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THE EFFECT OF WAX VEGETABLES (*Saccharum edule* Hasskarl) ON INCREASING HEMOGLOBIN LEVELS IN POST-PARTICIPANT WOMEN WITH MODERATE ANEMIA IN THE WORKING AREA OF THE PITU PUBLIC HEALTH CENTER, KALI PITU VILLAGE, TOBELO DISTRICT TENGAH KABUPATEN

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ABSTRACT

Background: The puerperal period is the period or period after labour until 40 days after delivery. The puerperal period is the period in which the uterus removes blood and extra tissue remains after the baby is born during labour. Anaemia during childbirth is a condition of lack of red blood cells or haemoglobin in women after childbirth. This condition is common and can be caused by various factors such as blood loss during childbirth, iron deficiency, or infection. Postpartum anaemia can affect the mother's health, including the lactation process and wound healing. **Research Method:** this study is descriptive using the *Wilcoxon Signed statistical test with probability ≤ 0.05* . The population in this study is postpartum mothers with anaemia. The research data is presented in a frequency distribution. **Research Results:** there is a positive and significant influence between the effect of giving wax vegetables on increasing haemoglobin levels in postpartum mothers with anaemia. proven through the results of the Wilcoxon test (Asymp. Sig. (two-tailed) = 0.005 then H1 is accepted (0.005 < 0.05). **Conclusion:** Based on the research results, the administration of wax gourd was proven to have a positive and significant effect on increasing hemoglobin levels in postpartum women with anemia (p = 0.005 < 0.05). In addition to helping with anemia recovery, wax gourd was also favored by respondents, readily available, and provided benefits such as reduced fatigue

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PRELIMINARY

The postpartum period (puerperium) is the period that begins after the placenta is delivered and continues until the mother's reproductive organs and physiological condition return to pre-pregnancy levels. This period lasts approximately 6 weeks or 42 days. This is a crucial period because the mother experiences various physical, psychological, and social changes that require optimal monitoring and care. In addition to the body's recovery process, the postpartum period also serves as a period of adaptation for the mother to breastfeeding and caring for her baby. Therefore, quality healthcare during the postpartum period is essential to prevent complications and support the health of both mother and baby.¹

When the hemoglobin level is below the normal limit for age and gender, it is called anemia. When a person experiences anemia, body tissues, including the brain, do not receive enough oxygen and nutrients, which can cause symptoms such as fatigue and weakness. Hemoglobin, a protein in red blood cells, functions properly when oxygen and nutrients are carried by the red blood cells through the lungs to the rest of the body, including the brain.²

Based on data obtained from the Wari Community Health Center, 30 postpartum patients who had undergone check-ups within the past week had low hemoglobin levels. Therefore, I raised the issue of anemia in late postpartum, which is significantly associated with this wax vegetable. Wax vegetables contain iron (non-heme), but this non-heme iron is not efficiently absorbed by the body. In 100 grams of terubuk flowers, there are 4.3 grams of protein, 25 milligrams of calcium, 2 milligrams of iron, 35 milligrams of vitamin C, and 92.4% water.

The *Saccharum edule* Hasskarl plant is found in North Maluku, particularly in Tobelo in the North Halmahera Islands. Locals know it as wax vegetable. This plant is used as a vegetable to be eaten every day and is also used as *salah*, one of the typical foods of the area.

Terubuk plants or commonly called egg cane or waxy vegetables are often found on the islands of Java and Kalimantan as well as in Eastern Indonesia. (Sulawesi, Ambon and Papua). This vegetable belongs to the Graminae family and the Poaceae genus.

According to some people, this vegetable has a very delicious taste, its taste resembles the taste of fish eggs. The part that is consumed from this plant is the flower in the tuber, but if the tuber flower is too old, it can no longer be consumed. Terubuk can grow in lowland areas up to 2300 above sea level. Terubuk height can reach 10 meters, with leaves 1-2 meters long, leaf width 2.5 -7 cm and stem diameter 2-3 cm

Based on an initial survey conducted by researchers, which included interviews with midwives at Wari Polindes, 30 postpartum mothers between May and June,

METHOD

This study was an experimental study with a quasi-experimental design and a pre-posttest.

This study aimed to analyze the effect of Sayur Lilin (*Saccharum Edule* Hasskarl) on increasing hemoglobin levels in postpartum mothers at the Wari Village Health Center (Polindes), North Halmahera Regency. The intervention group in this study were patients undergoing intervention procedures using Sayur Lilin (*Saccharum Edule* Hasskarl).

This study was conducted at the Wari Village Health Center (Polindes), North Halmahera Regency, from May to June. The total population in this study was 30 postpartum mothers who were breastfeeding their babies. The sample size for this study was 30 individuals who met the inclusion criteria.

RESULTS

Table 1. Frequency Distribution of Respondents by Gender.

Age	N	%
>23 Year	8	53
23-28 Year	7	47
>38 Year	1	7
Total	16	100

Source primary data 2025

Based on the data obtained, the majority of respondents were under 23 years old, namely 8 people (53%), followed by respondents aged 23–28 years as many as 6 people (40%), and respondents aged over 38 years as many as 1 person (7%).

Table 2. Frequency Distribution of Respondents by Education.

Education	N	%
SD	4	27
SMP	6	40
SMA	4	27
PT	2	13
Total	16	100

Source primary data 2025

Based on the data above, it can be seen that the final education of the most respondents was junior high school, namely 6 (40%), and 4 (27%) respondents were elementary school level, 4 (27%) respondents were high school/vocational school, and 2 (13%) respondents had a diploma..

Table 4. Frequency Distribution of Respondents by Occupation.

Job	N	%
IRT	11	73
Farmer	2	13
Private	2	13
Teacher	1	7
Total	20	100

Source primary data 2025

Based on the data obtained, the majority of respondents worked as housewives (IRT) as many as 11 people (68.8%), while farmers and private sector workers each had 2 people (12.5%), and teacher 1 person (6.2%).

Table 5. Distribution Respondent characteristics based on parity number.

Paritas	N	%
1	5	33
2	6	40
3	3	20
4	2	13
Total	16	100

Based on the data obtained, the majority of respondents were multiparous, with 6 (40%) having 2 children, 3 (20%) having 3 children, and 2 (13%) having 4 children. Meanwhile, 5 (33%) respondents had 1 child (primiparous).

Data Khusus

1. Kadar Hmoglobin

Wilcoxon Signed Ranks Tes Ranks

Bivariate Analysis

	Kadar_Hb_sebelum_Kadar _Hb_Sesudah
Z	-2.828
Asymp. Sig. (2tailed)	0,005

Bivariate analysis aims to correlate the two variables studied to determine the extent of their influence on the pre-test and post-test. To compare mean and significance values, a paired samples t-test was conducted with a confidence level of $P < 0.05$.

DISCUSSION

According to previous research, wax vegetables contain macronutrients, various essential minerals, and beneficial chemical compounds. Macronutrients such as protein and carbohydrates are useful as building blocks, sources of energy for the body, and nutritional needs. Various vitamins, such as vitamins A, B complex, C, D, K, potassium, calcium, and iron, are found in wax vegetables. 100 grams of wax vegetables yields 4.3g of protein, 25mg of calcium, 2mg of iron, and 92.4% of water.

Wax vegetables contain impressive protein, which helps meet nutritional needs, boost immunity, and improve overall health. They also contain fat, which serves as a source of energy, builds body cells, protects organs, and helps the body utilize vitamins. Wax vegetables also contain carbohydrates, which support brain function and serve as an energy source. The minerals in wax vegetables are also crucial for the body, as

	N	Mean Rank	Sum of Ranks
Previous_Hb_Level	Negative ranks	0	12.50
	Positive ranks	8	00.0
Hb_level_after	Ties	8	
	Total	16	

they regulate complex metabolism, work with enzymes, and serve as a pathway for important vitamins to enter the body.

CONCLUSION

The results of this study indicate that, based on the data in Table 6, there is a relationship between the provision of wax vegetable and increased hemoglobin levels in postpartum mothers with anemia. This is demonstrated by the Wilcoxon test, using an Asymp. Sig. value (two-tailed) of 0.005, resulting in H_1 being accepted ($0.005 < 0.05$). Thus, the provision of wax vegetable has a significant effect on increasing hemoglobin levels in postpartum mothers with anemia.

SUGGESTIONS

1. For readers, the results of this study are expected to increase knowledge regarding increasing hemoglobin levels in mothers with anemia, especially those in Kali Pitu Village, and the factors that influence it. It is also hoped that this research will be understandable and broaden readers' knowledge.
2. For future researchers, it is hoped that they can conduct further research on the effect of wax vegetable on increasing hemoglobin levels with a wider and more varied

number of respondents and research locations, while also adding several other research variables.

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