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### THE EFFECT OF GIVING DATE JUICE ON THE LENGTH OF THE SECOND STAGE OF LABOR ON WOMEN IN THE WORKING AREA MANGGOPOH COMMUNITY HEALTH CENTER

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#### ABSTRACT

*Prolonged labour is one of the pathological forms of labor. Manggopoh Community Health Center is one of the health centers have high reports of childbirth complications. They are 121 (23%) cases, dominated by cases of prolonged labor. This study aimed to determine The Effect of Dates Extract on Second Phase on Primipara Mothers in the Working Area of Manggopoh Community Health Center in 2022. The type of research was a quasi-experimental approach with pos test only with control group design approach. The population in this study were all maternity mothers in the working area of Manggopoh Community Health Center, as much as 44. By using purposive sampling technique, 32 people were chosen as the samples. The data were collected through observation sheets and it was analyzed by univariate analysis and bivariate analysis using t-independent test. The results showed that the administration of date palm juice had a significant effect on the length of the second stage of labor with an average difference of 4.875 minutes in the second stage of labor and p value = 0.001, where the length of the second stage of labor was shorter in the experimental group. It can be concluded that the administration of date palm juice at the end of pregnancy has a significant effect on the length of the second stage of labor. It is hoped that the Manggopoh Community Health Center will provide health information to pregnant women to always prepare themselves both physically and mentally in facing childbirth, one of them is by utilizing date palm juice at the end of pregnancy which is proven to be effective in the progress of labor.*

*Keywords : Dates, Second Stage of Labor*

#### INTRODUCTION

Maternal and child health is an important indicator in measuring the health status of a country, where maternal health status can be seen from the Maternal Mortality Rate (MMR) and Infant Mortality Rate (IMR). According to data from the World Health Organization or WHO for short (2019), every day around 810 women die during pregnancy or childbirth due to preventable causes. Maternal mortality is still very high today. Around 295 thousand

women die before or during childbirth and 86% occur in developing countries such as Sub-Saharan Africa and Southeast Asia. In addition, the maternal mortality rate in developing countries is 462 per 1000 live births, while in developed countries the maternal mortality rate is 11 per 1000 live births (World Health Organization, 2019).

Indonesia's MMR from 2018 to 2019 decreased from 4,226 to 4,221 maternal deaths. In 2019, the most common cause of maternal death was bleeding, 1,280 cases,

hypertension in pregnancy, 1,066 cases, infection, 207 cases (Ministry of Health of the Republic of Indonesia, 2020). The number of maternal deaths compiled from family health program records at the Ministry of Health in 2020 showed 4,627 deaths in Indonesia. This number shows an increase compared to 2019 of 4,221 deaths. The causes of AKI in 2020 were caused by bleeding in 1,330 cases, hypertension in pregnancy in 1,110 cases, and circulatory system disorders in 230 cases (Ministry of Health of the Republic of Indonesia, 2021).

The Maternal Mortality Rate (MMR) for West Sumatra province in 2018 was recorded at 111 cases of maternal death, a decrease compared to 2017 which was 113 cases. However, it has increased compared to 2016, which was 108, with the causes of death being bleeding and hypertension in pregnancy. The maternal mortality rate for West Sumatra in 2018 was  $111/92,935 \times 100,000 = 119.44$  (West Sumatra Provincial Health Service, 2019)

Agam Regency is one of the regencies with a fairly high maternal mortality rate (MMR), where in 2019 there were 10 cases of maternal mortality recorded, this figure places Agam Regency in the 4th highest maternal mortality rate in West Sumatra Province. The causes of AKI are still dominated by three main causes of death, namely bleeding 16.7%, hypertension 50% and other diseases 33.3% (pulmonary TB, perforated appendicitis, DM). Meanwhile, in 2018 there were 4 cases of maternal death recorded in Agam Regency and in 2017 the maternal mortality rate (MMR) of Agam Regency increased to 13 deaths (Agam Regency Health Service, 2020).

Childbirth is the process where the baby, placenta and amniotic membranes exit the mother's uterus. Childbirth is considered normal if the process occurs at term (after 37 weeks) without any complications. Labor begins (inpartu) when the uterus contracts

and causes changes in the cervix (opening and thinning) and ends with the complete birth of the placenta. The mother is not in labor if uterine contractions do not result in cervical changes (JNPK-KR, 2008).

Pregnant women who are about to give birth really need adequate nutritional intake. These include drinks and foods that are rich in sugar, this is because the muscles of the uterus contract a lot when the baby is being expelled, especially if it takes a long time. The sugar, vitamin B1 and iron content really helps to control the rate of movement of the uterus and increase systole (heart contractions when blood is pumped into the arteries). Meanwhile, in dates, apart from these two ingredients, there is the hormone potuchin which functions to bind the uterus and uterine muscles so that it can help reduce postpartum bleeding. Apart from that, there is the hormone oxytocin which can help stimulate contractions of the uterine muscles, making labor easier. This hormone will also help stimulate contractions in the veins around the mother's breasts, thereby encouraging the mammary glands to produce breast milk (Suroso, 2017).

The initial survey that researchers conducted in the Manggopoh Community Health Center working area with interviews with 6 postpartum mothers about the efforts made to smooth the birth process, obtained information that in general to prepare the mother's physical condition for childbirth, the mother should do physical activities such as a marathon every morning, consume food. nutritious and consume traditional ingredients which are believed to help the mother's labor process and overall the researchers did not find mothers who consumed date palm juice during the second stage of labor to help the progress of labor. Based on the background description and results of previous research, the researcher is interested in conducting research on "The Effect of Giving Date Palm Juice on the

Duration of the Second Stage of Primiparous Mothers in the Manggopoh Community Health Center Work Area".

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## METHOD

This research is a Quasi Experiment research with a Post Test Only With Control group approach design which aims to reveal cause and effect relationships by involving a group of subjects and a control group. The population in this study were primiparous mothers who were in the working area of the Memggopoh health center. Sampling in this study used a purposive sampling technique so that the sample in this study was 32 people (16 mothers in the intervention group and 16 in the control group). Data collection in this study used old observation sheets for period I and period II

## RESULTS AND DISCUSSION

A. Average Length of Second Stage of Labor in Primipara Mothers in the Intervention Group in the Manggopoh Community Health Center Working Area Year 2022

Leng Second Labor	of of	N	Mean	SD	Min - Max
Eksperimen		16	18,50	2,756	14 - 24

Table 1 shows that the average length of the second stage of labor in primiparous mothers in the intervention group was 18.5 minutes with a standard deviation of 2.756. The fastest length of the second stage of labor in the experimental group was 14 minutes.

B. Average Length of Second Stage of Labor in Control Group Primipara Mothers in Manggopoh Community Health Center Working Area Year 2022

Lengh of Second of Labor	N	Mean	SD	Min - Max
Kontrol	16	23,37	4,379	18 - 31

Table 2 shows that the average length of the second stage of labor in primiparous mothers in the control group was 23.37 minutes with a standard deviation of 4.379. The fastest length of the second stage of labor in the control group was 18 minutes and the slowest was 31 minutes.

C. The Effect of Giving Date Juice on the Length of the Second Stage of Labor in Primiparous Mothers in the Manggopoh Community Health Center Working Area Year 2022

Education (Post Test)	N	Mean	Mean Different	t	df	P value
Intervensi	16	18,50	4,875	3,768	25,273	0,001
Kontrol	16	23,37				

Table 5.4 shows that the average length of the second stage of labor in the intervention group was 18.5 minutes and the average length of the second stage of labor in the control group was 23.37 minutes. There is a difference in the average length of the second stage of labor between the experimental group and the control group with an average difference of 4.875 minutes and a p value = 0.001, where the length of the second stage of labor is shorter in the intervention group, so it can be stated that giving date palm juice has a significant effect on the duration of labor. second stage of labor in primiparous mothers.

Giving date palm juice is one of the steps that can be taken to meet energy needs and help the rate of uterine contractions in

pregnant women, because dates contain sugar (natural fructose and glucose) as a source and reserve of energy as well as Vitamin B1 which plays a role in controlling the rate of uterine movement and increases the period of systole (heart contraction when blood is pumped into the arteries). Apart from these two elements, there is also the hormone oxytocin which is useful for uterine muscle contractions during childbirth (Paryono, 2016).

Another research conducted by Effects of date fruit consumption on labor and vaginal delivery in Tabuk, KSA. The results of this study state that giving dates at the end of pregnancy has an effect on the smooth process of vaginal delivery, where there is a difference in the length of the labor process between the control group and the experimental group, statistically the value of  $p = 0.001$ .

The researcher's assumption is that giving date palm juice at the end of pregnancy (from 37 weeks of gestation) has a significant effect on the length of the second stage of labor, which is based on research findings that the length of the second stage of labor is faster in the group of mothers who were given the date palm juice intervention when compared to those who were not given the juice dates.

In the intervention group, researchers found that in general mothers showed strength and stamina that tended to be more balanced compared to the control group, so that mothers' strength when pushing in the second stage of labor tended to be better when compared to the control group, this of course affects the length of labor. II childbirth because the mother's power or stamina is one of the determining factors in a smooth delivery. The differences in maternal power and stamina are influenced by various factors, namely the mother's ability to regulate breathing and carbohydrate intake as an energy source during the birthing

process. Giving date palm juice is one step that can keep the mother's stamina stable during the birth process, because dates contain carbohydrates with the main content being fructose and natural glucose which are liquid and easily absorbed by the body, so giving date palm juice will maintain the mother's stamina and power. stable during labor.

Apart from that, in the experimental group there were also differences in contractions and contractions which tended to be more regular and stronger when compared to the control group. This is influenced by the content of date juice, namely Vitamin B1 and the hormone oxytocin which plays a role in controlling the rate of uterine contractions, strengthening the uterine muscles and oxytocin will also stimulate contractions of the smooth muscles of the uterus so that giving date palm juice helps maximize contractions and the mother's power in the birthing process. which will ultimately affect the acceleration of the length of the second stage of labor.

## CONCLUTIONS

Based on the results of research and discussion regarding the effect of giving date palm juice on the length of the second stage in primiparous mothers in the Manggopoh Community Health Center working area in 2022, it can be concluded that:

- a. The average length of the second stage of labor in the intervention group was 18.5 minutes
- b. The average length of the second stage of labor in the control group was 23.37 minutes
- c. There is a difference in the average length of time for the second stage of labor between the experimental group and the control group with an average difference of 4.87 minutes and a  $p$  value = 0.001, where the length of time for the second

stage of labor is shorter in the intervention group, so it can be stated that juice is given Dates at the end of pregnancy have a significant effect on the length of the second stage of labor in primiparous mothers.

## REFERENCES

- [1] Ahmed, Izzaddinn E, Hyder, O. M., Mesaik, M. A., Yassin, M. I., & Tehreen, Q. A. (2018). "Effect of date fruit consumption on labour and vaginal delivery in Tabuk, KSA" *Journal of Taibah University Medical Science* 13(6). <https://doi.org/10.1016/j.jtumed.2018.11.003>
- [2] Arikunto, S. (2013). *Prosedur Penelitian Suatu Pendekatan Praktik* (IV). Rineka Cipta.
- [3] Astari, R. Y., & Dewi, Y. D. (2019). Konsumsi Kurma Pada Akhir Kehamilan Terhadap Percepatan Kala I Persalinana. *Wellness and Healthy Magazine*, 2(February), 1–9. <https://wellness.journalpress.id/wellness/article/view/v1i218wh>
- [4] Bagian Obstetri & Ginekologi Fakultas Kedokteran Universitas Padjajaran. (2011). *Obstetri Fisiologi*. Fakultas Kedokteran Universitas Padjajaran.
- [5] Bobak. (2004). *Buku Ajar Keperawatan Maternitas*. EGC.
- [6] Dinas Kesehatan Kabupaten Agam. (2020). *Profil Kesehatan Kabupaten Agam Tahun 2019*. Dinas Kesehatan Kabupaten Agam.
- [7] Dinas Kesehatan Provinsi Sumatera Barat. (2019). *Profil Kesehatan Provinsi Sumatera Barat Tahun 2018*. Dinkes Provinsi Sumbar.
- [8] Gyte, G. (2017). *Eating and Drinking in Labour, NCT Evidence Based*.
- [9] JNPK-KR. (2008). *Asuhan Persalinan Normal & Inisiasi Menyusui Dini*. Salemba Medika.
- [10] Kemenkes RI. (2020). kemenkes. In *Profil Kesehatan Indonesia*. Kementerian Kesehatan RI. <https://pusdatin.kemkes.go.id/resources/download/pusdatin/profil-kesehatan-indonesia/Profil-Kesehatan-indonesia-2019.pdf>
- [11] Kemenkes RI. (2021). Profil Kesehatan Indonesia 2020. In *Kementrian Kesehatan Republik Indonesia*. <https://pusdatin.kemkes.go.id/resources/download/pusdatin/profil-kesehatan-indonesia/Profil-Kesehatan-Indonesia-Tahun-2020.pdf>
- [12] Legawati. (2018). *Asuhan Kebidanan Dan Bayi Baru Lahir*. Wineka Media.
- [13] Marizni, S. (2020). *Durasi Persalinan Kala II Pada Ibu Bersalin Durasi Persalinan Kala II Pada Ibu Bersalin*. Prodi D-IV Kebidanan Jurusan Kebidanan Poltekkes Kemenkes Palembang Prodi D-IV Kebidanan Jurusan Kebidanan Poltekkes Kemenkes Palembang.
- [14] Mochtar. (2013). *Sinopsis Obstetri Jilid II*. Kedokteran EGC.
- [15] Nursalam. (2013). *Konsep Dan penerapan Metodologi Penelitian Ilmu Keperawatan Jilid 1*. Salemba Medika.
- [16] Pefbrianti, D. (2015). Analisis Faktor yang Berhubungan Dengan Pemilihan Metode Persalinan Di Rumah Sakit Pelita Insani Martapura. In *Fakultas Kedokteran Universitas Airlangga* (pp. 7–43).
- [17] Puji, L., Puri, S. E., & Prasida, D. W. (2018). *Manfaat Sari Sari Kurma Dalam Mempercepat Persalinan Kala I*. 5(1), 1–8.
- [18] Puskesmas Manggopoh. (2021). *Data Laporan Tahun 2021 Puskesmas Manggopoh*.
- [19] Rosyidah, N. N., & Kiftiyah, B. (2017). Efektivitas Pemberian Ekstrak Kurma Muda Terhadap Percepatan Kala I Persalinan. *Jurnal Keperawatan Dan*

- Kebidanan*, 9(1), 114–122.
- [20] Rukiyah, A. Y. et. al. (2009). *Buku Kebidanan I (Kehamilan)*. Trans Info Media.
- [21] Saifuddin, A. B. (2006). *Buku Ilmu Kebidanan Sarwono prawirohardjo*. Yayasan Bina Pustaka Sarwono Prawirohardjo.
- [22] Sarwono Prawirohardjo. (2010). *Ilmu Kebidanan* (Edisi Keen). PT Bina Pustaka Sarwono Prawirohardjo.
- [23] Siddiq, M., Aleid, S. M., & Kader, A. A. (2013). Dates: Postharvest science, processing technology and health benefits. In *Dates: Postharvest Science, Processing Technology and Health Benefits*.  
<https://doi.org/10.1002/9781118292419>
- [24] Siswosudarmo Risanto et.al. (2010). *Obstetri Fisiologi*.
- [25] Sumarah. (2008). *Perawatan Ibu Bersalin. Asuhan kebidanan Pada Ibu Bersalin*. Penerbit Fitramaya.
- [26] Suroso, P. (2017). *Pengaruh Konsumsi Sari Kurma Pada Akhir Kehamilan Terhadap Kemajuan Persalinan Kala I Dan Jumlah Perdarahan Saat Persalinan Pada Primipara Di Wilayah Kerja Puskesmas Klaten Selatan*. 000(58), 44–50. <http://jurnal.poltekkes-solo.ac.id/index.php/JKG/article/download/355/317>
- [27] Utami, I., & Fitriahadi, E. (2019). *Buku Ajar Asuhan Persalinan & Manajemen Nyeri Persalinan*. Universitas Aisyiyah Yogyakarta, 284 hlm.
- [28] Varney, H. et al. (2016). *Buku Saku Bidan*. EGC.
- [29] Wiknjosastro, H. (2007). *Ilmu Kebidanan*. Yayasan Bina Pustaka Sarwono Prawirohardjo.
- [30] World Health Organization. (2019). *Fact Sheet: World Health Organization*. <https://www.who.int/>
- [31] Yanti. (2010). *Buku Ajar Asuhan Kebidanan Persalinan*. Pustaka Rihama.