



Ethnobotany of Banana Stock on The Normality of Uterial Involution in Lapandewa Village, South Buton Regency

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ABSTRACT

The people of Lapandewa village, South Buton district, are used to doing ethnobotany by using water from the banana stem plant or commonly called the lower banana stem as an alternative in traditional medicine consumed during the puerperium because it is believed to help facilitate the process of uterine involution to minimize the occurrence of preventing bleeding. The purpose of this study was to determine the normality of uterine involution in postpartum mothers who consumed water from banana stems. The method used is Quasi Experiment; the intervention carried out is that postpartum mothers drink water that has been taken from banana stems $\pm 20-30$ ml and allowed to stand for ± 10 minutes to separate fiber or dirt then consumed directly by postpartum mothers one time a day for seven days. The results obtained are p-value < 0.05 or $0.001 < 0.005$ with a mean difference in 95% CI of 6.0 (4.0-7.9), thus it can be concluded that postpartum mothers who consume banana stem water at the predetermined dose determined to help accelerate the process of uterine involution compared to postpartum mothers who did not consume banana stem water.

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Kata kunci:

Ibu Postpartum
Air Batang Pisang
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ABSTRAK

Masyarakat desa Lapan dewa kabupaten Buton Selatan telah terbiasa melakukan etnobotani dengan memanfaatkan air dari tanaman batang pisang atau biasa disebut gedebong pisang bagian bawah sebagai salah satu alternatif dalam pengobatan tradisional yang dikonsumsi selama masa nifas karena diyakini dapat membantu memperlancar proses involusio uteri sehingga meminimalisir terjadinya mencegah perdarahan. Tujuan Penelitian ini yaitu untuk mengetahui normalitas involusio uteri pada ibu nifas yang mengkonsumsi air dari batang pisang. Metode yang digunakan yaitu Quasi Eksperimen, intervensi yang dilakukan yaitu ibu nifas mengkonsumsi air yang telah diambil dari batang pisang $\pm 20-30$ ml dan didiamkan ± 10 menit untuk dipisahkan serat atau kotoran kemudian dikonsumsi secara langsung oleh ibu nifas sebanyak 1 kali dalam sehari selama 7 hari. Hasil yang diperoleh yaitu nilai $p < 0,05$ atau $0,001 < 0,005$ dengan perbedaan rerata pada CI95% sebesar 6,0(4,0-7,9), dengan demikian dapat disimpulkan bahwa ibu nifas yang mengkonsumsi air batang pisang dengan takaran yang telah ditetapkan dapat membantu mempercepat proses involusio uteri dibandingkan dengan ibu nifas yang tidak mengkonsumsi air batang pisang.

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INTRODUCTION

Uterine involution returns the uterus after childbirth, gradually returning to its pre-pregnancy state and size (Munayarokh et al., 2015). The process of uterine involution begins immediately after the delivery of the placenta. If this involution process does not go well, it can result in uterine subinvolution, which can cause prolonged abnormal lochia expenditure, uterine bleeding, irregular pain cramps (Zheng et al., 2019).

Based on the preceding, it is appropriate for postpartum mothers to receive essential postnatal care so that they can help the postpartum process to take place usually as is the habit of most postpartum mothers in the village of Lapandewa, which is located at the tip of South Buton Regency, where they are familiar with various methods and traditional treatments used during the postpartum period. Local people often consume banana stem water to help smooth/normalize the involution process, in this case, to prevent bleeding.

As stated by (F.X.S. & Prasetyaningrum, 2013), it is known that banana stems contain $\pm 80\%$ water and contain saponins, tannins, and flavonoids. One of the compounds, such as flavonoids, is a group of phenolic compounds found in plant tissues that play an active role as anti-inflammatory, anti-allergic, antioxidant, and vasodilating activity. The way to consume it is that the water that is accommodated in the bottom of the Gedebug is then stored in a small glass with many water ± 20 -30ml and allowed to stand for ± 10 minutes to separate the fiber or dirt from the banana stem, which may be included in the glass and then consumed directly by the postpartum mother as much as one time a day for seven days.

Research conducted by (Nur Hasanah et al., 2016) states that as many as 40% of banana stems include plants widely used as a treatment for the people of Lapandewa Village. This is supported by the results of research conducted by (F.X.S. & Prasetyaningrum, 2013.) which states that the lower stem of the banana plant contains saponins, tannins, and flavonoids. One of the compounds, such as flavonoids, is a group of phenolic compounds found in plant tissues that play an active role as anti-inflammatory, anti-allergic, antimutagenic, antioxidant, and vasodilating activities. That is why banana stems are widely used as traditional ingredients by the people of Lapandewa village.

Although postpartum mothers have long carried out the habit of consuming water from banana stems in Lapandewa village, this tradition does not yet have accuracy in scientific data. Therefore, this research hopes that scientific information/data will be obtained regarding the effectiveness of consuming water from banana stem plants on the normality of uterine involution in postpartum mothers in Lapandewa Village, South Buton Regency.

Based on initial interviews conducted with several postpartum mothers in Lapandewa Village who consumed water from banana stem plants to help normalize uterine involution, mothers felt less pain in the abdomen, lochia, and involution expenditure could take place generally compared to mothers who did not use the potion. However, after a literature search, it turns out that the habit of consuming traditional medicine does not yet have accurate scientific data.

From the description above, researchers are interested in researching with the title "Ethnobotany of Banana Stem Plants in Efforts to Normalize Uterine Involution in Lapandewa Village, South Buton Regency

Banana stem plants are monocot plants. This plant has a pseudostem composed of several midribs or commonly called a banana gedebog. This gedebog will make this banana plant stand tensely towering upwards. The shape of the petiole is grooved on the upper side, the size of the leaf blade extends to an elongated oval, and the leaf bones look pinnate and small (Wa Ode Siti Sariamanah et al., 2016).

Bananas contain 80% water and contain high levels of cellulose and glucose, so the community often uses them as animal feed and as a medium for other plants. Inside the banana tree, the sap has various benefits, including being used in the medical world. Banana stem sap contains saponins, quinones, and anthraquinones that can function as antibiotics and analgesics analgetik (Banjarnahor & Artanti, 2015). Similarly, research conducted by (Nugroho, 2016), states that Ambon banana stems are very effective as bacteria killers because this is due to the presence of bioactive compounds.

Research conducted by Prastyo Bf 2008 in (Apriasari et al., 2013) stated that banana stem extract has the same content as Mauli bananas, namely tannins, saponins, and flavonoids. The content of flavonoids and tannins functions as anti-inflammatory and commercial genes that can accelerate blood clots in the wound healing. Banana stems contain saponin, anthraquinone, and quinone compounds that function as antibacterial and pain relievers. It also contains lectins that can function as a stimulus for the growth of new skin cells (Suharto et al., 2016).

Overview of Banana Stem Ethnobotany by postpartum women in Lapandewa village

An Overview of Banana Stem Ethnobotany by Mrs. Nifas in Lapandewa village, The people of Lapandewa still use plants as traditional medicine. Research conducted by (Nur Hasanah et al., 2016) with the title ethnobotany medicinal plants, the community of Lapandewa Kaindea Village, Lapandewa District, South Buton Regency, stated that as many as 40% of banana stems are plants that are widely used as treatment.

Mothers mainly consume this banana stem water in the puerperium in Lapandewa village; they consume the concoction every day until the 7th day. The exact time this belief has been carried out for generations is uncertain, but people have been consuming this herb for decades from the interviews.

Involution or Contraction Of The Uterus

Involution or contraction of the uterus is when it returns to its pre-pregnancy state with a uterine weight of about 60 grams. This process begins as soon as the placenta has been delivered due to the contraction of the smooth muscles of the uterus. Involution is a retrogressive change in the uterus that causes the uterus to decrease in size, the involution of the puerperium is limited to the uterus, and what happens to other organs and structures is only considered a change in the puerperium (Melinawati, 2019).

Uterine Subinvolution

Uterine subinvolution is a condition where the uterus fails to return to its original state/size so that the uterine contraction process is hampered. On bimanual examination, it will be found that the uterus is more significant and flaccid than it should be, the uterine fundus is still high, lochia is

abundant and foul-smelling, and bleeding is not uncommon (Oksana Shynlova et al., 2013).

The etiology of uterine subinvolution is an infection of the myometrium, presence of retained placenta and placental membranes in the uterus, lochia rubra more than two weeks postpartum, poor nutritional status of postpartum mothers, absence of contractions. The symptoms of subinvolution are that the uterine fund is still high in the abdomen/pelvis, the uterus feels soft, the discharge of the type of lochia is not on time, and the lochia has a strong odor, paleness, dizziness, low blood pressure and high body temperature. Therapy that patients with subinvolution uterine cases can give is by giving antibiotics, uterotonics, analgesics, and giving Fe tablets (Marati & Aziza, 2018).

METHOD

This type of research is quasi-experimental or quasi-experimental with an after-only design, in this case, to determine the normality of uterine involution in postpartum mothers who consume banana stem water. This research was conducted in the village of Lapandewa, which is located at the end of South Buton Regency, starting from March to June 2021

Population and sample

The population in this study was all postpartum mothers in Lapandewa Village at the initial data collection during research. The sampling technique used was purposive sampling. The samples in this study were postpartum mothers who were included in the inclusion category, namely mothers who gave birth typically (vaginally) without complications, mothers who gave birth at term or preterm gestation, postpartum mothers who stayed at the study site, postpartum mothers who were willing to become respondents. As for the exclusion criteria, namely mothers who gave birth by Sectio Caesarea, mothers who gave birth spontaneously with complications, mothers who had a history of congenital diseases.

The formula used to determine the sample size with an unknown population. Thus, the sample size in this study was 41 respondents.

$$n = \frac{Z\alpha^2PQ}{d^2}$$

Data Collecting

1. Preparation Stage
 - a. Survey, collecting information from all parties related to research at this case information obtained from the South Buton District Health Office, Lapandewa Health Center, and the Lapandewa village community
 - b. early visiting in respondent's house, during this visit an explanation about the procedure of the research and the signing of the respondent's participation

Tabel 1. Data Normality Test

		Kolmogrov-Smirnov	
		n	p
postpartum mother	Control Group	20	0,186
	Intervention Group	21	0,098

agreement in the research which signed on stamp duty of 10,000.

- c. Furthermore, the measurement of the height of the uterine fundus before the intervention (consuming banana stem water).
2. Stages of the Process of Taking & Consuming Banana Stem Water
 - a. The taken of Banana stem water using a pipette that allows the water to flow out, then inserted into the lower banana stem, and the water collected into a glass.



Picture 1. The process of taken the banana stem water

- b. After the banana stem water it's about ± 10 ml, the water is allowed to stand until the water leftover from the pulp can be removed
- c. After that, respondents must quickly drink the banana stem water, immediately consumed once a day for seven days
- d. the Control is carried out by recall 1x24 hours, to ensure that respondents have consumed banana stem water
3. Final stage
 - a. After seven days respondents of consuming banana stem water, the researcher should come to measure the height of the uterine fundus.
 - b. the data entry, coding, and editing, was carried out of this is data that had been an entry in the format provided and then coded to make it easier for researchers to carry out further analysis.

RESULT AND DISCUSSION

Univariate Analysis

Based on the research results conducted in Lapandewa Village, South Buton Regency, with a total sample of 41 respondents, of which 20 consumed banana stem water (intervention group) and 20 respondents who did not consume banana stem water (control group). In the previous univariate analysis, the data normality test has been carried out where the results obtained are typically distributed data.

In table 1, postpartum mothers in the control group category have a p-value = 0.186, while postpartum mothers in the intervention group category have a p-value = 0.098. Because the p value > 0.05, it can be concluded that the distribution of the intervention group and the control group

is declared to be normally distributed. Furthermore, the Bivariate test was carried out using an unpaired independent t-test. Univariate analysis was conducted to determine the frequency distribution of the characteristics of the research subjects. The results obtained are as follows:

Table 2. Distribution Characteristics of Respondents

Variable	Experimental Group	Control Group	total
Education			
Basic	8 (53,3%)	7 (46,7%)	15 (100%)
High	11(42,30)	15(57,70)	26 (100%)
Age			
15-20 ys	2 (66.67%)	1 (33.33%)	3 (100%)
21-35 ys	21 (55.27%)	17 (44.73%)	38 (100%)
Economic status			
Low	6 (60%)	4 (40%)	10 (100%)
Middle	12 (54,54%)	10 (45,45%)	22 (100%)
Hugh	2 (22,2%)	7 (77,8%)	9 (100%)
Occupation			
Employment	7 (43,75%)	9 (56,25%)	16 (100%)
Employed	14 (56%)	11 (44%)	25 (100%)
Parities			
Primipara	5 (45,45%)	6 (54,54%)	11 (100%)
Multipara	21 (70%)	9 (30%)	30 (100%)

Based on table 2, the results of the distribution of respondents' characteristics, Most of the respondents were highly educated in the control group, Most were adults (21-35 years old) in the intervention group, Most had moderate economic status in the intervention group, Most had jobs in the intervention group, and Most of the respondents were multiparous in the intervention group.

Bivariate Analysis

Bivariate analysis was conducted to compare the normality of uterine involution in postpartum women who consumed banana stem water (intervention group) and postpartum women who did not consume banana stem water (control group). Bivariate analysis was carried out using the independent t-test. The results are as follows:

Table 3. Comparating of Normality Uterine in Mother Postpartum who consumed banana stem water with without

Variable	Involution Uterin not palpable		N	average± s.b	Mean difference (IK95%)	p
	1-2 mgg	> 2mgg				
Intervantion team	19 (90.47%)	2(9.53%)	21	12.6±2,5	6.0(4.0-7.9)	0,001
Control team	11 (55%)	9 (45%)	20	6.6±3.4		

Table 3 shows that postpartum mothers who consume banana stem water experience uterine involution faster than mothers who do not consume banana stem water. Because the p-value <0.05 or 0.001 <0.005, it was concluded that there was a difference in the mean normality of uterine involution in postpartum mothers who consumed banana stem water with postpartum mothers who did not consume banana stem water with a mean difference of 95% CI of 6.0(4, 0-7,9) so that mothers who consume banana stem water are six times faster in the normality of involution than postpartum mothers who do not consume banana stem water.

From the results of the bivariate analysis carried out, there is a significant difference in the mean normality of uterine involution in postpartum women in the control and intervention groups. It is known that the sap of the banana stem plant is cooling because it contains saponins, anthraquinones, quinones, and lectins that function to stimulate the growth of skin cells and tannins, which are antiseptic.

It is known that the banana stem plant is a monocot plant. Monocot plants have vascular bundles, namely xylem and phloem, scattered throughout the banana stem tissue. Xylem functions to transport water and as a solute, while phloem functions to transport the products of photosynthesis.

Similar to the research conducted by (Ditha Kharisma Fakhriani, 2015)in her research she mentioned that the people of Bulucenrana Village often use banana stems that are still wet (containing a lot of water and sap) to stop bleeding in wounds and as an antibacterial because the water from the banana stem plant is beneficial as an inhibitor of the growth of some bacteria such as Saurus.

the sap from banana stems has been passed down from generation to generation It is often used as an ointment for wounds. The sap is cooling because it contains saponins, anthraquinones, quinones, and lectins that stimulate the growth of skin cells and tannins, which are antiseptic(Banjarnahor & Artanti, 2015)

The results of this study are also supported by qualitative research conducted by (Restu Zulaekha et al., 2018) wherein his research Sanjaya studied the health behavior of traditional birth attendants for mothers and babies, where a young banana stem plant gave suture wound therapy then the banana stem was pounded. The water rubbed into the mother's birth canal, or the traditional healer also takes the leaves of the banana manure, which are still shoots, then the leaves are ground until smooth, and then the juice is applied to the suture wound the outside of the birth canal.

From the above description and several supporting theories, it can be stated that banana stem water consumed by postpartum mothers following a predetermined dose provides benefits to the uterine involution process compared to mothers who do not consume banana stem water. With the acceleration of the involution process, of course, it will minimize the occurrence of secondary post-delivery bleeding because the reproductive sisters, especially the mother's womb, have returned to their pre-pregnancy condition or size.

LIMITATION OF THE STUDY

This studied, was not reviewed by measuring blood loss while consuming banana stem water. This is because the location of the researcher is not a native of the area, so if the measurement of blood loss is carried out, the researcher considers that it takes time and effective communication between the researcher and the respondent.

CONCLUSIONS AND SUGGESTIONS

From the results of the interventions that have been carried out, it can be concluded that postpartum women who consume banana stem water at a predetermined rate can help accelerate the process of uterine involution compared to postpartum women who do not consume banana stem water. Thus, it can minimize secondary bleeding in postpartum mothers because the reproductive system, especially the uterus, has returned to its pre-pregnancy state or size.

Based on the limitations of the research that has been described, it will be very useful if later there are further studies that measure blood loss while consuming banana stem water.

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