure 1. Research Design

Information :

O1 : Giving Young Areca Nut Simplicia

O2 : Final Test (posttest) after the intervention

X : Intervention of administering young areca nut simplex

The population in this study were all postpartum mothers on day 1 who experienced first and second degree perineal wounds in April-June 2025 who gave birth at the Wanti Clinic. The sample in this study used (purposive sampling) in which the study first calculated the sample size, taking samples from the population at a certain locus at a certain time of 20 populations. Of the 20 populations selected according to the inclusion criteria, 10 postpartum mothers 2 days postpartum were given young areca nut simplicia and 10 people who were not given young areca nut simplicia as samples given intervention in the form of young areca nut simplicia.

10 grams of dried young areca nut simplicia is then boiled for 15 minutes with 800 ml of water, wait until it boils until the water is half or 400 ml left. Then the boiled water of the young areca nut simplicia is put into a bottle to be poured onto the mother's perineal wound

twice a day, namely morning and evening. This is done from day 1-8 on postpartum mothers who experience perineal wounds of degree 1 and 2. Observing the healing of perineal wounds using the REEDA Scale with the measurement results

1. Slow = If the Reeda value is >5 with a wound healing category of >7 days
2. Fast = If the Reeda value is 0 with a wound healing category of <6 days
3. Normal = If the Reeda value is 1-5 with a wound healing category of 6-7 days

RESULTS AND DISCUSSION

One way to treat perineal wounds is by using young areca nut. Research has been conducted on postpartum women with first- and second-degree perineal wounds using the REEDA scale to assess the level of wound healing in postpartum mothers.

Univariate Analysis

The age of the respondents was mostly in the 21-35 years age group 90**%**for both the intervention and control groups. The highest parity of respondents was primigravida in the intervention group (60%) and in the control group (50%). The highest degree of perineal injury was grade 2 in both the intervention and control groups (70% each). This can be seen in Table 1.

Table 1. Frequency Distribution of Characteristics Based on Age, Parity and Degree of Wounds of Respondents in the Experimental Group and Control Group at the Wanti Clinic in Medan

Age	**Group**			
	Intervention		**Control**	
	F	**%**	**f**	**%**
<20 Years	1	10.0	1	10.0
21-35 Years	9	90.0	9	90.0
Parity	**Group**			
	Intervention		**Control**	
	F	**%**	**f**	**%**
Primigravida	6	60.0	5	50.0
Multigravida	4	40.0	5	50.0
Degree of Perineal Wound	**Group**			
	Intervention		**Control**	

	F	%	f	%
Grade 1	3	30.0	3	30.0
Grade 2	7	70.0	7	70.0
Total	**10**	**100.0**	**10**	**100.0**

Source: Primary data 2025

Perineal Wound Healing

Perineal wound healing in the intervention group was the fastest (90%) and in the control group was the most normal (60%).

Table 2. Frequency Distribution of the Effectiveness of Young Areca Nut Fruit Simplicia on Healing Perineal Wounds in Postpartum Mothers at the Wanti Clinic in Medan

Healing of Perineal Wounds	**Group**			
	Intervention		**Control**	
	F	**%**	**f**	**%**
Slow	-	-	4	40.0
Fast	9	90.0	-	-
Normal	1	10.0	6	60.0
Total	**10**	**100.0**	**10**	**100.0**

Source: Primary data 2025

Bivariate Analysis

Normality Test

Table 3. Normality Test Results

Test of Normality

Giving Young Areca Nut Simplicia	***Shapiro-wilk***		
	Statistics	**Df**	**Sig**
Giving	.366	20	.000

a. Lilliefors Significance Correction

In the normality test above, the Shapiro-Wilk value is sig ($p<0.05$). Therefore, the data is not normally distributed, so the next step is to use a non-parametric test with the Man-Whitney test.

Non-parametric test with Mann Whitney test

Table 4. The Effectiveness of Young Areca Nut Fruit Simplicia in Healing Perineal Wounds at the Wanti Clinic in Medan

Group	N	Mean Rank	Sum of Rank
Intervention	10	5.50	55.5
Control	10	15.50	155.00

Based on table 4. The mean rank value or average healing in the intervention group was 5.50 while the number or positive ranking or sum of ranks was 55.50. The mean rank value or average control group was 15.50 while the number of positive rankings or sum of ranks was 155.00 so it can be concluded that in the intervention group given young areca nut simplicia experienced faster healing than the control group that was not given young areca nut simplicia.

Table 5. The statistical test above shows that the Mann Whitney

Test Statistics

	Intervention group
Mann-Whitney University	.000
Wilcoxon W	55,000
Z	-3,987
Asymp. Sig. (2-tailed)	.000
Exact Sig. [2(1-tailed Sig.)]*	.000b

*a. Grouping Variable:*Group

b. Not corrected for ties.

Based on Table 5. The statistical test above shows that the Mann Whitney U value is 0.000 and the Wilcoxon value or the average deviation value between the intervention group and the control group is 55,000. If converted or changed to a Z value of -3.987, with an asymp sig (2-tailed) value of 0.000. Because the value of 0.000 is smaller than <0.05, it can be concluded that "Ha is accepted", meaning that there is a difference between the length of healing time given young areca nut simplicia and those not given young areca nut simplicia, it can be interpreted that there is the Effectiveness of Young Areca Nut Simplicia with Healing Perineal Wounds in Postpartum Mothers at the Wanti Medan clinic.

DISCUSSION

The Effectiveness of Young Areca Nut Fruit Simplisia in Healing Perineal Wounds at the Wanti Clinic in Medan

Based on research conducted at the Wanti Clinic in Medan, there were 20 respondents, with 10 people each given young areca nut simplicia and 10 people who were not given young areca nut simplicia. The Mann Whitney statistical test analysis was obtained, namely asymp sig (2-tailed) with a value of 0.000. Because the value of 0.000 is smaller than <0.05, it can be concluded that "Ha is accepted", meaning that there is a difference between the value of the duration of healing with the given young areca nut simplicia and those who were not given young areca nut simplicia, so it can be interpreted that there is the Effectiveness of Young Areca Nut Simplicia with Healing Perineal Wounds in Postpartum Mothers at the Wanti Clinic in Medan"

The frequency of distribution of perineal wound healing in the group given young areca nut fruit simplicia in this study experienced faster perineal wound healing, where the average healing of >6 days was 9 people (90.0%) precisely on the 4th and 5th day with the fast category and in the normal category as many as 1 person (10.0%) experienced healing precisely on the 6th day, compared to the control group the average healing occurred on the 6th-7th day with the normal category as many as 6 people (60.0%) and in the <7 days category with the slow category as many as 4 people (40.0%) who experienced healing on the 8th day.

Injuries to the birth canal can occur intentionally, such as with an episiotomy. A straight (even) incision is easier to repair and heals more quickly than a laceration, which tears irregularly and uncontrollably. Nearly 90% of births involve perineal tears, whether intentional (episiotomy) or unintentional.(Zeranika, 2022).

The process of healing perineal wounds is interrelated starting from the process of reducing the size of the wound, followed by reducing redness in the wound on the perineum of postpartum mothers, which was initially dark red turning into pale red or fading from before for 5 days of perineal wound care using young areca nut simplicia. Edema is a form of wound inflammation, in this process there is an increase in blood flow to the arteries to damaged tissue which aims for plasma proteins and cells to the surface of the wound to be able to avoid infections that will enter. Wound healing can also be influenced by nutrition, hygiene, adequate rest, age, stress, obesity, and infection (Liesmayani et all, 2020).

Perineal care involves preventing infection related to tissue healing. Infection causes increased inflammation and necrosis, which inhibit wound healing. The presence of foreign objects and extensive tissue detachment will slow healing and reduce the tensile strength of the wound. Rough and improper care can damage new blood capillaries, leading to bleeding, and halt wound healing. The possibility of wound infection due to improper care can increase with the presence of inanimate objects and foreign bodies.(Olivia, 2022).

Areca nut contains alkaloid compounds, flavonoids, saponins and tannins that can heal wounds, where alkaloid compounds are effective for bleeding wounds, saponins and flavonoids act as antimicrobials and anti-inflammatories. Meanwhile, tannins from areca nut have an astringent effect that functions to reduce wounds on skin tissue so that bleeding can stop and wound healing can occur. (Citra, 2021).

Alkaloids work by disrupting the peptidoglycan component of bacterial cells, preventing the cell wall from forming properly, leading to cell death. Flavonoids work by interfering with the transpeptidase activity of peptidoglycan, disrupting cell wall formation and leading to cell lysis. Tannins work by denaturing the proteins found in the cell wall.(Aziz et al., 2022).

This research is in line with research conducted by Citra Shauma Ramadhan 2021 on the effectiveness of boiled water of young areca nut seeds and kandis acid on pain intensity and healing of perineal wounds in postpartum mothers on 22 respondents, with a quasi-experimental research type with a pre-post test approach with a control group design consisting of 11 people as the intervention group and 11 people as the control group. The measuring instruments used were the NRS (Numerical Rating Scale) pain scale and the Souhampton scale and Bates-Jensen wound continuity scoring. From the Mann-Whitney statistical test that there is a difference between the intervention group and the control group with a P value = 0.000 using that the therapy of boiled water of young areca nut seeds and kandis acid is effective in relieving pain and accelerating healing of perineal wounds in postpartum mothers.(Citra, 2021)

This study is in accordance with the study conducted by Arief Azis et al. 2022 on the activity test of areca nut ethanol extract (Areca catechu L.) on the healing of rabbit cuts (Oryctolagus cuniculus), using the 70% ethanol solvent extract method by dividing the group into 5 test groups consisting of 3 test animals. Group I was given Na-CMC as a negative control group, group II was given 3% concentration of areca nut ethanol extract, group III was given 5% concentration of areca nut ethanol extract, group IV was given 7% concentration of ethanol extract, and group V was given Nebacetin powder as a positive control. The results of the study showed that the group given 7% concentration of areca nut ethanol extract could

accelerate wound healing in rabbit cuts with the results of the Anova statistical test obtained a significance value of P> 0.05, namely 0.000 <0.005(Aziz et al., 2022).

In this study, researchers assume that the administration of young areca nut simplicia regularly in the right amount can accelerate the healing of perineal wounds in postpartum mothers, in this study the administration of young areca nut simplicia was given 2 times a day, morning and evening, 400 ml by dabbing the perineal wounds of postpartum mothers. This is because young areca nuts contain alkaloid compounds, flavonoids, saponins and tannins that can heal wounds, where alkaloid compounds are efficacious for bleeding wounds, saponins and flavonoids act as antimicrobials and anti-inflammatories. While tannins from areca nuts have an astringent effect that functions to minimize wounds on skin tissue so that bleeding can stop and wound healing can occur.

Young betel nut is a complementary medicine that can accelerate wound healing. Wound healing can be influenced by several factors, including the respondent's age and nutrition. Postpartum mothers with perineal wounds are in their reproductive years (20-35 years), who have cellular mechanisms that work more quickly and effectively to heal wounds and nutrition to increase the body's immune system. However, the mother's condition must also be healthy, both physically and mentally, which can also affect how long it takes for perineal wounds to heal.

This can also be seen from the respondents' compliance in using young areca nut simplicia during the study. Seen from the respondents in the group given young areca nut simplicia in this study experienced an average healing on the 4th and 5th day in the fast category and in the normal category healing occurred on the 6th day, compared to the control group that was not given young areca nut simplicia with an average healing occurring on the 6th day and the 7th day with the normal category and on the 8th day with the slow category.

CONCLUSION AND SUGGESTIONS

The frequency distribution of the duration of perineal wound healing in postpartum mothers in the group given young areca nut simplicia in this study experienced faster perineal wound healing, where the average healing time was >6 days for 9 people (90.0%) precisely on the 4th and 5th days with the fast category and in the normal category as many as 1 person (10.0%) experienced healing precisely on the 6th day, compared to the control group the average healing occurred on the 6th-7th day with the normal category as many as 6 people

(60.0%) and in the <7 days category with the slow category as many as 4 people (40.0%) who experienced healing on the 8th day.

The results of the statistical test using the Mann-Whitney Test obtained Asymp. Sig (2 T-tailed) 0.000, this value is smaller than the P value (α) 0.005, indicating that there is significant effectiveness in administering young areca nut fruit simplicia with healing of perineal wounds in postpartum mothers.

It is recommended that health workers, especially midwives at the Wanti Medan Clinic, apply complementary therapy using young areca nut as a herbal remedy in the treatment of perineal wounds.

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