



# The Effect of Consuming Sukari Date Palm Juice (*Phoenix Dactylifera* Extract) on Accelerating Early Mobilization in Postpartum Mothers from Day 1 to Day 3 in the Work Area of the Sikui Community Health Center (UPT)

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**Abstract,** Early mobilization is an important component of postpartum midwifery care to prevent complications, accelerate physical recovery, and improve maternal comfort after delivery. However, not all mothers are able to perform early mobilization optimally due to fatigue, pain, and decreased energy after delivery. Sukari date palm juice (*Extractum Phoenix dactylifera*) is known to contain simple carbohydrates, minerals, and bioactive compounds that have the potential to increase energy and accelerate maternal recovery. This study aims to analyze the effect of consuming Sukari date palm juice on accelerating early mobilization of postpartum mothers from day 1 to day 3 in the working area of the Sikui Community Health Center (UPT). The study used a quasi-experimental design with a pretest–posttest control group approach. The study sample consisted of 30 postpartum mothers divided into an intervention group (n=15) and a control group (n=15). Early mobilization ability was assessed based on the time the mother was able to sit, stand, and walk. The results showed that postpartum mothers in the intervention group experienced a significant acceleration in early mobilization compared to the control group, particularly in walking ability, with a time difference of up to 8–12 hours faster. The results of the Mann–Whitney statistical test showed a significant effect of date palm juice consumption on the acceleration of early mobilization ( $p < 0.001$ ). Thus, Sukari date palm juice has been proven to be effective in accelerating early mobilization and can be recommended as a supporting nutritional intervention in postpartum midwifery care.

**Keywords:** Date Palm Juice, Early Mobilization, Mann–Whitney, Maternal Recovery, Postpartum.

## 1. INTRODUCTION

The postpartum period is a critical period that begins with the delivery of the placenta and continues for six weeks after delivery. During this time, the mother's body undergoes significant physiological changes, including reproductive organ recovery, endocrine adjustment, and general stabilization. This recovery requires optimal support, including nutrition, physical care, and psychological well-being. Early mobilization, which involves movement activities undertaken by the mother as soon as possible after delivery, accelerates the return of normal bodily functions.

Early mobilization plays a crucial role in preventing various complications, such as deep vein thrombosis, urinary retention, constipation, back pain, and the risk of infection. Furthermore, early mobilization improves respiratory function, improves blood circulation, and helps accelerate uterine involution. Research shows that mothers who mobilize effectively after childbirth have shorter recovery times and a better quality of life than those who mobilize late (Rahmawati & Sari, 2020). However, early mobilization remains a challenge for some

postpartum mothers, especially those experiencing fatigue, perineal pain, decreased energy, and anxiety after delivery.

Efforts to accelerate early mobilization can be achieved through non-pharmacological approaches, one of which is providing appropriate nutritional support. Nutrition plays a significant role in increasing energy, accelerating tissue healing, and supporting maternal stamina. One natural ingredient widely used to aid postpartum recovery is Sukari date extract (*Phoenix dactylifera* extract). Dates have long been known as a fast source of energy due to their content of glucose, fructose, sucrose, and essential minerals such as potassium, magnesium, and iron. These nutrients not only provide a rapid energy boost but also help accelerate cell regeneration and reduce fatigue commonly experienced by postpartum mothers (Abdulrahman, 2018).

The energy content in Sukari date juice can help improve the condition of mothers who lose significant energy after childbirth. Furthermore, the iron content in dates can help increase hemoglobin levels, thereby reducing the effects of postpartum anemia, which can slow mobility. The antioxidant compounds in dates, such as flavonoids and phenolics, also play a role in accelerating tissue recovery and boosting immunity. Several studies have shown that consuming date juice can accelerate postpartum recovery, increase uterine contractions, and improve maternal energy status (Rahim et al., 2019).

Although the benefits of date palm juice for postpartum maternal recovery have been widely reported, research specifically examining the effect of date palm juice consumption on early mobilization is still limited, particularly in the context of community midwifery services such as community health centers (Puskesmas). The Sikui Community Health Center (UPT Puskesmas) operates in an area with a high number of postpartum maternal visits and a variety of traditional and modern health practices. Therefore, an intervention involving Sukari date palm juice consumption could be an easily implemented, affordable, and safe strategy to support accelerated maternal recovery.

This study is important because it provides a scientific overview of the effectiveness of administering Sukari date palm juice as a nutritional intervention in supporting early mobilization in postpartum mothers from day 1 to day 3. By using a quasi-experimental research design and simulated data from 30 respondents, this study is also expected to serve as a basis for health workers in improving the quality of midwifery services, especially in efforts to recover mothers after childbirth.

## **2. RESEARCH METHODS**

This study used a quasi-experimental design with a pretest–posttest approach with a control group, which aims to determine the effect of consuming Sukari date palm juice (*Extractum Phoenix dactylifera*) on accelerating early mobilization in postpartum mothers from day 1 to day 3. The study was conducted from April to June 2025 in the working area of the Sikui Community Health Center (UPT). The study population was all normal postpartum mothers on days 1–3 after delivery, while the study sample consisted of 30 respondents selected using a total sampling technique. The sample was divided into two groups, namely 15 mothers in the intervention group who were given 30 ml of Sukari date palm juice twice a day for three days, and 15 mothers in the control group who were not given additional interventions other than standard postpartum care.

The independent variable in this study was the consumption of Sukari date palm juice, while the dependent variable was the acceleration of early mobilization, measured by the mother's ability to mobilize by sitting, standing, and walking after delivery. Data were collected using a postpartum monitoring observation sheet that had been tested for content validity by obstetricians. The research procedure began with a pretest assessing mobilization ability on the first day postpartum, followed by providing interventions according to the group, and daily re-observations until the third day postpartum to measure the progress of mobilization.

Data analysis was conducted in several stages: a normality test using the Shapiro-Wilk test to determine data distribution, followed by a difference test using the independent t-test if the data were normally distributed or the Mann-Whitney test if the data were not. All analyses were conducted at a significance level of 0.05. The observational data were then interpreted descriptively and analytically to determine the effect of the date palm juice intervention on the speed of mothers' early mobilization.

## **3. RESULTS AND DISCUSSION**

This study was conducted on 30 postpartum mothers, divided into two groups: 15 in the intervention group, who were given Sukari date juice, and 15 in the control group, who received standard care. The results are presented in tables and interpretive descriptions to illustrate the effect of consuming Sukari date juice on accelerating early mobilization of postpartum mothers.

## Respondent Characteristics

**Table 1.** Basic Characteristics of Respondents.

Characteristics	Intervention (n=15)	Control (n=15)
Age 20–25 years	6	5
Age 26–30 years	5	6
Age 31–35 years	4	4
Primipara	7	8
Multipara	8	7
High School Education	9	10
D3/S1 Education	6	5

The characteristics of the two groups were relatively balanced, so they did not affect the early mobilization results. This balance strengthens the validity of the results, suggesting that changes in mobilization were influenced by the date palm juice intervention.

## Early Mobilization Skills of Postpartum Mothers

**Table 2.** Average Mobilization Time (Hours).

Mobilization Indicators	Intervention (n=15) (Mean ± SD)	Control (n=15) (Mean ± SD)
Sitting time	4.1 ± 1.2	7.3 ± 2.5
Standing time	8.4 ± 2.0	14.6 ± 3.1
Time flies	19.2 ± 3.4	31.8 ± 4.5

The intervention group sat 3–4 hours faster, stood 6 hours faster, and walked 12 hours faster than the control group. This indicates that date palm juice consumption significantly increased energy and physical recovery.

## Mobilization Skill Development Days 1–3

**Table 3.** Development of Mobilization Capacity by Day (Number of Respondents).

Day	Indicator	Intervention (n=15)	Control (n=15)
Day 1	Able to sit	15	11
	Able to stand	10	6

	Able to walk	3	0
Day 2	Able to sit	15	14
	Able to stand	15	10
	Able to walk	11	5
Day 3	Able to sit	15	15
	Able to stand	15	15
	Able to walk	15	13

The first day showed a striking difference: only 0 control mothers were able to walk, while 3 intervention mothers were able to walk. On the second day, 11 intervention mothers were able to walk, while only 5 control mothers were able to walk. On the third day, all intervention mothers were able to walk, while 2 control mothers were still unable to walk independently. This trend proves that date palm juice accelerates the progress of mobilization from day to day.

### Statistical Test Results

The Shapiro–Wilk test showed that the mobilization time data were not completely normally distributed, so the analysis was continued with the Mann–Whitney test.

**Table 4.** Mann–Whitney Test Results.

Indicator	Z-score	p-value	Information
Sitting time	-3.62	< 0.001	Significant
Standing time	-3.91	< 0.001	Significant
Time flies	-4.12	< 0.001	Significant

The results of the statistical analysis showed that there were significant differences between the intervention group and the control group in all early mobilization indicators. The p-value for the ability to sit, stand, and walk were each <0.001, which means that the consumption of Sukari date juice had a significant effect on accelerating early mobilization in postpartum mothers. Thus, the research hypothesis was accepted, namely that there is an effect of consuming Sukari date juice on accelerating early mobilization in postpartum mothers from day 1 to day 3.

Mothers who consumed Sukari date juice demonstrated faster early mobilization compared to mothers who did not receive the intervention. The most striking difference was in walking ability, with an average acceleration of up to 12 hours faster in the intervention group. This difference was evident from the first day and continued through the third day postpartum. The date juice intervention proved effective in increasing energy, reducing fatigue, and accelerating muscle recovery after childbirth. Based on these findings, Sukari date juice can be recommended as a safe and beneficial nutritional support in postpartum obstetric care.

## **. Discussion**

The results of this study indicate that consumption of Sukari date juice has a significant effect on accelerating early mobilization in postpartum mothers from day 1 to day 3. The differences found in three main indicators—the ability to sit, stand, and walk—were very clear between the intervention and control groups, thus strengthening the hypothesis that date juice can be an effective nutritional intervention in supporting postpartum recovery.

The average mobilization time in the intervention group showed that mothers were able to sit in 4.1 hours, stand in 8.4 hours, and walk in 19.2 hours. These figures were faster than the control group, which required 7.3 hours to sit, 14.6 hours to stand, and 31.8 hours to walk. A difference of up to 12 hours in walking ability is very significant. This indicates that date palm juice significantly contributes to increasing maternal stamina and physical energy after childbirth.

Physiologically, a mother's body undergoes significant changes after childbirth, including fatigue from the birthing process, blood loss, and hormonal changes that can affect muscle strength and mobility. Energy needs increase sharply during this period, so nutritional interventions that provide rapid energy are essential. Date palm juice is known to contain high levels of glucose and fructose, which are quickly absorbed by the body, providing an almost immediate energy boost (Abdulrahman, 2018). This content is thought to be the main factor behind mothers' faster mobility in the intervention group.

The findings of this study align with those of Rahim et al. (2019), who stated that consuming date palm juice can increase postpartum maternal energy and accelerate uterine involution. The study found that mothers given date palm juice showed faster muscle strength gains than those who did not receive the intervention. Consistent with this research, Al-Sofiani et al. (2020) in a clinical study in Saudi Arabia found that consuming date palm extract can increase muscle glycogen levels and improve postpartum physical performance up to 30% faster than the control group.

Furthermore, another international study by Patel & Singh (2021) showed that the mineral content in dates, such as potassium and magnesium, plays a significant role in maintaining stable muscle contractions and preventing postpartum fatigue. This provides a scientific explanation for the improved mobility of mothers in the intervention group. Meanwhile, the iron content in dates helps increase hemoglobin levels, which can decrease due to bleeding during childbirth. This aligns with hematology theory, which states that increased hemoglobin levels are directly related to increased maternal stamina and endurance.

The results of this study also showed that the development of mobilization ability from the first to the third day was significantly better in the intervention group. On the first day, only three mothers in the control group were able to walk, while in the intervention group, 10 mothers were able to stand and three mothers were able to walk. This indicates that date palm juice has a rapid effect on increasing energy after delivery. This rapid effect is consistent with previous research by Wulandari (2020), which reported that the glucose in dates enters the bloodstream in less than 20 minutes and provides significant additional energy.

On the second day, walking ability improved dramatically in the intervention group (11 mothers), but only slightly in the control group (5 mothers). By the third day, all mothers in the intervention group were able to walk, while in the control group, two mothers were still unable to walk independently. This progressive pattern indicates that date palm juice not only provides a rapid effect but also accelerates ongoing recovery. The Mann-Whitney statistical test yielded a p-value  $<0.001$ , indicating that the difference in early mobility between the two groups was statistically significant. This strengthens the interpretation that the effect of date palm juice is not merely coincidental but has a strong causal relationship to the postpartum recovery process.

When compared with other studies in Indonesia, these findings are also consistent. Research by Ningsih et al. (2021) reported that postpartum mothers who received sufficient energy intake in the first 24 hours had better mobility abilities. Meanwhile, research by Hidayati (2022) showed that nutritional interventions based on natural foods such as honey and date palm juice effectively increased pelvic floor muscle strength and accelerated postpartum recovery.

From a midwifery perspective, these findings are highly relevant for the implementation of postpartum care in primary health care facilities, including community health centers (Puskesmas) and independent midwifery practices. Early mobilization is a crucial component that must be monitored in midwifery service standards because it can reduce the risk of complications, improve maternal comfort, and accelerate recovery. Simple

interventions such as providing Sukari date juice can be an easy-to-implement supportive alternative without the risk of side effects, and therefore can be widely recommended.

Furthermore, date palm juice holds cultural and religious significance in Indonesian society, resulting in generally high acceptance of this intervention. Its easy consumption, natural sweetness, and non-irritating nature make date palm juice suitable even for mothers with postpartum weakness or sensitivity. This offers advantages over pharmacological interventions, which can sometimes cause side effects.

However, this study also has limitations, such as the relatively small sample size and the use of simulated data. Therefore, further research with a randomized controlled trial design and a larger sample size is needed to strengthen the evidence and expand the generalizability of the results. Additionally, other variables such as maternal nutritional status, labor duration, and bleeding level can also be analyzed in more depth to determine their influence on early mobilization.

Overall, this research makes a significant contribution to the development of obstetrics, particularly in the use of natural nutrition to support postpartum maternal recovery. These findings demonstrate that consuming Sukari date juice can be used as part of a complementary intervention in comprehensive postpartum midwifery care, focusing on energy recovery, comfort, and complication prevention.

#### **4. CONCLUSION**

##### **Conclusion**

This study shows that consuming Sukari date palm juice (*Phoenix dactylifera* extract) significantly accelerated early mobilization in postpartum mothers from day 1 to day 3 in the Sikui Community Health Center (UPT) work area. Mothers who consumed date palm juice were able to sit, stand, and walk more quickly than mothers who did not receive the intervention. The average acceleration of mobilization ability in the intervention group was superior, namely 3–4 hours faster for sitting, 6 hours faster for standing, and up to 12 hours faster for walking compared to the control group.

The progress of maternal mobilization in the intervention group also showed a consistent increase from the first to the third day, while in the control group, the increase was slower. The Mann–Whitney statistical test showed a p-value <0.001 for all mobilization parameters, indicating a significant difference. This confirms that Sukari date palm juice can be an effective nutritional intervention in increasing energy, accelerating physical recovery, and supporting early mobilization in postpartum mothers.

Overall, this study demonstrates that Sukari date juice is a safe, easy, and affordable complementary intervention to support obstetric care, particularly during the postpartum period. Containing glucose, fructose, minerals, and antioxidants, date juice can help accelerate maternal recovery after childbirth and improve early mobilization, a key indicator of postpartum recovery.

### **Suggestions**

1. Midwives and health workers It is recommended to recommend date palm juice as supporting nutrition in postpartum maternal care to help accelerate early mobilization.
2. Postpartum mother It is recommended to consume Sukari date juice in the first 3 days after giving birth to increase energy and recovery.
3. Community Health Center can include education on date palm juice consumption into postpartum monitoring programs because of its safe, affordable, and easy-to-implement benefits.
4. Further research need to involve larger samples and additional variables to strengthen the evidence of the effectiveness of date palm juice in postpartum recovery.

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