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The Effectiveness of Giving Dates Juice on the Amount of Bleeding in Laboring Mothers at PMB Banjarmasin City

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ABSTRACT

Postpartum hemorrhage is one of the factors causing the high maternal mortality rate (MMR). The number of MMR in South Kalimantan in 2015 caused by bleeding is still quite high, to prevent bleeding in labor using non-pharmacology, namely by using date fruit (Phoenix dactylifera). This study aims to analyze the effectiveness of giving dates juice on the amount of bleeding in laboring mothers. This study used a quasi-experimental design, with a posttest-only control group design, where researchers measured the effect of treatment in the experimental group (given date juice) by comparing the control group (given the freedom to drink other foods) on the amount of bleeding in laboring women. The sample size was 60 respondents in laboring mothers consisting of 30 people in the treatment group and 30 people in the control group. Analysis used with One Way Anova Test. There was a significant difference between the control group and the intervention group in the amount of bleeding in the first stage - stage IV. In the control group, the average amount of bleeding was 553.50 ml and in the intervention group was 239.48 ml. (ρ =0,000). Giving date palm juice during pregnancy to laboring mothers is proven effective to reduce the amount of bleeding in labor.

Keywords: Dates juice, Laboring mothers, Bleeding

ABSTRAK

Perdarahan postpartum merupakan salah satu faktor penyebab tingginya Angka Kematian Ibu (AKI). Angka AKI di Kalimantan Selatan pada tahun 2015 yang disebabkan oleh perdarahan masih cukup tinggi, untuk mencegah perdarahan pada persalinan menggunakan non farmakologi, yaitu dengan menggunakan buah kurma (Phoenix dactylifera). Penelitian ini bertujuan untuk menganalisis efektivitas pemberian jus kurma terhadap jumlah perdarahan pada ibu persalinan. Penelitian ini menggunakan desain quasi-eksperimental, dengan desain posttest-only control group design, dimana peneliti mengukur pengaruh perlakuan pada kelompok eksperimen (diberikan kurma juice) dengan membandingkan kelompok kontrol (diberi kebebasan minum makanan lain) terhadap jumlah perdarahan pada wanita yang melahirkan. Ukuran sampel adalah 60 responden pada ibu persalinan yang terdiri dari 30 orang pada kelompok perlakuan dan 30 orang pada kelompok kontrol. Analisis yang digunakan dengan One Way Anova Test. Ada perbedaan yang signifikan antara kelompok kontrol dan kelompok intervensi dalam jumlah perdarahan pada tahap pertama - tahap IV. Pada kelompok kontrol, jumlah rata-rata perdarahan adalah 553,50 ml dan pada kelompok intervensi adalah 239,48 ml. (ρ =0,000). Memberikan jus kurma selama kehamilan kepada ibu persalinan terbukti efektif untuk mengurangi jumlah perdarahan dalam persalinan.

Kata kunci: Jus kurma, Ibu melahirkan, Pendarahan

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INTRODUCTION

The maternal mortality rate in Indonesia based on data from the Indonesian health profile in 2017 was 305 per 100,000 live births, 75% of which were caused by severe bleeding (mostly post-saline bleeding). Every day, 830 mothers worldwide, and in Indonesia 38 mothers die from diseases/complications related to pregnancy and childbirth. Approximately 75% of maternal deaths are due to prolonged labor (Endang, 2019). In 2015 the number of maternal mortality in South Kalimantan was 89 people caused by bleeding in 27 people (30.3%), Pre Eclampsia/eclampsia in 20 people (22.4%), infection in 1 person (1.1%), circulatory disorders 8 people (8.9%), metabolic disorders 4 people (4.4%), others including prolonged labor 29 people (32.5%) (*Health Profile of South Kalimantan Province*, 2021).

Labor is a process of removing the results of conception (fetus and placenta) that can live in the outside world from the womb through the birth canal with the mother's energy, without the help of tools, and does not injure the mother and baby, which generally lasts less than 24 hours. Abnormal labor is vaginal delivery with the help of tools or through the abdominal wall with a cesarean section)(Mochtar, 2013).

According to (Satriyandari and Hariyati, 2017) the factors that influence puerperal bleeding are parity, administration of oxytocin, and anemia. Pregnant women with anemia are 16.972 times more likely to experience postpartum hemorrhage compared to women without anemia (Wardani, 2017).

Dates are a non-pharmacological alternative to help labor progress quickly and prevent bleeding. We know that the first and second stages of labor should not be induced in PMB to accelerate and can only be done in the hospital on doctor's instructions and often fail so SC must be done. Dates given after delivery will make the amount of bleeding less(Andriani, 2021). The results of a study published in the Journal of Obstetrics and Gynaecology (Maharani, 2018) revealed the fact that women who ate dates every day when they were 9 months pregnant had a smaller risk of needing help from drugs in the process of labor. Date juice containing vitamin B1 is very helpful to control the rate of movement of the uterus and increase the period of systole (contraction of the heart when blood is pumped into the veins. In addition to these two ingredients, there is a Potuchin hormone that functions to bind the uterus and uterine muscles so that it can help reduce bleeding for women during childbirth and accelerate the process of returning the position of the uterus as usual before the next pregnancy. Because date juice contains a hormone that resembles the

hormone oxytocin which can help the labor process. Oxytocin hormone is a hormone one of its functions is to help when women give birth and breastfeed (Dewi et al, 2021). RSUD Dr. H. Moch Ansari Saleh Banjarmasin, which is a referral hospital, some mothers give birth with prolonged labor every year increasing from 39 people (1.1%) in 2018 increasing to 42 people (1.9%) in 2019 and 2018 most cases ranked first with delivery by emergency cesarean section as many as 295 people (21, 1%) where one of the causes is due to prolonged labor, while the incidence of postpartum women with Hemorrhagic postpartum (HPP) was 46 people (1.2%) in 2018 increasing to 36 people (1.6%) in 2019, so the authors are interested in conducting research with the title "The Effectiveness of Giving Date Juice to the Amount of Bleeding in Maternity Women".

This research was conducted for one year. The author is interested in conducting research with the title "The Effectiveness of Giving Date Juice to the Amount of Bleeding in Laboring Mothers".

METHOD

The research design used in this study was the Quasi Experiment (pseudo-experiment), with the type of posttest-only control group design, where researchers measured the effect of treatment on the experimental group by comparing the control group. One Way Anova test was used to compare the mean of measured variables between the control group in laboring mothers who were given other drinks, and the treatment group in laboring mothers who were given Date Juice. The location of the research was in the Independent Midwife Practice (PMB) in the city of Banjarmasin. The population in this study were all mothers giving birth at PMB in Banjarmasin City in 2021.

Data collection techniques were obtained by observing the amount of bleeding in laboring mothers at PMB in the Banjarmasin city area, which consisted of:

1. The treatment group, namely primigravida pregnant women and multigravida pregnant women as many as 30 people, were given date palm juice twice at the time of gestation 37 weeks to 41 weeks given date palm juice as much as 1 x and when the mother entered labor in the first phase of the active phase given again 1x date palm juice.
2. The control group is primigravida pregnant women and multigravida pregnant women as many as 30 people who are given the freedom to consume other drinks during labor.

Groups were given regular food and then the amount of bleeding from the first, second, third, and fourth periods was observed. Data Analysis Technique:

1. Parametric Test

Data were statistically analyzed using the SPSS 19.0 for Windows software program. Before data analysis, the data was tested by conducting a parametric test analysis to determine whether the data were normally distributed or not. The data normality test uses the Shapiro-Wilk test by assessing the probability of empirical error on the p-value. p-value > 0.05 and the data is normally distributed (Santoso, 2005). Parametric tests were conducted to measure the length of labor and the amount of bleeding.

2. Independent Sample T-test

Then the independent sample t-test data analysis technique was carried out to compare 2 groups of dependent samples, namely between the treatment group. (Sugiyono, 2013). Namely, the delivery mothers who were given Date Juice, and the control group in the delivery mothers who were given other drinks.

3 One-Way Anova Test

One-way ANOVA test was used to compare the mean of measured variables between the control group in laboring mothers who were given other drinks, and the treatment group in laboring mothers who were given Date Palm Juice. This test was conducted to conclude that Ho was rejected or that there was a meaningful difference. After that, multiple comparison tests were conducted to find date palm juice administration.

RESULTS AND DISCUSSION

Results

Overview of Research Results

This study used 60 laboring mothers as samples, which were divided into two groups, namely the group of mothers who were given date palm juice and the group of mothers who were not given date palm juice. Each intervention group and control group amounted to 30 people.

a. Number of Pregnancy of the Mother

Table 1.

Frequency Distribution of Maternity Mothers Based on Parity at PMB Banjarmasin City Region 2021

No	Mother's Parity	Frequency	%
1	Unsafe (number of maternal deliveries 1 or >3)	28	46,7
2	Safe (number of maternal deliveries 2-3)	32	53,3
	Total	60	100,0

Based on table 4.1 shows that of the 60 mothers who gave birth, the most with safe parity were 32 people (53.3%), while unsafe parity was 28 people (46.7%).

b. Mother's age

Table 2.

Frequency Distribution of Maternity Mothers Based on Maternal Age at PMB Banjarmasin City Area

No	Mother's age	Frequency	%
1	At risk (age <20 years and >35 years)	4	6,7
2	Not at Risk (20- 35 years old)	56	93,3
	Total	30	100,0

Based on table 4.2, it shows that of the 60 mothers who gave birth, most were not at risk, namely 56 people (93.3%), while 4 people were at risk (6.7%).

c. Mother's Occupation

Table 3.

Frequency Distribution of Maternity Mothers Based on Maternal Occupation at PMB Banjarmasin City Area

No	Mother's Occupation	Frequency	%
1	Not Working	50	83,3
2	Working	10	16,7
	Total	60	100,0

Based on table 3 shows that of the 60 mothers who gave birth, the majority did not work, namely as many as 50 people (83.3%), while only 10 people (16.7%) were working. Research Results and Data Analysis After all data has met the parametric prerequisite test, namely, the data is proven to be normally distributed. Furthermore, the data is ready to be analyzed with parametric statistical tests to prove the research hypothesis.

The following are the results of the research data analysis that has been obtained.

The results of the labor duration comparison test between the control and treatment groups.

Table 4.

The Effect of Dates Juice on the Number of Bleeding Stages I, II, III, and IV in Mothers Giving Birth at PMB Banjarmasin City in 2021

Group No	Amount of bleeding	Mothers who do not consume date juice (ml)	Mothers who consumed date juice (ml)	ρ value
1	Kala I	61,33 .	12,07	0,000
2	Kala II	66,50	15,34	0,000
3	Kala III	299,00	113,79	0,000
4	Kala IV	126,67	98,28	0,000
	TOTAL	553,50	239,48	0,000

Based on data analysis with the Independent Samples Test statistical test, the value ≤ (0.05) is obtained, which means that if the significant value is below or equal to 0.05 then the hypothesis is accepted, in the data on the amount of bleeding in Periods I, II, III, and IV in laboring women there is a significant difference in the average number of bleeding in Periods I, II, III, and IV in laboring women in the control group and treatment group with a p-value> 0.05.

The results of data analysis showed that the administration of date palm juice was proven to affect the amount of bleeding that occurred in the first - fourth stage of labor. Based on data analysis, dates juice influences the amount of bleeding during labor I - IV in laboring mothers with a p-value of 0.000.

Analyzing the effectiveness of date palm juice administration on the amount of bleeding in labor stages I-IV.

The results showed differences in the average amount of bleeding in both groups. In the control group, the average amount of bleeding was 553.50 ml in the treatment group was 239.48 ml. This shows that the average value in the treatment group is lower than the control group, which means that the duration of labor in the third stage in the group given date palm juice is shorter than in the group that was not given date palm juice.

This is in line with research conducted by Harianti. et al, (2018) who in This research showed that there was an influence between regular consumption of dates at the end of pregnancy with the amount of labor bleeding.

This study is in line with research conducted by (Mutiah, 2019) where nutrition during labor as a source of energy can be obtained from dates (Dactylifera Phoenix). Research shows that dates contain nutrients that are good for the body rich in carbohydrates and have been shown to affect the progress of labor and increase labor, and reduce postpartum hemorrhage. There was a difference in the average duration of labor between mothers who received date juice and the control group.

Many efforts to streamline contractions (power) include; ambulation techniques, position changes, emptying the bladder, nipple stimulation, and nutrition as well as reducing maternal stressors and fatigue. One of the efforts is to provide good nutrition, both during labor and before labor. (Rahimi et al., 2018).

Pregnant women who are about to give birth need drinks and foods that are rich in sugar elements, The content of sugar, vitamin B1, and iron is very helpful to control the rate of movement of the uterus and increase the period of systole (contraction of the heart when blood is pumped into the veins(Taavoni et al.,

2019). Whereas in dates, in addition to these two ingredients, there is the content of the Potuchin hormone which functions to bind the uterus and uterine muscles so that it can help reduce postpartum bleeding. (Bagherzadeh Karimi et al., 2020)

This study is in line with Winancy, et al, (2020) where there is a significant effect on giving dates to the duration of the active phase of kala I in primigravida. Date juice is an herbal nutrient that has no negative effects if consumed in moderation. It has a good effect on the contraction of the mother's uterus because it contains oxytocin which is needed during labor so it can help the mother's uterus contract. Accelerates the active phase and the onset of bleeding. In addition, there is the hormone oxytocin that can help stimulate contractions in the muscles of the uterus, making labor easier and reducing bleeding. This hormone will also help spur contractions in the veins around the mother's breasts, thus spurring the mammary glands to produce milk(Nurdin and Umar, 2021).

Many benefits can be obtained from wet dates, including controlling the rate of movement of the uterus, increasing the systole period (heart contraction when blood is pumped into the veins), preventing bleeding in women during childbirth, and accelerating the process of returning the position of the uterus as before. This is because fresh dates contain a hormone that resembles the hormone oxytocin, which can help the birth process and reduce postpartum bleeding. (Husaidah et al., 2019).

The results of this study showed that the administration of date palm juice was effective on the amount of bleeding in laboring mothers, in this case reducing the length of time and amount of bleeding in the process of delivering a baby.

During labor, pregnant women need a lot of energy to push the fetus out, this process will cause fatigue and lethargy. Dates contain simple high glucose (glucose, sucrose, and fructose) as a source of energy to maintain the body's energy during childbirth. The sugar found in dates is easily absorbed by the body making it safe to consume and reducing the risk of gestational diabetes and also contains the Potuchin hormone which affects vasoconstriction in the uterus(Ulya et al., 2022).

WHO recommends not limiting the intake of food and fluids to mothers during labor due to the enormous energy requirements for straining. One of the efforts is to provide good nutrition, both during labor and before labor. If the mother's fluid intake is inadequate or she experiences vomiting, she will become dehydrated, especially when labor makes her sweat a lot, which

can interfere with the progress of labor. (Triananinsi et al., 2021)

The content of the hormone oxytocin in date juice can help stimulate contractions in the muscles of the uterus, making labor easier and reducing bleeding.

CONCLUSION

Based on the research that has been done, it shows that the administration of date juice is proven effective on the amount of bleeding in labor I-IV by 239.48 ml compared to the control group that is not given date juice. It is expected that future researchers can examine various other types of dates and different research methods.

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