



DOI:

10.22301/IJHMCR.2466-2471.2043

Article can be accessed online on:

<http://www.ijhmcr.com>

ORIGINAL ARTICLE

INTERNATIONAL JOURNAL
OF HEALTH MEDICINE AND
CURRENT RESEARCH

THE EFFECT OF PREGNANT WOMEN'S KNOWLEDGE ABOUT THE BENEFITS OF GEDI LEAVES ON MILD ANEMIA IN PREGNANT WOMEN IN TOGALA VILLAGE, WORKING AREA OF PITU PUBLIC HEALTH CENTER, TOBELO TENGAH DISTRICT, NORTH HALMAHERA REGENCY

Ririn Femala^{1,3}, Ida Laila Nur^{1,3}, Selvie Ticoalu³

¹S1- Bachelor Of Midwifery Study Program, Makariwo Halmahera College of Health Sciences (STIKMAH) – Tobelo

²DIII- Midwifery Study Program, Makariwo Halmahera College of Health Sciences (STIKMAH) – Tobelo

³Medika Mandiri Foundation – Tobelo

ARTICLE INFO

Article History:

Received 19th Jan, 2025

Received in revised form

15th February, 2025

Accepted 20th February, 2025

Published online 10th March, 2025

Key words:

Effect, Pregnant, Knowledge, Anemia

*Correspondence to Author:

Ririn Femala

Lecturer Midwifery Study Program
Makariwo Halmahera College of
Health Sciences

Copyright © 2025, Ida Laila Nur. This is an open-access article distributed under the creative commons attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited

ABSTRACT

Background: Anemia in pregnancy is a condition where the hemoglobin (Hb) level is less than 11 g/dL in pregnant women which can reduce the oxygen supply to the mother and fetus and increase the risk of complications during pregnancy and childbirth. **Research Method:** Quasy experimental method with quantitative analysis. using a pretest-posttest control group design. **Research Results:** seen from the provision of pre-test post-test questionnaires which showed the results of the Wilcoxon test (Asymp. Sig. (2-tailed) = 0.000 then H1 is accepted (0.000 < 0.05). This means that pregnant women's knowledge about the benefits of gedi leaves for mild anemia in pregnant women. **Conclusion:** The results of the study showed that before counseling, most respondents had sufficient knowledge (50%) and less (33.4%), while after counseling all respondents (100%) had good knowledge. The results of the statistical test showed a p value = 0.000 (p < 0.05), which means that there is a significant effect of counseling on increasing pregnant women's knowledge about the benefits of consuming gedi leaves for mild anemia.

Citation: Ririn Femala,¹ Ida Laila Nur², Selvie Ticoalu³

"Bachelor Of Midwifery Study Program", *International Journal of Health Medicine and Current Research*, 10 (02), 2466-2471.

PRELIMINARY

Anemia in pregnant women remains a global health problem. The WHO reported that 37% of pregnant women worldwide experienced anemia in 2019. In Indonesia, the prevalence of anemia in pregnant women continues to increase, reaching 43.2% in 2017, 43.7% in 2018, and 44.2% in 2019, representing an average annual increase of 0.5%.¹

According to the 2020 Basic Health Research (Riskesdas), the prevalence of anemia in pregnant women in Indonesia increased from 37.1% in 2013 to 48.9% in 2019, with 84.6% of cases occurring in the 15–24 age group. As a preventative measure, the government implemented a program to provide 90 iron tablets during pregnancy, with a national coverage of 83.6% in 2020. However, coverage in North Maluku Province (67.5%) and North Halmahera Regency (61.1%) remained below the national target of 75%.³

During pregnancy, the mother's blood volume increases by approximately 50%, thus increasing the need for iron for hemoglobin formation, fetal growth, and the placenta. Therefore, anemia in pregnancy is a health problem that requires special attention in maternal health services.⁴

Research by Hermawan et al. (2020) showed a significant relationship between green vegetable consumption and hemoglobin levels. Respondents who regularly consumed green vegetables tended to have normal hemoglobin levels, while those who rarely consumed them were at higher risk of anemia. The Chi-square test results showed a p-value of 0.000 ($p < 0.05$), indicating a significant relationship between green vegetable consumption and Hb levels.⁸

Gedi leaves contain various bioactive compounds, such as flavonoids, saponins,

alkaloids, tannins, and polyphenols, and are rich in vitamins, iron, folic acid, and potassium. These compounds play a role in red blood cell formation, potentially helping prevent and treat anemia.⁸

Based on a preliminary survey conducted by the researchers, this research was conducted in May–June 2025. The research topic regarding the effectiveness of traditional drinks was determined in April 2025, followed by the determination of the research title and the development of the research proposal in the same month. The research was conducted in Togala Village, within the Pitu Community Health Center, Central Tobelo District, North Halmahera Regency.

METHOD

This study used a quantitative method with a one-group pretest-posttest design. This design began with a pretest measurement of respondents' knowledge before the intervention, followed by education on the benefits of gedi leaves, and then a posttest.

This design was chosen to determine the effect of pregnant women's knowledge about the benefits of consuming gedi leaves on mild anemia in pregnant women in the Pitu Community Health Center (Puskesmas) area.

RESULTS

Tabel 4.1 Karakteristik Responden Penelitian

Respondent Characteristics	Frequency	(%)
Age		
<20	4	13,4
20	15	50
30	11	36,6
Total	30	100
Educator		
SD	6	20
SMP	6	20
SMA	14	46,6
Diploma	0	0
Sarjana	4	13,4
Total	30	100
Job		
Housewife	28	93,4
Farmer	0	0
Swasta	2	6,6
Total	30	100

Based on respondent characteristics, the majority of pregnant women were in the 20–29 age group (15 women (50%)), followed by 11 women aged 30 years and older (36.6%), and 4 women aged <20 years (13.4%). This indicates that the majority of respondents were in a relatively safe reproductive age for pregnancy.

Based on educational level, the majority of respondents had a high school education (14) (46.6%), while 6 respondents each had an elementary and junior high school education (20%), and 4 respondents (13.4%) had a bachelor's degree. There were no respondents with a diploma.

Based on occupation, almost all respondents were housewives (28 women (93.4%)), while 1 respondent each worked in the private sector and one respondent each worked as a trader (3.3%). There were no respondents who worked as farmers or civil servants. Thus, the respondents in this study were dominated by pregnant women aged 20–29, with a high school education, and

Level of Knowledge	Frequency	(%)
Good	30	100
Enough	0	0
Insufficient	0	0
Total	30	100

Tabel. 4.2 Level of Knowledge

Based on the frequency distribution data in table 4.2, it can be seen that the level of knowledge of the benefits of consuming gedi leaves is mostly in the sufficient category, namely 30 respondents (100%).

Influence of Knowledge Level of Pregnant Women Before and After Counseling

Tabel 4.3. Tabulasi Silang Tingkat Pengetahuan

Level of Knowledge	Socialization				Total	
	Before		After			
	f	%	f	%	f	%
Good	5	16,6	30		100	
Enough	15	50	0		0	0,000
Insufficient	10	33,4	0		0	
Total	30	100	30		100	

Table 4.3 shows the level of knowledge of pregnant women regarding the benefits of consuming gedi leaves for mild anemia in the Pitu Community Health Center work area.

Before the counseling session, only 5 respondents (16.6%) had good knowledge, while the majority still had poor knowledge. After the counseling session, all respondents (100%) had good knowledge good. These results indicate an increase in knowledge among pregnant women after receiving

counseling on the benefits of consuming gedi leaves for mild anemia.

DISCUSSION

5.1 Respondent Characteristics

Respondent characteristics provide a general overview of the respondents' identities and backgrounds, such as age, education, and occupation, which may influence the research results.¹

Based on age characteristics, the majority of respondents were aged >20 (15 respondents), while the fewest were aged <20 (4 respondents). The age group of 20–35 is considered a healthy reproductive age and is safer for pregnancy and childbirth than those aged <20 or >35, which are at risk of complications. Therefore, the majority of respondents are in a relatively safe age group for pregnancy.^{2,4}

Based on educational level, the majority of respondents (14 respondents) had a high school education. Education plays an important role in increasing a person's knowledge and ability to receive health information. The higher the level of education, the better a person's understanding of health, including preventing anemia during pregnancy.^{4,5}

5.2 Knowledge Level of Pregnant Women

Based on the results of a study of 30 pregnant women, all respondents (100%) had a good level of knowledge regarding the benefits of consuming gedi leaves in preventing anemia. Knowledge is the result of the process of sensing and receiving information through the five senses, especially sight and hearing.¹³

Good knowledge can influence a person's health behavior, including maintaining health during pregnancy. The level of knowledge is influenced by various factors, such as age, education, occupation, environment, and socio-cultural factors. The better a pregnant woman's knowledge about anemia and its prevention, the greater her awareness of meeting nutritional and iron needs during pregnancy.³¹

Anemia in pregnancy is generally caused by iron deficiency due to increased needs during pregnancy. Therefore, understanding iron sources, including the benefits of iron-rich gedi leaves, is crucial to support anemia prevention and maintain the health of the mother and fetus.³²

5.3. Relationship between Knowledge Levels Before and After Counseling

The results of this study indicate an increase in the knowledge level of pregnant women after receiving counseling regarding the benefits of consuming gedi leaves in preventing anemia. Prior to the counseling, some respondents still had poor knowledge, while after the counseling, all respondents had good knowledge.

These results indicate that counseling is an effective method for improving the knowledge of pregnant women.

This finding aligns with research by Hariati et al. (2019), which states that pregnant women with good knowledge about anemia tend to have positive attitudes towards preventing and managing anemia. Research by Juniliyanti (2017) also showed a significant relationship between the level of knowledge of pregnant women and the incidence of anemia ($p=0.001$), where the

better the mother's knowledge, the lower the risk of anemia.³⁶

Knowledge is an important factor influencing a person's health behaviors. Pregnant women with good knowledge are better able to maintain nutritional intake, take iron supplements, and practice anemia-preventive behaviors during pregnancy. Therefore, increasing knowledge through health education needs to be continuously carried out as an effort to prevent anemia in pregnant women.^{13,38}

CONCLUSION

1. The average age of pregnant women over 20 years was 15. Furthermore, based on educational level, the majority of respondents had a high school education (14 respondents). Based on occupational characteristics, the majority were housewives (28 respondents).
2. The highest level of knowledge about the benefits of consuming gedi leaves was in the good category (30 respondents).

RECOMMENDATIONS

1. It is recommended that health workers be more active in providing health education to the public regarding maternal health, especially regarding anemia in pregnancy.
2. It is recommended that future researchers conduct further research related to anemia in pregnancy and the benefits of consuming gedi leaves for pregnant women.

BIBLIOGRAPHY

1. Ministry of Health of the Republic of Indonesia. Indonesian Health Profile

2020. Jakarta: Ministry of Health of the Republic of Indonesia. 2021.
2. North Maluku Province Stunting Reduction Acceleration Team. Semester 2 Report on the Implementation of the Acceleration of Stunting Reduction in 2023. Sofifi: TPPS North Maluku Province. 2023
3. Arief, Nurhaeni. Complete Guide to Healthy Pregnancy and Birth. Yogyakarta: AR Group. 2008.
4. Bobak, Iriene M. Maternity Nursing Textbook. Jakarta: EGC. 2008.
5. Muliani, R., Radatullah, M., & Noviyanti Putri, R. Factors Associated with the Incidence of Anemia in Pregnant Women in the Tegal Binangun Community Health Center Work Area, Palembang City, 2021. Applied Health Journal. 2021. 9(1), 29–33.
6. Hermawan, et al. "Green Vegetable Consumption and the Incidence of Anemia in Pregnant Women" Holistic Health Journal. 2020. Volume 14, No. 1: 149-154.
7. Suoth E, Kaempe H, & Tampi A. Evaluation of Total Polyphenol Content and Isolation of Flavonoid Compounds in Red Gedi Leaves (*Abelmoschus manihot* L.). Chemistry Progress, Chemical Science Publication Journal. 2013;6(2):86-9.
8. Waryana. Health Promotion, Counseling, and Community Empowerment for Lecturers, Students, Midwives, Nurses, Health

- Workers, and the General Public. Yogyakarta: Nuha Medika. 2016.
9. Suhartatik et al. The Relationship Between Knowledge and the Incidence of Anemia in Pregnant Women at the Tamalanrea Community Health Center. *Scientific Journal of Health Diagnosis*. 2018. Vol. 14, No. 2. Pp: 187-191
 10. Wulandari I. A. The Relationship Between Knowledge Level and the Incidence of Anemia in Pregnant Women at the Jongaya Community Health Center, Makassar, 2018. *Journal of Delima Pelamonia Health*. 2018. Vol. 2, No. 2. Pp: 155-158
 11. Mubarak, W. *Public Health Science: Theory and Application*. Jakarta: Salemba Medika. 2009.
 12. Notoatmodjo. *Health Behavioral Science*. Jakarta: Rieneka Cipta. 2010.
 13. Amiruddin. *Iron Deficiency Anemia in Pregnant Women in Indonesia*. 2014.
 14. Evelyn. *Anatomy and Physiology for Paramedics*. Jakarta: Gramedia. 2013.
 15. Sulistyoningsih. *Nutrition for Maternal and Child Health (Issue 16)*. 2012.
 16. Rizki, F., Lipoeto, N. I., & Ali, H. The Relationship between Iron Tablet Supplementation and Hemoglobin Levels in Third Trimester Pregnant Women at the Air Dingin Community Health Center, Padang City. *Andalas Health Journal*. 2018. 6(3), 502.
 17. Nugraha, G. *Basic Hematology Laboratory Examination Guide (2nd ed.)*. Jakarta: Trans Info Media. 2017.
 18. Astutik, R. Y. & Ertiana, D. *Anemia in Pregnancy*. East Java: CV. Pustaka Abadi. 2018.
 19. Rahmawati, Ayu. *Analysis of Behavioral Factors for Preventing Anemia in Pregnant Women Using the Theoretical Approach of Lawrence W. Green*. Thesis. Faculty of Nursing, Airlangga University. 2019.
 20. Reni DE. *Anemia in Pregnancy*. Jember: CV. Pustaka Abadi. 2018.
 21. Saifuddin AB. *Practical Guide to Maternal and Neonatal Health Services*. Jakarta: EGC. 2014.
 22. Sutarto, Toto, and Gani Utari. *Analysis of the Content of Ki Dedi's Medicinal Plant (Abelmoschus manihot)*. Bandung: Unpas. 2007.
 23. Kayadu, Yustin Nova. *Archaeological Characteristics and Nutritional Analysis of Gedi Plants (Abelmoschus manihot L. Medik) from Sentani and Kemtuk Districts, Jayapura Regency*. Agriculture and Agricultural Technology Thesis. Manokwari: State University of Papua. 2013. pp. 5-6.
 24. Mandey, Jet Saartje. *The Effects of Native Gedi Leaves (Abelmoschus manihot L. Medik) from Northern Sulawesi, Indonesia as a Source of Feedstuff on the Performance of Broilers*. Malang: Brawijaya University. 2013.

25. Assagaf, Fadhila et al. Acute Toxicity Test (Lethal Dose 50) of Ethanol Extract of Red Gedi Leaves (*Abelmoschus manihot* L.) on Male White Rats of the Wistar Strain (*Rattus novergicus* L.). Manado: Unstrat Scientific Journal of Pharmacy. 2013.
26. Taroreh M, et al. Sequential Extraction of Gedi Leaves (*Abelmoschus manihot* L.) and Its Antioxidant Activity. *Agritech*. 2015. 35 (3): 280-287.
27. Sujarweni, Y.W. Nursing Research Methodology. 1st Edition. Gava Media; Yogyakarta. 2014.
28. Hartanto, H. Family Planning and Contraception. Jakarta: Sinar Harapan Library. 2015.
29. Wiknjosastro, H. Midwifery. Jakarta: Bina Pustaka Sarwono Prawirohardjo Foundation. 2014.
30. Wawan, A. and Dewi, M. Theory and Measurement of Human Knowledge, Attitudes, and Behavior. Yogyakarta: Nuha Medika. 2014.
31. Sulistyawati, A. Midwifery Care During Pregnancy. Jakarta