



NURSING CARE FOR PREGNANT WOMEN WITH ANEMIA

Sri Dewi^{1*}, Nurwulan Khaira², Abd. Gafar³, Yulvi Hardoni⁴, Aini Yusra⁵,

^{1,2,3,4,5} DIII Nursing Study Program, Solok, Ministry of Health Polytechnic of Health, Padang, Indonesia

**Corresponding author: uchiuda@gmail.com*

Abstract

Anemia in pregnancy can increase the risk and complications in pregnancy, childbirth and postpartum, several cases of IUDR fetuses, abortion, IUFD, stillbirth, and low birth weight due to pregnant women who experience anemia. The purpose of this study describes how the application of nursing care to pregnant women with anemia using a descriptive method with a case study approach with the nursing process, including assessment of nursing diagnosis, planning, implementation, evaluation. Nursing care was carried out for six days on one patient who met the inclusion criteria. The results of the study found that the client complained of dizziness, dizzy eyes, her body felt weak, tired, easily tired, pale conjunctiva, pale face, Hb 8 gr / dl. The nursing diagnosis was ineffective peripheral perfusion, fatigue, knowledge deficit. Nursing interventions carried out were diet education, energy management, knowledge level. The implementation carried out encouraged eating vegetables, fruit, encouraged taking Fe tablets as recommended, doing activities such as pregnancy exercises, providing education about anemia. And obtained the final evaluation that peripheral perfusion increased, fatigue levels decreased, knowledge levels increased. Study results This expected capable become reference in development service nursing maternity, in particular in effort prevention and treatment anemia in pregnancy.

Keywords: Pregnant women, Anemia, Nursing care

1. INTRODUCTION

The World Health Organization (WHO) stated global prevalence of anemia in women age reproduction reached 29.9% (95% UI 27.0%–32.8%), equivalent to with more from half billion woman aged 15–49 years [1]. Among non-pregnant women of reproductive age, the prevalence reached 29.6% (95% UI 26.6%–32.5%). Meanwhile, in pregnant women, the prevalence of anemia was higher, namely 36.5% (95% UI 34.0%–39.1%) [2] [3]. The Indonesian health survey in 2023 stated that the prevalence of anemia in pregnant women in Indonesia was 27.7%. With anemia in the age group being 14.6% of the 15-24 age group, for the 25-34 age group, 31.4% for the 35-44 age group, 39.6% for the 45-54 age group and 2.4% for the 45-54 age group [4]. With the highest number of anemia cases in pregnant women still dominated in rural areas, namely 31.3% and in urban areas at 25.5%. [5]. Based on visit data from the Tanjung Paku Health Center in 2024, the number of pregnant women with anemia in the Tanjung Paku Health Center work area from January to December was 61 people.

The causes of anemia in pregnant women are less nutritious food, digestive disorders and malabsorption, lack of iron in food [6], increased iron requirements, heavy blood loss such as previous childbirth, menstruation and others, as well as chronic diseases such as tuberculosis, lung, intestinal worms, malaria and others [7]. The factors that influence anemia in pregnancy include socio-economic factors such as (level of education, economic status, access to health services, availability of nutritious food), biological factors such as (maternal age, pregnancy spacing, nutritional status, comorbidities), and cultural factors (food taboos, local beliefs, diet, family support) [8].

Anemia during pregnancy has a major impact on the fetus due to insufficient intake of nutrients and oxygen [9]. Fetal growth and development tends to be disturbed. Several cases of IUDR fetuses, abortion, IUFD, stillbirth, and low birth weight were found due to pregnant women experiencing anemia [10]. In the intranatal period, prolonged labor and obstructed labor, bleeding, especially in the third and fourth stages, can occur, while incidents during the postpartum period can include lactation disorders, the risk of postpartum infection, uterine involution disorders, and slow wound healing processes [11].

So far handling anemia in mothers pregnant more Lots focused on providing therapy pharmacological in the form of supplementation of substance tablets iron. However, in practice Still found various problem like non-compliance consumption of Fe tablets, lack of knowledge Mother about anemia, pattern nutrients that are not adequate, and limitations monitoring condition Mother during pregnancy [12]. Condition the show that management anemia in mothers pregnant No only need intervention medical, but also a therapeutic approach, comprehensive and continuous nursing care at the primary level family.

Nurses have a role as educators, where nurses can provide health education to clients regarding causative factors, disease prevention, and provide appropriate information about managing anemia [13]. In addition, documentation application of the nursing process start from assessment, nursing diagnosis, intervention, implementation, to evaluation of the case anemia pregnancy Not yet Lots explained in a way deep in form studies case. In fact, the approach structured nursing is very necessary to improve health status, prevent complications, and increase compliance to therapy.

Through studies case This expected can obtained description real about implementation of the care process nursing care for mothers pregnant with anemia in a way Systematic and evidence-based. The purpose of this study is to describe how to apply nursing care to pregnant women with anemia using the nursing process method.

2. METHODOLOGY

This research was conducted in the Tanjung Paku Community Health Center, Solok City, in 2025. The research was conducted from March 24–29, 2025. The research design used was descriptive. The type of research design used was a case study. Case study research is a study that explores a nursing problem with detailed limitations, has in-depth data collection and includes various sources of information. In this case study research, nursing care was provided to pregnant women with anemia. The subject of the case study in this research was one pregnant woman with anemia who met the criteria. inclusion and exclusion criteria inclusion that is willing to be respondents and sign the consent form, able to communicate well and pregnant women diagnosed with anemia. Criteria exclusion namely pregnant women with age pregnancy > 36 weeks. The subject selection technique in this case study was Accidental sampling. Data collection methods in this study were through interviews, direct measurements, and documentation studies.

3. RESULTS AND DISCUSSIONS

3.1 Pengkajian

The assessment was conducted on a 30-year-old woman (G2P1A0H1) with a gestational age of 31 weeks. Her last education was high school, her job was a housewife, and her husband's income was 2,000,000 per month. During the assessment, the client complained of dizziness upon waking and sometimes accompanied by headaches, blurred vision when going from sitting to standing/from lying to standing, the client said her body felt weak, tired and quickly exhausted when doing activities such as washing clothes, washing dishes, and cleaning the house, the client said that if she did too much activity, she felt pain in her extremities. The client said that she felt her energy was not restored and lacked energy even after taking a nap and the client also looked a little pale and lethargic. The client said that she rarely exercised, and also said that she rarely consumed fruit and vegetables, and the client said that she rarely took the Fe tablets that were given to her. The client said that during early pregnancy she experienced excessive nausea and vomiting and said that she did not know much about anemia that occurred in her pregnancy. The client reported frequently eating fast food and drinking tea in the morning. She stated that she had only had two prenatal checkups, one in the first and the other in the third trimester. She also reported difficulty sleeping due to her growing pregnancy. She complained of feeling unsatisfied with her rest and sleep.

In line with the theory that says that pregnant women who experience anemia will usually experience symptoms such as mothers complaining of fatigue quickly, frequent dizziness, blurred vision, sore tongue, decreased appetite, loss of concentration, changes in nail epithelial tissue, shortness of breath in severe anemia, and complaints of vomiting more severely during pregnancy [14]. These symptoms are caused by the brain lacking oxygen because the hemoglobin carrying capacity is reduced, causing blurred vision, dizziness, and sometimes accompanied by shortness of breath.

The results of this study are in accordance with previous research which stated that the complaints of pregnant women with anemia were that the mothers complained of feeling weak, tired and often dizzy [15].

On physical examination Mrs. R found the patient's face pale, the client's lips looked pale, the mucous membrane of the lips was dry, the skin looked pale, the acral felt cold, the skin turgor decreased, the patient looked weak, the conjunctiva was pale. On abdominal examination, Leopold I palpation showed a TFU of 30 cm mid-center and px, Leopold II on the right side of the mother's abdomen felt long and hard like a board possibly the back of the fetus and the left side of the mother's abdomen felt small protrusions possibly the fetal extremities, on Leopold III On the lower part of the mother's abdomen felt round, hard and could still be shaken, the fetal head had not entered the PAP, Because the fetus had not entered the PAP, Leopold IV was not performed. For the estimation of fetal weight (TBJ) was obtained 2635 gr. The results of laboratory examinations obtained a Hemoglobin level of 8 g / dl.

The results of the physical examination conducted are in accordance with the theory that in pregnant women with anemia, the face will usually appear pale, the conjunctiva pale, the sclera appear pale, and the mucous membranes will appear pale [16]. Pregnant women are very susceptible to iron deficiency anemia because during pregnancy the need for oxygen is higher, thus triggering an increase in erythropoietin production [17]. As a result, plasma volume increases and red blood cells (erythrocytes) increase. However, the increase in plasma volume occurs in a greater proportion when compared to the increase in erythrocytes, resulting in a decrease in hemoglobin (Hb) concentration due to hemodilution [18].

The results of this study are in accordance with previous research where physical examination of the patient found that the client's facial expression looked tired and weak, the mucous membranes were dry, the conjunctiva was pale, and the skin color was pale [19].

3.2 Nursing Diagnosis

Based on the data assessment and analysis process, 3 diagnoses were obtained, namely (1) Ineffective peripheral perfusion (D.0009) due to decreased hemoglobin concentration, Fatigue (D.0057) due to physiological conditions (anemia), Knowledge deficit (D.0111) due to lack of exposure to information.

3.3 Nursing Interventions

The guidelines used in developing the nursing care plan were the SLKI and SIKI guidelines. Based on the nursing diagnoses identified in Mrs. R, the researcher created a nursing plan to address these issues. Nursing planning was conducted for the following three diagnoses:

3.3.1 Ineffective peripheral perfusion (D.0009)bd Decreased hemoglobin concentration

The nursing outcomes to be achieved are increased peripheral perfusion with the following outcome criteria: increased peripheral pulse strength, decreased pale skin color, decreased extremity pain, improved acral, improved skin turgor, improved systolic blood pressure, improved diastolic blood pressure.

Nursing interventions carried out are: Diet education , Observation: Identify the patient's and family's ability to receive information, Identify the current level of knowledge, Identify current and past eating habits. Therapeutic: Prepare materials, media and teaching aids, Schedule the right time to provide Health education, Give the patient and family the opportunity to ask questions . Education: Teach how to plan meals according to the program (Recommend consuming vegetables, fruits and also iron tablets).

3.3.2 Fatigue (D.0057) due to physiological conditions (anemia)

The nursing outcomes that will be achieved are: increased verbalization of energy recovery, increased strength, increased ability to carry out routine activities, increased motivation, decreased complaints of fatigue and lethargy, decreased headaches, decreased anxiety, improved appetite, improved rest patterns.

Nursing interventions carried out are: Energy management , Observation: Identify body function disorders that cause fatigue, Monitor physical and emotional fatigue, Therapeutic: Perform passive and / or active range of motion exercises. Education: Recommend gradual activities such as doing pregnancy exercises.

3.3.3 Knowledge deficit (D.0111) due to lack of exposure to information

The nursing outcomes that will be achieved are: Behavior according to recommendations increases, verbalization of interest in learning increases, the ability to explain knowledge about a topic increases, the ability to describe previous experiences according to the topic increases, questions about the problems faced decrease, erroneous perceptions of the problem decrease, undergoing inappropriate examinations decrease.

Nursing interventions carried out are: Health Education, Observation: Identify readiness and ability to receive information, Therapeutic: Provide Health Education materials and media (anemia in pregnancy), Schedule Health Education as agreed, Provide opportunities to ask questions. Education: Explain risk factors that can affect health, Teach clean and healthy living behavior, Teach strategies that can be used to improve clean and healthy living behavior.

3.4 Nursing Implementation

The nursing implementation was conducted over six days, from March 24 to 29, 2024, using observation, counseling, and demonstration methods, with meetings lasting approximately 30 to 45 minutes each day. Following implementation, progress notes were compiled for each nursing diagnosis.

3.4.1 Diet education

The nursing implementation carried out is: identifying the ability of patients and families to receive information, identifying the current level of knowledge, identifying current and past eating habits, scheduling the right time to provide health education, encouraging consumption of vegetables, fruits and also Fe tablets. The nursing evaluation achieved is: increased peripheral pulse strength, decreased pale skin color, decreased extremity pain, improved acral, improved skin turgor, improved systolic blood pressure, improved diastolic blood pressure.

Based on the results of previous research, it is known that efforts to overcome anemia are carried out by encouraging mothers to consume nutritious foods, especially those containing lots of protein, vegetables and fruits to increase iron, as well as encouraging the consumption of Fe tablets as recommended [20]. This research is in line with previous research which found that the lack of regular consumption habits and minimal family support are still the main obstacles in increasing compliance of pregnant women with the Fe supplementation program, which in turn can have an impact on the effectiveness of preventing anemia during pregnancy [6].

3.4.2 Energy management

The nursing implementation carried out is: identifying body function disorders that cause fatigue, monitoring fatigue, encouraging gradual activities such as carrying out daily activities routinely and doing pregnancy exercise activities.

To mother pregnant with anemia, fatigue is one of the common problems appear consequence decline level hemoglobin in blood. Hemoglobin functioning bring oxygen to network body, so that decline level hemoglobin cause supply oxygen to cells and tissues become not optimal. Condition the result in production energy decline and rise complaint like tired, lethargic, sick head, decrease ability activity, disturbance pattern rest, and decline motivation in do activity daily.

Based on the results of previous research, hemoglobin levels were measured before and after pregnancy exercises and the results obtained showed a difference in hemoglobin levels in the first and second measurements where pregnancy exercises had a 5.4% effect on increasing hemoglobin levels in pregnant women [21].

3.4.3 Health Education

The implementation of nursing carried out is: identifying readiness and ability to receive information, scheduling health education according to agreement, explaining risk factors that can affect health, exploring client knowledge about anemia, explaining the causes, risk factors, the process of occurrence, signs and symptoms, complications, and ways to prevent anemia in pregnancy.

To mother pregnant with anemia, lack of knowledge about conditions experienced often become influencing factors behavior health patient. Ignorance about causes, signs and symptoms, impacts anemia, as well as method prevention and treatment can cause Mother No obedient to recommendation health, such as consumption of Fe tablets, regulation pattern eat , and inspection pregnancy routinely. Condition the can worsen health status mother and improve risk complications during pregnancy.

Based on the results of previous research, researchers carried out implementation, namely informing mothers about the results of the examination, explaining to mothers about anemia, informing mothers about the causes of anemia, anemia management, complications of anemia in pregnancy, providing health education about nutrition for pregnant women, informing mothers how to take Fe tablets correctly [20].

After the implementation is carried out, progress notes are compiled for each nursing diagnosis. The progress notes obtained on the first to sixth days for the nursing problem of Ineffective Peripheral Perfusion are that the client said he had consumed fruits and vegetables because he understood the benefits of vegetables and fruits, the client ate according to the explained portion, and the client had consumed Fe tablets as recommended. The client's face no longer looked pale, vital signs examination showed blood pressure results of 100/70 mmHg, Pulse 75x/l, Respiration 20x/l, Temperature 36.4°C, Body Weight: 70Kg, Height: 105cm, Hb 10 gr/dl,

The client seemed to understand and know what foods contain iron that are needed to be consumed by anemia sufferers.

The progress notes obtained on the first to sixth day for the nursing problem of fatigue are that the client said that his body was no longer tired and had more energy than before, the client said that he had taken walks in the morning even if only for a short time, the client said that he had often done exercise in his free time, the client did not seem tired anymore, the client seemed to be able to maintain routine activities, the client seemed to apply the education that had been given.

The progress notes obtained on the first to sixth day for the nursing problem of knowledge deficit are that the client said she already knows why she can get anemia during pregnancy, the client said she already knows about the causes, risk factors, the process of occurrence, signs and symptoms, complications, and how to prevent anemia during pregnancy, the client seems no longer confused, the client seems to be asking about her pregnancy.

3.5 Nursing Evaluation

Evaluation is conducted based on the patient's condition and response after 6 days of intervention. Nursing evaluation achieved for the nursing problem of Ineffective Peripheral Perfusion is increased peripheral pulse strength, decreased pale skin color, decreased extremity pain, improved acral, improved skin turgor, improved systolic blood pressure, improved diastolic blood pressure. Diet education and compliance consume Fe tablets regularly sustainable can help improve hemoglobin status so that perfusion peripheral increased. With thus, diet education is intervention effective nursing in help overcome anemia in mothers pregnant and supportive improvement health Mother and fetus.

Nursing evaluation achieved for the nursing problem of fatigue is verbalization of increased energy recovery, increased strength, increased ability to carry out routine activities, increased motivation, decreased complaints of fatigue, decreased headaches, decreased anxiety, improved appetite, improved rest patterns. Management energy optimally for mothers pregnant with anemia can help increase ability activity mother. With thus, management energy is intervention effective nursing in help reduce fatigue and increase quality life Mother pregnant with anemia.

Nursing Evaluation achieved for knowledge deficit nursing problems, namely increased behavior according to recommendations, increased verbalization of interest in learning, increased ability to explain knowledge about a topic, increased ability to describe previous experiences according to the topic, decreased questions about the problem faced, decreased erroneous perceptions of the problem, decreased undergoing inappropriate examinations. health in a way sustainable can increase knowledge and change behavior Mother pregnant to more direction positive. With thus, education health is intervention important nursing in increase ability Mother pregnant for guard health yourself and prevent complications consequence anemia during pregnancy.

4. CONCLUSIONS

The results of the study showed that the diagnosis that appeared in the client was Ineffective peripheral perfusion due to decreased hemoglobin concentration, Fatigue due to physiological conditions (anemia), Knowledge deficit due to lack of exposure to information. Nursing interventions were based on diagnoses that could be established, nursing plans in accordance with the SDKI, namely Diet Education, Energy Management and Health Education. Nursing implementation was adjusted to the action plan that had been prepared and carried out on March 24-29, 2024 with observation, counseling and demonstration methods. Nursing evaluation is the final stage of the nursing process. The evaluation was carried out for 6 days in accordance with the nursing intervention reference. The results of the study obtained in nursing problems diagnosed 1, namely increased peripheral pulse strength, decreased pale skin color, decreased extremity pain. The results of the study obtained in nursing problems diagnosed 2, namely increased energy recovery verbalization, decreased fatigue verbalization, improved appetite. The results of the evaluation in diagnosis 3, namely Verbalization of interest in learning has increased,

the ability to explain knowledge about a topic has increased, erroneous perceptions of problems have decreased.

ACKNOWLEDGEMENTS

The researchers would like to thank the participants for volunteering and sharing their feelings during intervention.

REFERENCES

- [1] B. Devi, N. Vir Singh, S. Kaur, R. Das, A. Pal, and P. Malhotra, "Prevalence and Determinants of Anemia Among Nursing Professionals in a Tertiary Care Center," *Indian J. Hematol. Blood Transfus.*, 2025, doi: 10.1007/s12288-025-02014-x.
- [2] R. Juwita, *Anemia pada Ibu Hamil dan Faktor yang Memengaruhinya*. Penerbit NEM, 2023.
- [3] D. Kinyoki et al., "Anemia prevalence in women of reproductive age in low- and middle-income countries between 2000 and 2018," *Nat. Med.*, vol. 27, no. 10, pp. 1761–1782, 2021, doi: 10.1038/s41591-021-01498-0.
- [4] Kementerian Kesehatan, *Profil Kesehatan Indonesia 2023*. 2023.
- [5] R. Kemenkes, "SSGI 2024 Survei Status Gizi Indonesia dalam Angka," 2025.
- [6] G. Khuu and C. Dika, "Iron deficiency anemia in pregnant women," *Nurse Pract.*, vol. 42, no. 10, pp. 42–47, 2017, doi: 10.1097/01.NPR.0000516124.22868.08.
- [7] Kemenkes, *Survei Kesehatan Indonesia (SKI) Dalam Angka*. 2023.
- [8] E. Nurachma, R. A. Putri, D. Hendriani, and N. A. Syukur, *Pengurangan Status Gizi Ibu Hamil dengan Anemia melalui Es Krim Daun Kelor*. Penerbit NEM, 2023.
- [9] M. M. Rahman et al., "Maternal anemia and risk of adverse birth and health outcomes in low- and middle-income countries: Systematic review and meta-analysis," *Am. J. Clin. Nutr.*, vol. 103, no. 2, pp. 495–504, 2016, doi: 10.3945/ajcn.115.107896.
- [10] C. M. Chaparro and P. S. Suchdev, "Anemia epidemiology, pathophysiology, and etiology in low- and middle-income countries," *Ann. N. Y. Acad. Sci.*, vol. 1450, no. 1, pp. 15–31, 2019, doi: 10.1111/nyas.14092.
- [11] S. Romaulina et al., *Anemia Pada Kehamilan*. Yogyakarta: Penerbit K Media, 2024.
- [12] Demsa, Jumiaty, and A.rahmadi., *Pencegahan dan penanggulangan kurang energi kronik dan anemia pada ibu hamil*. Yogyakarta: Grup penerbitan CV Budi Utama, 2020.
- [13] A. N Kamilia Fithri , Putri et., "Faktor-Faktor Yang Berhubungan Dengan Kejadian Anemia Pada Ibu Hamil," *Usia2*, vol. VIII, no. 2, pp. 14–22, 2021, doi: 10.37048/kesehatan.v12i1.274.
- [14] S. Suparti and A. N. Fauziah, "Dampak Anemia Kehamilan Dengan Kejadian Bayi Bblr Di Puskesmas Musuk I Kecamatan Musuk Boyolali Tahun 2018," *J. Kebidanan Indones. J. Indones. Midwifery*, vol. 11, no. 1, p. 134, 2020, doi: 10.36419/jkebin.v11i1.334.
- [15] M. Sattu and N. Safitri, *Pengetahuan Dasar Gizi Ibu Hamil*. Jambi: PT. Sonpedia Publishing Indonesia, 2023.
- [16] I. S. Suryani., Asep Mulyana, M. K. Meti Fatimah, A. Kafkaylea, and C. Premium, *Pencegahan Anemia Dengan Makanan Tambahan: Menuju Ibu Hamil Sehat dan Kreatif*. Edu Publisher, 2021.

- [17] K. Austin, G. Kidson-Gerber, and A. Shand, "Iron deficiency anaemia in pregnancy: How best to treat, and why," *Med. Today*, vol. 20, no. 8, pp. 41–46, 2019, [Online]. Available: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85071657797&partnerID=40&md5=c8ef554308f8e23d122eafc2b1007da2>
- [18] N. Asiyah, "Peran Edukasi Perawat dengan Tingkat Pengetahuan pada kejadian Anemia Ibu Hamil Trimester III," vol. 01, no. 03, pp. 63–68, 2022.
- [19] Y. Syaiful and Lilis Fatmawati, *Asuhan Keperawatan Kehamilan*. Jakad Media Publishing, 2019.
- [20] A. F. Tendean, R. V. F. Sumampouw, and C. N. Ering, "Tingkat Pengetahuan Anemia Ibu Hamil Dan Kepatuhan Konsumsi Tablet Fe," *Klabat J. Nurs.*, vol. 7, no. 2, pp. 280–290, 2025, doi: 10.37771/kjn.v7i2.1421.
- [21] M. Z. Qotrunnada, A. Y. Fauzi, and T. Mahmudiono, "The Effect of Nutrition Education on Hemoglobin Levels among Pregnant Women : A Systematic Review and Meta-Analysis," *Media Gizi Kesmas*, vol. 14, no. 2, pp. 332–344, 2025.