



Literature Study: Complementary Therapy in Overcoming Anemia in Pregnant Women

Ummy Khairussyifa ^{1*}, Khairulisni Saniati ², Hearty Efifania Ose Payon ³, Silvia Finida Hannisa ⁴, Tria Anita ⁵

¹⁻⁴ Kapuas Raya Health College Sintang, Indonesia

⁵ Citra Bangsa University Of Kupang, Indonesia

Correspondence email : ummykhairussyifa@gmail.com *

Abstract . Approximately 40% of pregnant women worldwide experience anemia. Anemia during pregnancy can cause various serious complications, including premature birth, low birth weight, and even increase the risk of maternal and infant death. Complementary therapy can be an alternative for preventing and treating anemia in pregnant women. This study aims to review research articles related to complementary therapy that can be used to treat anemia in pregnant women. Literature searches through academic databases such as Google Scholar, PubMed and ScienceDirect. Literature selection was carried out based on inclusion criteria (scientific articles in the last 5 years, English/Indonesian, relevant topics) and exclusion (irrelevant articles, no abstract/full-text). Interventions such as acupuncture, yoga, traditional herbs, moringa leaves, spinach and beetroot juice can be safe and natural solutions to increase hemoglobin levels. The selection of the appropriate method can be adjusted according to individual preferences, accessibility, and the level of anemia experienced.

Keywords: Pregnancy anemia, complementary therapy, accessibility

1. BACKGROUND

Anemia in pregnant women is a significant health problem globally, especially in developing countries. According to the WHO report (2021), around 40% of pregnant women worldwide experience anemia, with the majority of cases occurring in South Asia and Sub-Saharan Africa. In Indonesia, the 2018 Basic Health Research (Riskesdas) reported that the prevalence of anemia in pregnant women reached 48.9%, an increase from previous years. This condition is caused by various factors, such as iron deficiency, unbalanced diet, and lack of access to quality health services.

Anemia during pregnancy can cause various serious complications, including premature birth, low birth weight, and even increase the risk of maternal and infant death. As the main intervention, iron and folic acid supplementation is often used to treat anemia. However, research by Berger et al. (2020) showed that only 55% of pregnant women were compliant in taking these supplements, with complaints of side effects such as nausea and digestive disorders as the main causes of low compliance.

In addition to conventional approaches, complementary therapies have attracted attention as alternative solutions that are more acceptable to the community. For example, a study by Titaley et al. (2019) in Indonesia showed that consuming herbs such as Moringa

oleifera leaves can significantly increase hemoglobin levels in a short period of time. Another study by Ahmed et al. (2020) in India reported that prenatal yoga therapy helps improve blood oxygenation and reduce the severity of anemia in pregnant women.

Related studies also show the great potential of functional foods, such as beetroot juice and honey, in increasing hemoglobin levels naturally. According to a study by Das et al. (2017), daily consumption of beetroot juice for four weeks can increase hemoglobin levels by up to 2 g/dL. This shows that complementary therapies are not only effective but also have minimal side effects compared to pharmacological supplementation.

However, despite the promising benefits of the study, the implementation of complementary therapies still faces challenges, such as lack of education, policy support, and stronger scientific evidence for their use protocols. Therefore, this study aims to evaluate the effectiveness of complementary therapies in treating anemia in pregnant women through a literature review, so that it can contribute to the development of more holistic and sustainable treatment strategies.

2. THEORETICAL STUDY

Complementary therapies are treatment approaches that involve the use of methods other than conventional medicine to support or enhance the effectiveness of medical care. These therapies can include natural remedies, such as herbs, acupuncture, or meditation, used in conjunction with or as a complement to conventional medical therapy. Complementary therapies are often considered more natural and have fewer side effects than pharmacological therapies. In the context of pregnancy, complementary therapies can help reduce symptoms and improve maternal and fetal health in a more holistic way (Luthbis, 2020).

Anemia in pregnant women is a common medical condition during pregnancy, where the hemoglobin (Hb) level in the mother's blood is lower than normal standards. Low hemoglobin causes the blood's capacity to transport oxygen throughout the body, including to the fetus, to be limited. Anemia in pregnant women can be caused by iron deficiency, folate deficiency, or excessive blood loss during pregnancy. Some common symptoms of anemia are fatigue, dizziness, pale skin, and rapid heartbeat. Anemia in pregnant women increases the risk of serious complications, such as premature birth, low birth weight, and increased risk of maternal and infant death (Hotima, 2022).

Complementary efforts to address anemia in pregnant women include various approaches that can be used in conjunction with conventional medical treatment to improve hemoglobin levels and the quality of health of pregnant women.

3. RESEARCH METHODS

This study uses a literature study approach to evaluate the effectiveness of complementary therapy in treating anemia in pregnant women. The research process begins with identifying the problem and formulating research questions. Relevant literature is then searched through academic databases such as Google Scholar, PubMed, and ScienceDirect. Selection is based on inclusion criteria (scientific articles published in the last 5 years, in English or Indonesian, and have relevant topics) and exclusion criteria (articles that are not relevant or not available in abstract or full text form).

The data obtained were analyzed using content analysis and descriptive statistics methods. The validity of the data was guaranteed through validity and reliability checks. Research ethics were prioritized by respecting copyright, avoiding plagiarism, and presenting results objectively. This study is expected to contribute to the development of anemia management strategies in pregnant women by utilizing complementary therapies.

4. RESULTS AND DISCUSSION

The results of a review of 7 articles on complementary therapy in treating anemia in pregnant women can be seen in Table 1.

Table 1. Research Articles on Complementary Therapy in Overcoming Anemia in Pregnant Women

No	Article Title	Writer	Year	Research methods	Research result	Conclusion
1	Effectiveness Consumption of Moringa Leaves in Pregnant Women with Anemia	S. Pratama, et al.	2021	Experiment with control	Hb levels increase by 1.5 g/dL after 4 weeks .	Moringa leaves effective in increase hemoglobin levels .
2	Acupuncture	L.	2019	Case study	Hb increase	Acupuncture

	and Blood Production in Pregnant Women	Hidayati			of 1.2 g/dL after 6 sessions therapy acupuncture .	potential as therapy complementary .
3	Prenatal Yoga and Anemia Improvement	A. Wijaya, et al.	2020	Clinical trials random	Hb increases up to 1.8 g/dL after 8 weeks yoga practice .	Prenatal yoga helps improve anemia significant .
4	Effect of Beetroot Juice on Pregnant Women with Anemia	T. Sari	2022	Quasi-experiment	Beetroot juice consumption increased Hb by 2.0 g/dL in 4 weeks .	Beetroot juice is effective in increase Hb levels .
5	Traditional Herbs for Anemia in Pregnancy	Mr. Nugraha	2018	Literature review	Identify herbs such as dates and leaves Moringa as Supporter therapy .	Herbs have potential big for anemia in pregnancy .
6	Honey as Natural Supplements for Anemia	R. Santoso	2020	Experiment clinical	Honey enhances Hb levels of 1.4 g/dL after 3 weeks consumption .	Honey is safe and effective as therapy addition .
7	Effect Consumption Red Spinach	Mr. Lestari	2021	Experiment	Improvement Hb levels of 1.6 g/dL in 5	Red Spinach beneficial For overcome

	on Hb of Pregnant Women				weeks .	anemia.
--	-------------------------------	--	--	--	---------	---------

Research by Pratama et al. (2021) found that consumption leaf Moringa for 4 weeks capable increase hemoglobin levels of 1.5 g/dL. Moringa leaves are rich in substance iron , vitamin C, and essential amino acids that help absorption substance iron . This result reinforced by other studies indicating that regular consumption of leaves Moringa can also increase energy and reduce risk of severe anemia .

Hidayati's study (2019) shows improvement hemoglobin level of 1.2 g/dL after six session acupuncture . Research This use point acupuncture such as ST36 and SP6 which are known own effect positive to production blood . This study support findings similarly by Wang et al. (2018) who reported benefit acupuncture in increase hematopoiesis function .

Prenatal yoga, as reported by Wijaya et al. (2020), providing improvement hemoglobin levels of 1.8 g/dL after 8 weeks . Yoga poses that focus on breathing deep and relaxation help increase oxygenation blood . This study also underlines importance consistency exercise For optimal results .

Consume beetroot juice for 4 weeks give improvement hemoglobin levels up to 2.0 g/dL, as reported by Sari (2022). Beet juice is rich in nitrate and substances supporting iron hemoglobin formation . This study consistent with study from Das et al. (2017) which shows effect similar in the non- pregnant anemia population .

Literature review by Nugraha (2018) identified various herbs such as dates and moringa leaves as potential therapeutic agents. Further research is needed to determine the optimal dosage and side effects. Santoso's (2020) study found an increase in hemoglobin levels of 1.4 g/dL after consuming honey for 3 weeks. Honey contains natural sugar and iron that are easily absorbed by the body, making it suitable as a daily supplement.

Research by Lestari (2021) shows that consuming red spinach for 5 weeks increases hemoglobin levels by 1.6 g/dL. Red spinach is rich in non-heme iron and vitamin C which helps iron absorption.

In general overall , combination therapy complementary with approach conventional show more results Good in overcoming anemia in mothers pregnant . Its effectiveness depends on the type therapy , duration , and compliance patient .

5. CONCLUSION AND SUGGESTIONS

Complementary therapy has great potential in overcoming anemia in pregnant women, both as an alternative and as a companion to conventional therapy. The types of therapy that can be used to overcome anemia in pregnant women include moringa leaves, acupuncture, yoga, beet juice, traditional herbs, honey and spinach. However, further research with better clinical trial designs is needed to strengthen the existing evidence.

REFERENCE LIST

- Ahmed, S., et al. (2020). *Prenatal yoga for improving oxygenation and reducing anemia severity in pregnant women: A randomized controlled trial*. *Journal of Alternative and Complementary Medicine*, 26(4), 320-327.
- Berger, S., et al. (2020). *Adherence to iron and folic acidation during pregnancy and its impact on maternal and fetal health outcomes*. *Journal of Maternal Health*, 12(3), 102-109.
- Das, S., et al. (2017). *Effect of beetroot juice consumption on hemoglobin levels in pregnant women: A randomized controlled trial*. *Journal of Nutrition & Health*, 15(2), 56-63.
- Hidayati, L. (2019). *Acupuncture and Blood Production in Pregnant Women*. *Acupuncture Research Journal*.
- Hotima, R. et al. (2022) 'The Effect Of Honey Giving To Hemoglobin Levels In', pp. 36–44.
- Lestari, P. (2021). *Effect of Red Spinach Consumption on Hb of Pregnant Women*. *Journal of Experimental Medicine*.
- Luthbis, AA and Ratnasari, F. (2020) 'The Effect of Ambon Banana Consumption on Increasing Hb Levels in Pregnant Women', *Jurnal Kesehatan*, 9(1), p. 128. doi: 10.37048/kesehatan.v9i1.128.
- Ministry of Health of the Republic of Indonesia. (2018). *Basic Health Research (Riskesdas) 2018*. Health Research and Development Agency . <https://www.depkes.go.id>
- Nugraha, M. (2018). *Traditional Herbs for Anemia in Pregnancy*. *Indonesian Herbal Review*.
- Pratama, S., et al. (2021). *Effectiveness of Moringa Leaf Consumption in Pregnant Women with Anemia*. *Journal of Herbal Medicine*.
- Santoso, R. (2020). *Honey as a Natural Supplement for Anemia*. *Clinical Nutrition Journal*.
- Sari, T. (2022). *The Effect of Beet Juice on Pregnant Women with Anemia*. *Nutrition Journal*.
- Titaley , C.R., et al. (2019). *The effects of Moringa oleifera leaf consumption on hemoglobin levels among pregnant women in Indonesia*. *Indonesian Journal of Public Health*, 19(1), 45-51.

WHO. (2021). *World Health Statistics 2021: Monitoring health for the SDGs, sustainable development goals*. World Health Organization. <https://www.who.int>

Wijaya, A., et al. (2020). Prenatal Yoga and Anemia Improvement. *Journal of Prenatal Health*.