

Case Report: Comprehensive Midwifery Care for Pregnant Women with Mild Anemia and Chronic Energy Deficiency Supported by Date Extract

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ABSTRACT

Mild anemia and chronic energy deficiency (CED) are maternal nutritional problems that may coexist during pregnancy and can increase the risk of adverse maternal and fetal outcomes. This case report describes comprehensive midwifery care for a pregnant woman with mild anemia and CED in the working area of Plaosan Public Health Center, Magetan, Indonesia. A descriptive case report was conducted from 9 to 24 March 2026. The participant was Mrs. A, 23 years old, G1P00000, at 21–22 weeks of gestation at the initial assessment. Data were collected through anamnesis, observation, physical and obstetric examinations, laboratory assessment, and review of the maternal health record. Care was documented using the SOAP framework and implemented through four visits over two weeks. The main outcomes monitored were symptoms, hemoglobin (Hb), body weight, mid-upper arm circumference (MUAC), vital signs, fundal height, and fetal heart rate. At the first visit, the participant reported dizziness, fatigue, and blurred vision. Hb was 10.7 g/dL and MUAC was 21.5 cm, supporting the assessment of mild anemia and CED. Management included education on correct and regular iron-tablet intake, nutritional counseling, encouragement of iron-rich foods and balanced energy-protein intake, supportive date extract, ANC adherence, rest and activity management, danger-sign education, and P4K counseling. After four visits, the complaints resolved, Hb increased to 11.1 g/dL, body weight increased from 44.05 kg to 46.20 kg, and MUAC increased from 21.5 cm to 22 cm. Maternal vital signs remained stable and fetal heart rate remained within the normal range. Comprehensive and continuous midwifery care integrating iron supplementation, nutritional improvement, supportive date extract, education, and serial monitoring was associated with improvement in maternal symptoms, Hb, body weight, and MUAC in this case. Because MUAC remained below 23.5 cm, continued nutritional monitoring and follow-up are still required.

Keywords: midwifery care; mild anemia; chronic energy deficiency; pregnancy; iron supplementation; date extract

INTRODUCTION

Anemia is a common health problem among pregnant women and remains an important public health concern worldwide. If not appropriately managed, anemia may adversely affect maternal health and fetal development. Anemia during pregnancy is defined as a hemoglobin (Hb) concentration below 11.0 g/dL, which reduces the blood's oxygen-carrying capacity.⁽¹⁾ During pregnancy, iron requirements increase due to physiological expansion of maternal blood volume and fetal growth, making pregnant women more susceptible to iron deficiency and anemia. Clinical manifestations of anemia during pregnancy may include dizziness, fatigue, weakness, and blurred vision.^(1,2)

Several factors contribute to the development of anemia during pregnancy, including inadequate iron intake, poor adherence to iron supplementation, short pregnancy intervals, and pregnancy at high-risk ages, particularly below 20 years or above 35 years. Low socioeconomic status and educational attainment may also influence maternal knowledge and access to nutritious foods. Furthermore, some pregnant women may not consume iron tablets regularly because of nausea, gastrointestinal discomfort, or other unpleasant effects following consumption. These factors may reduce maternal iron stores and subsequently contribute to decreased hemoglobin levels.^(3,4) The risk of anemia is also influenced by iron status, nutritional intake, adherence to supplementation, maternal characteristics, and other contextual factors.^(3,4)

Chronic Energy Deficiency (CED) is another important nutritional problem during pregnancy that may increase the risk of anemia. CED reflects inadequate maternal nutritional status and may result in insufficient intake of essential nutrients, particularly iron, protein, and folate. A mid-upper arm circumference (MUAC) below 23.5 cm is commonly used as an indicator of CED risk. Low dietary diversity, inadequate food intake, and

suboptimal nutrient absorption may further increase the risk of anemia.⁽⁵⁾ CED may coexist with anemia because inadequate energy and nutrient intake can reduce the availability of iron, protein, folate, and other nutrients required for erythropoiesis. Previous studies have reported an association between CED and anemia among pregnant women, emphasizing the importance of assessing nutritional status together with hemoglobin levels rather than considering anemia in isolation.⁽⁵⁻⁷⁾

Anemia during pregnancy may result in complications affecting both mothers and fetuses. Fetal complications include an increased risk of miscarriage, intrauterine fetal death, preterm birth, and infection. Pregnant women with anemia may also experience complications during pregnancy and childbirth, including hemorrhage and premature rupture of membranes.⁽⁸⁾ Anemia may further increase the risk of low birth weight, low birth length, and preterm delivery.⁽⁹⁾ Therefore, early detection, regular monitoring, adequate nutritional intake, and iron supplementation are essential to prevent these complications. Pregnancy increases nutritional requirements, making regular antenatal care (ANC) important for the early identification of nutritional and hematological problems.⁽¹⁰⁾

Regular ANC is essential for the early detection and management of anemia during pregnancy. According to Fitriawati et al. (2025), ANC should be provided at least six times during pregnancy, including hemoglobin assessment.⁽⁴⁾ Management includes the provision of 90 iron tablets and monitoring their consumption to improve adherence. Rulya et al. (2024) reported that adherence to iron supplementation combined with nutritional education was associated with increased hemoglobin levels among pregnant women.⁽¹¹⁾ Adequate dietary intake, family support, and quality maternal healthcare services are also important components in the prevention and management of anemia.

The management of anemia during pregnancy should prioritize iron supplementation and adherence to its use, while nutritional counseling is necessary to address dietary adequacy and energy-protein requirements. Correct administration of iron tablets, avoidance of simultaneous consumption with tea or coffee, and adequate vitamin C intake are important for supporting iron absorption.^(12,13) Nutritional management of CED includes improving meal quality and frequency and increasing adequate sources of energy and protein.⁽¹⁴⁾ In addition, appropriate management of physical activity and rest should be considered because fatigue and activity demands may affect maternal well-being during pregnancy.^(15,16)

Date extract may be used as a supportive intervention to help improve hemoglobin levels. Audrias et al. (2021) reported that date extract contains approximately 0.90 mg of iron per 100 g and may contribute to improved hemoglobin levels when consumed regularly during pregnancy.⁽¹⁷⁾ Another study also reported an increase in Hb following date extract administration.⁽¹⁸⁾ However, date extract should be considered a complementary intervention alongside iron supplementation and a balanced diet. Date extract should not replace iron supplementation as the primary therapy for anemia during pregnancy.

Family support is also important in encouraging healthy dietary practices, regular iron-tablet consumption, and adherence to ANC. Such support may improve maternal adherence to health recommendations and help sustain appropriate dietary practices throughout pregnancy. Therefore, an integrated approach involving nutritional education, iron supplementation, improved energy and protein intake, family support, regular ANC, and monitoring of nutritional and hemoglobin status is necessary to prevent and manage anemia among pregnant women with CED.^(5,10)

METHODS

Study Design

This study used a descriptive case report design to provide an in-depth description of one clinically relevant midwifery case. The case involved a pregnant woman with mild anemia and Chronic Energy Deficiency (CED). The approach followed the midwifery management sequence of assessment, diagnosis/analysis, planning, implementation, and evaluation, with documentation using the SOAP (Subjective, Objective, Assessment, and Plan) framework.

Participant

The participant was Mrs. A, a 23-year-old primigravida, G1P00000, at 21–22 weeks of gestation at the initial assessment. She reported dizziness, fatigue, and blurred vision, with an Hb level of 10.7 g/dL, body weight of 44.05 kg, height of 155 cm, and MUAC of 21.5 cm. She was selected because the case represented a pregnant woman with coexisting mild anemia and CED who required comprehensive nutritional and hematological management.

Setting and Study Period

The case was managed in the working area of Plaosan Public Health Center, Magetan Regency, East Java, Indonesia. The initial assessment was conducted on 9 March 2026 at the participant's workplace in Plaosan Market, followed by home visits on 13, 18, and 24 March 2026. The total observation and care period was two weeks, consisting of four visits.

Data Collection

Data were collected using several complementary methods. Anamnesis was conducted to obtain demographic, obstetric, medical, menstrual, nutritional, activity, rest, and psychosocial information, including the participant's adherence to iron-tablet supplementation and date extract consumption. Direct observation was used to assess the participant's condition and response to counseling. Physical and obstetric examinations included vital signs, body weight, MUAC, fundal height, abdominal palpation, and fetal heart rate. Laboratory information included Hb, hematological parameters, infectious screening, blood glucose, and urine protein based on the available antenatal records. Hb was rechecked manually during the initial case visit and at the final visit. Documentation review included the maternal health record and supporting antenatal care documents.

Intervention and Follow-up

Care focused on the problems identified during the assessment. The participant received education on taking iron tablets regularly according to the prescribed dosage, consuming vitamin C to support iron absorption, and avoiding simultaneous intake of iron tablets with tea, coffee, or milk. Nutritional counseling was provided to encourage increased consumption of iron-rich foods from both animal and plant sources and to improve energy and protein intake through a balanced diet and more frequent meals. Supportive date extract was provided at a dosage of 3×2 tablespoons per day according to the care plan. Additional care included education on adequate rest and activity management, pregnancy danger signs, antenatal care, P4K, early signs of labor, and routine follow-up. At each visit, symptoms, adherence, vital signs, anthropometric measurements, fundal height, and fetal heart rate were assessed.

Outcome Measures

The primary short-term outcomes were changes in Hb, body weight, and MUAC. Additional outcomes included changes in dizziness, fatigue, blurred vision, maternal physical findings, fetal heart rate, and fundal height. These measures were selected because they were consistently assessed during the care period and could be used to describe the participant's clinical progress across the four visits.

Data Analysis

Data were analyzed descriptively by comparing baseline and follow-up findings across the four visits. No inferential statistical tests were performed because this study involved a single case. Clinical interpretation was based on the participant's symptoms, examination findings, laboratory values, nutritional status, fetal assessment, and response to the care plan. The findings were then discussed in relation to relevant scientific references.

Ethical Considerations

The case was conducted after informed consent was obtained from the participant following an explanation of the care and documentation procedures. The participant was identified using the initial "A" in the report to maintain confidentiality. The student participated in the care under the supervision of a practicing midwife, and all care was provided within the scope of midwifery practice and the healthcare service setting.

RESULTS

On the initial assessment conducted on 9 March 2026, Mrs. A was a 23-year-old primigravida at 21–22 weeks of gestation. She reported experiencing dizziness, fatigue, and blurred vision, which had begun during the first trimester and had gradually decreased by the beginning of the second trimester. During the first trimester, these symptoms interfered with her daily activities, causing her to temporarily stop working. By the beginning of the

second trimester, she had resumed working as a vendor/shop worker, with working hours from approximately 07.00 to 19.00, although her work schedule was not always fixed. She reported consuming three meals per day in moderate portions, consisting of rice, chicken, fish, eggs, tempeh, vegetables, and fruits. She consumed approximately 3 liters of water daily and also drank pregnancy milk. She reported having no dietary restrictions. Her husband and family provided adequate support, and she had attended antenatal care (ANC/ANCT) and received iron tablets and multivitamins. At the first visit, interventions included balanced nutrition education, counseling to increase energy and iron intake, monitoring of adherence to iron tablet consumption, administration of date fruit extract as supportive therapy at a dosage of two tablespoons three times daily, and reinforcement of family support.

Objectively, the participant was in good general condition, conscious, and well oriented. Her blood pressure was 100/78 mmHg, pulse rate 81 beats/minute, body temperature 36.6°C, and respiratory rate 20 breaths/minute. Her height was 155 cm and body weight was 44.05 kg, while her mid-upper arm circumference (MUAC) was 21.5 cm. Physical examination revealed a pale facial appearance, pale conjunctivae and lips, and a smooth-appearing tongue. Obstetric examination showed a fundal height of 13 cm and a fetal heart rate of 158 beats/minute. The manually measured hemoglobin (Hb) level at the initial visit was 10.7 g/dL. Based on these findings, the participant was assessed as having mild anemia accompanied by chronic energy deficiency (CED), while her overall maternal and fetal conditions were stable.

At the first follow-up visit on 13 March 2026, the participant continued to experience occasional dizziness, fatigue, and blurred vision. She continued to consume three meals per day and reported regular adherence to iron tablets and date fruit extract as recommended. Her body weight increased to 44.85 kg, while MUAC remained at 21.5 cm. Her blood pressure was 95/65 mmHg, pulse rate 81 beats/minute, body temperature 36.6°C, and respiratory rate 20 breaths/minute. The fetal heart rate was 156 beats/minute, and fundal height was 14 cm. The participant was provided with motivation and reinforcement to continue taking iron tablets and date fruit extract, increase the intake of iron- and energy-rich foods, and consume energy-dense snacks to support her nutritional requirements during pregnancy. She was also advised to obtain adequate rest and maintain routine ANC visits.

At the third visit on 18 March 2026, the participant reported that dizziness, fatigue, and blurred vision had become infrequent. She continued taking iron tablets and date fruit extract and maintained a fluid intake of approximately 8–9 glasses per day. Her body weight was 44.40 kg, and MUAC remained at 21.5 cm. Her blood pressure was 93/60 mmHg, pulse rate 79 beats/minute, body temperature 36.6°C, and respiratory rate 20 breaths/minute. The fetal heart rate was 138 beats/minute, and fundal height was 15 cm. Continued counseling was provided to increase energy and protein intake and to consume nutritious snacks to support weight gain and improve her nutritional status during pregnancy.

At the fourth visit on 24 March 2026, the participant reported that her dizziness, blurred vision, and fatigue had resolved, and she was able to perform her daily activities normally. She continued taking iron tablets and date fruit extract and consumed three meals per day, including foods such as rice, rawon, and eggs. Her blood pressure was 100/80 mmHg, pulse rate 82 beats/minute, body temperature 36.5°C, and respiratory rate 20 breaths/minute. Her body weight increased to 46.20 kg, representing a total increase of 2.15 kg from the initial visit, while MUAC increased to 22 cm. Her Hb level increased to 11.1 g/dL. Facial and conjunctival pallor was no longer observed. The fetal heart rate was 155 beats/minute, and fundal height was 18 cm. The final assessment was G1P00000 at 23–24 weeks of gestation with CED, with both maternal and fetal conditions assessed as good.

Table 1. Serial maternal and fetal findings during four visits

Date	Hb (g/dL)	Weight (kg)	MUAC (cm)	BP (mmHg)	FHR (bpm)	Fundal height (cm)	Main symptoms
09 Mar 2026	10.7	44.05	21.5	100/78	158	13	Dizziness, fatigue, blurred vision
13 Mar 2026	—	44.85	21.5	95/65	156	14	Occasional dizziness, fatigue, blurred vision
18 Mar 2026	—	44.40	21.5	93/60	138	15	Symptoms infrequent
24 Mar 2026	11.1	46.20	22.0	100/80	155	18	Symptoms resolved

The case report findings indicate that following two weeks of midwifery care consisting of four visits, Mrs. A, a pregnant woman with chronic energy deficiency (CED) and mild anemia in the working area of Plaosan Community Health Center, demonstrated good understanding of the education provided and was able to adhere

to the recommendations given. She followed the recommendations regarding iron tablet (Fe) consumption, date fruit extract consumption at a dosage of three times daily, two tablespoons per administration, and increased nutritional intake during pregnancy. This adherence was associated with positive outcomes, as demonstrated by a reduction in symptoms such as dizziness, fatigue, and blurred vision, which had previously been frequently experienced and eventually resolved at the final visit.

Monitoring across the four visits demonstrated improvements in symptoms and several maternal outcomes. The Hb level increased by 0.4 g/dL, from 10.7 g/dL to 11.1 g/dL. At the final visit, the participant's Hb level had reached the normal range, indicating that the anemia had resolved. Her body weight increased by 2.15 kg, from 44.05 kg to 46.20 kg, while MUAC increased by 0.5 cm, from 21.5 cm to 22 cm. This improvement was also supported by the participant's improved physical condition, as evidenced by the absence of facial and conjunctival pallor at the final visit. In addition, her vital signs remained stable, and the fetal heart rate remained within the normal range throughout the documented assessments.

Overall, the participant's physical condition improved, and the fetus remained in good condition according to the gestational age. However, because her MUAC remained below 23.5 cm, at 22 cm, the improvement in her nutritional status was considered partial and had not yet fully resolved, indicating the need for continued monitoring and further nutritional support, particularly to ensure adequate energy and protein intake throughout pregnancy. These findings suggest that the combination of nutritional education, adherence to iron supplementation, increased nutritional intake, and the use of date fruit extract as supportive therapy contributed to improvements in the health status of the pregnant woman with CED and mild anemia.

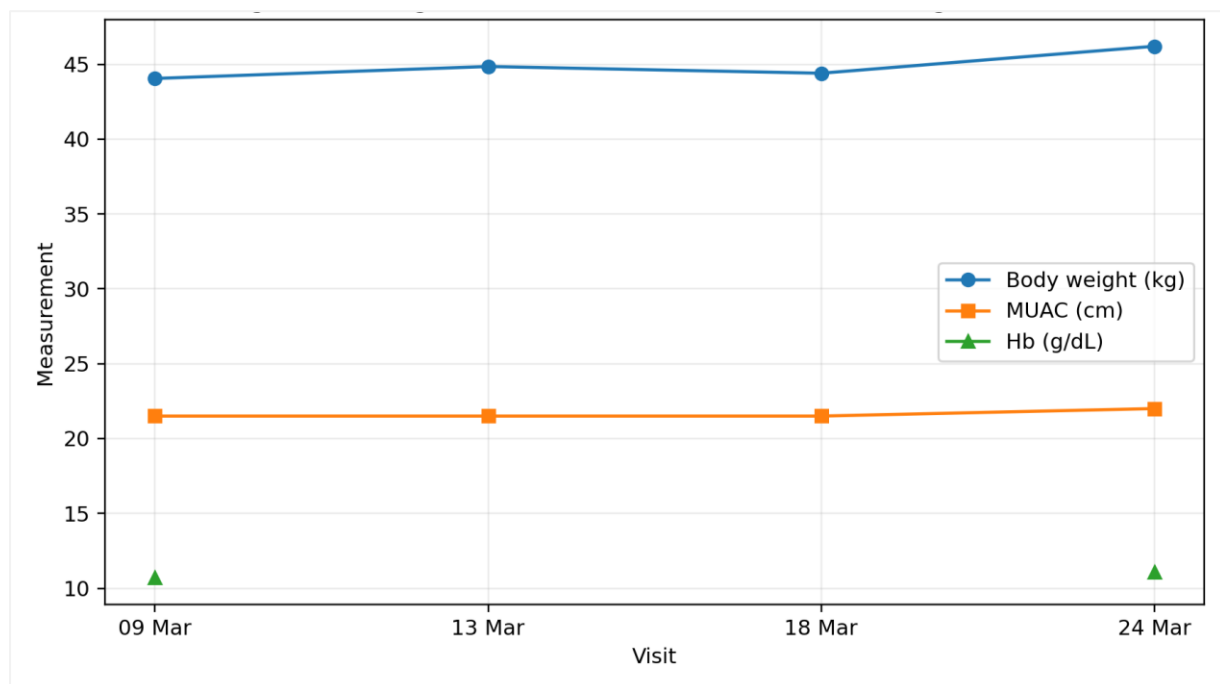


Figure 1. Changes in selected maternal outcomes across four visits. Hb was measured at the first and final visits; weight and MUAC were followed at all four visits

DISCUSSION

Based on the assessment of Mrs. A, a 23-year-old G1P00000 at 21–22 weeks of gestation, she reported experiencing dizziness, fatigue, and blurred vision that were still frequently present. She also worked as a vendor for approximately 12 hours per day and had a history of stopping work during the first trimester because of disturbing symptoms. These complaints were consistent with the clinical manifestations of anemia during pregnancy, in which decreased hemoglobin levels can impair oxygen transport to tissues, resulting in fatigue, dizziness, weakness, and visual disturbances.⁽¹⁹⁾ Chronic Energy Deficiency (CED) also contributed to the maternal discomfort, as indicated by a mid-upper arm circumference (MUAC) of <23.5 cm, reflecting inadequate long-term nutritional intake.⁽²⁰⁾ Prolonged physical activity without adequate nutritional intake and sufficient rest may increase maternal fatigue and exacerbate the symptoms of anemia and CED.⁽¹⁴⁾

Objective examination showed that Mrs. A was in good general condition with compos mentis consciousness. Her vital signs were within normal limits, with a blood pressure of 100/78 mmHg, pulse rate of 81 beats/minute, temperature of 36.6°C, and respiratory rate of 20 breaths/minute. Anthropometric measurements showed a body weight of 44.05 kg, height of 155 cm, and MUAC of 21.5 cm. Physical examination revealed pale conjunctiva and lips, brittle hair, and a smooth tongue. Laboratory examination showed a hemoglobin level of 10.7 g/dL, confirming mild anemia. Obstetric examination showed a fundal height of 13 cm, appropriate for gestational age, and a fetal heart rate of 158 beats/minute, which remained within the normal range of 120–160 beats/minute. These findings supported the diagnosis of anemia during pregnancy (Hb <11 g/dL) and CED (MUAC <23.5 cm), both of which may increase maternal and fetal health risks.^(18,19)

Analysis of the subjective and objective findings indicated that Mrs. A experienced mild anemia and CED. The combination of decreased hemoglobin levels and inadequate nutritional status explained her persistent complaints of dizziness, fatigue, and blurred vision. CED may contribute to impaired hemoglobin synthesis due to insufficient intake of energy, protein, and iron, thereby potentially worsening anemia.⁽⁵⁾ Although the maternal and fetal conditions remained stable without complications, continuous monitoring and appropriate management were required to prevent further deterioration.

Management was provided through four visits over a two-week period. The interventions included health education and counseling regarding adherence to iron supplementation, improvement of nutritional intake, and regular monitoring. To manage anemia, Mrs. A was advised to consume iron tablets regularly with vitamin C to enhance iron absorption and to avoid consuming tea, coffee, and milk simultaneously with iron tablets because these beverages may inhibit iron absorption.⁽¹²⁾ She was also encouraged to increase her intake of iron-rich foods, such as meat, liver, fish, eggs, and green vegetables. As supportive therapy, she was given date extract three times daily, with two tablespoons per administration, consumed on an empty stomach to support optimal nutrient absorption. Date extract contains iron and energy that may support hemoglobin synthesis.⁽¹⁷⁾ To manage CED, she received counseling to increase energy and protein intake through a balanced diet, consume smaller but more frequent meals, and adequately meet her requirements for carbohydrates, protein, fats, vitamins, and minerals.⁽¹³⁾

Evaluation after two weeks showed positive outcomes, with hemoglobin increasing from 10.7 g/dL to 11.1 g/dL, body weight increasing from 44.05 kg to 46.20 kg, and MUAC increasing from 21.5 cm to 22 cm. The subjective complaints of dizziness, fatigue, and blurred vision decreased, the maternal physical condition improved, and the fetal condition remained normal. These improvements indicated a favorable clinical response following comprehensive care involving adherence to iron supplementation, increased intake of nutritious and iron-rich foods, vitamin C consumption to support iron absorption, dietary adjustments to meet energy and protein requirements, family support, adequate rest, and the use of date extract as supportive therapy. Therefore, the increase in hemoglobin level and improvement in maternal condition in this case cannot be attributed solely to the administration of date extract but should be understood as the result of a combination of interventions provided throughout the care process. Date extract served as one supportive component to help improve nutritional intake, while iron supplementation remained the primary component of anemia management. These findings are consistent with evidence indicating that iron supplementation, nutritional counseling, family support, improved dietary intake, and the use of date extract as supportive therapy may contribute to improving maternal health and preventing complications during pregnancy.⁽¹⁰⁾ Nevertheless, despite the increases in body weight and MUAC and the improvement in hemoglobin level, the mother's MUAC remained below 23.5 cm, indicating that the nutritional risk had not been completely resolved. Therefore, continued nutritional assessment, increased energy and protein intake, and ongoing support throughout pregnancy remained necessary.

CONCLUSION

Comprehensive midwifery care that integrates nutritional education, adherence to iron supplementation, and supportive use of date extract has been shown to effectively improve maternal health outcomes in pregnant women with Chronic Energy Deficiency (CED) and mild anemia. The observed improvements in hemoglobin levels, maternal weight, and mid-upper arm circumference, together with the reduction of clinical symptoms, demonstrate that these interventions are both clinically beneficial and feasible within primary health care settings. Such findings strengthen existing evidence that nutritional counseling plays a vital role in preventing complications and supporting maternal and fetal well-being during pregnancy. Iron therapy remains the cornerstone of anemia management, highlighting its importance in antenatal care. The supportive use of date extract further contributes to hemoglobin synthesis and maternal energy intake. Additionally, the role of family support in ensuring compliance and sustaining nutritional improvements is crucial for positive outcomes. This case therefore underscores the importance of integrating evidence-based nutritional strategies into routine antenatal care to holistically address anemia and CED.

REFERENCES

1. Utomo D, Cuciati C, Risnanto R. Faktor yang berhubungan dengan kejadian anemia pada ibu hamil. *JIK Jurnal Ilmu Kesehatan*. 2023;7(2):303. doi:10.33757/jik.v7i2.733.
2. Aureli DA, Wardhani RK, Fauziyah N. Faktor-faktor yang berhubungan dengan kejadian anemia pada ibu hamil. *Jurnal Ilmiah Pamenang*. 2022;4(2):55-60.
3. Akib RD, Sukarta A, Erviany N, Hamil I. Faktor yang berhubungan dengan kejadian anemia pada ibu hamil di Puskesmas Salotungo Kabupaten Soppeng. *Indonesian Journal of Professional Nursing*. 2025;6(1):18-26.
4. Fitriawati N, Hendarwan H, Purnamasari R. Analisa faktor-faktor yang berhubungan dengan kepatuhan minum suplemen zat besi terhadap anemia ibu hamil. *Jurnal Ilmu Kesehatan Masyarakat*. 2025;14(1):93-112.
5. Qomarasari D, Pratiwi L. Hubungan umur kehamilan, paritas, status KEK, dan tingkat pendidikan ibu dengan kejadian anemia pada ibu hamil di Klinik El'Mozza Kota Depok. *Jurnal Kesehatan Kusuma Husada*. 2023;14(2).
6. Sandhi SI, Wijayanti D. Pengaruh kekurangan energi kronik (KEK) terhadap kejadian anemia pada ibu hamil. *Jurnal Kebidanan Indonesia*. 2021;12(1):78-86.
7. Agusmarinda R, Ananti Y, Purnamasari I. Hubungan Kekurangan Energi Kronis (KEK) dengan Kejadian Anemia pada Ibu Hamil. *Jurnal Kesehatan Amanah*. 2025;9(1):109-124. doi:10.57214/jka.v9i1.747.
8. Wahyuni R, Rohan S, Puspita L. Penyuluhan dampak anemia terhadap kesehatan ibu dan janin selama kehamilan di Desa Waluyojati tahun 2024. *Jurnal Pengabdian Kepada Masyarakat Ungu*. 2025;7(1):33-37.
9. Kementerian Kesehatan Republik Indonesia. Buku Saku Pencegahan Anemia pada Ibu Hamil dan Remaja Putri. Jakarta: Kementerian Kesehatan Republik Indonesia; 2023.
10. Rejeki IS, Fajri F. Penyuluhan dan pemeriksaan kadar hemoglobin untuk deteksi dini anemia pada ibu hamil. *Jurnal Pengabdian Masyarakat Gunung Sari*. 2023;3(1):1-8.
11. Rulya HO, Dewi R, Amalia R, Aisyah S. Hubungan pengetahuan, kepatuhan konsumsi tablet Fe, dan status gizi dengan kejadian anemia pada ibu hamil di wilayah kerja Puskesmas Ngarp. *Jurnal Kesehatan Tambusai*. 2024;6:133-143.
12. Sari NL. Pendidikan kesehatan tentang anemia dalam kehamilan dan pemeriksaan Hb sebagai langkah deteksi dini. *Jurnal Pengabdian Masyarakat Jajama*. 2023;2(1):35-43.
13. Kementerian Kesehatan Republik Indonesia. Buku KIA. Jakarta: Kementerian Kesehatan Republik Indonesia; 2024.
14. Sartini T, Mona S. Asuhan kebidanan pada ibu hamil dengan kekurangan energi kronik (KEK) melalui pemberian makanan tambahan di Puskesmas Tanjung Balai Karimun. *Zona Kebidanan*. 2023;13(2):124-134.
15. Muzakir H, Prihayati, Novianus C. Pengaruh kelelahan pada ibu hamil yang bekerja. *Higeia Journal of Public Health*. 2022;6(3):289-295.
16. Fajria NA, Sugesti R, Dewi MK. Hubungan aktivitas fisik, pola makan, dan dukungan suami terhadap kejadian anemia pada ibu hamil. *Jurnal Penelitian Inovatif*. 2024;4(2):565-574. doi:10.54082/jupin.358.
17. Audrias A, Maternity D, Yuliasari D, Mariza A. Pemberian sari dapat meningkatkan kadar Hb pada ibu. *Jurnal Kebidanan Malahayati*.
18. Rosdiana I. Effect of dates extract on increasing Hb levels in pregnant women. *Jurnal Ilmu Sosial dan Kesehatan*. 2020;9:1051-1056. doi:10.35816/jiskh.v10i2.463.
19. Pratiwi AM, Fatimah. *Patologis Kehamilan: Memahami Berbagai Penyakit & Komplikasi Kehamilan*. Yogyakarta: Pustaka Baru; 2019.
20. Kasmianti, Purnamasari D, Ernawati, Juwita, Salina. *Asuhan kehamilan*. PT Literasi Nusantara Abadi Grup; 2023.