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Factors Affecting The Incidence of Anemia in Third-Trimester Pregnant Women at Purwoharjo Primary Health Center, Pemalang District

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Abstract

Introduction: Anemia in pregnancy occurs due to a lack of nutritional intake to meet the needs of the mother and fetus. According to Riskesdas, the prevalence of anemia in Indonesia is 48.9%. Anemia in pregnancy can occur due to various factors. The most common anemia in pregnancy is iron deficiency anemia which is caused by a lack of nutritional intake and foods that contain iron.

Methods: This research uses a quantitative approach with descriptive observational, the sample was pregnant women in the third trimester, who had Hb levels <11 gr/dl and underwent ANC at Purwoharjo Primary Health Center. This research was conducted in August-October 2023 with a total of 62 respondents, analysis used univariate analysis.

Results: The prevalence of anemia in third-trimester pregnant women at the Purwoharjo Primary Health Center is 43%. Various factors influence the incidence of anemia in pregnant women in the third trimester at Purwoharjo Primary Health Center.

Conclusion: The prevalence of third-trimester pregnancy anemia at the Purwoharjo Primary Health Center is 43%, and the most influencing factors are nutritionalstatus (61.3%) and non-compliance with iron supplement consumption (53.2%). Health officials have also made various efforts to reduce the incidence of anemia

Keywords: Anemia, Pregnant Women, Hemoglobin, Primary Health Center

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Introduction

Pregnancy is the process of growth and development of the fetus in the womb starting from the beginning of conception until delivery. The normal pregnancy period lasts 280 days, after which changes occur in the mother's body as a form of adjustment.[1] During pregnancy, a mother's body will need more food for herself and for the fetus she is carrying. The nutritional intake consumed by the mother is a factor in the growth and development of the fetus. The more the mother consumes adequate intake, the more her fetus will be able to grow well.[2]

Low consumption intake by pregnant women can result in various risks for the mother and the fetus she is carrying. Currently, public awareness regarding health and nutrition for pregnant women is still relatively low. This can be seen from

the many incidents experienced by pregnant women, including heavy bleeding during pregnancy, fetuses that do not grow well, premature births, and various other incidents that can even result in death for the mother and fetus.[3]

Anemia is a condition of decreased hemoglobin levels in the blood due to reduced erythrocyte production which can be caused by various factors. Pregnant maternal anemia is a condition when the mother's hemoglobin level is below 11% in the first and third trimesters, and in the second trimester below 10.5%. Anemia is a response from the mother's body because during pregnancy the blood supply in the body increases by 20-30%, so the body needs more blood sources, one of which is iron and vitamins to help the process of making erythrocytes more quickly and in greater quantities.[4]

The incidence of anemia in pregnant women is associated with increasing gestational age. As gestational age increases, a pregnant woman's body will physiologically experience changes, this can be seen in the 6th week when the blood plasma volume will increase and the peak increase is at the 26th week. In the third trimester, the incidence of anemia is related to increasing gestational age, which causes more iron in the blood to be divided for fetal growth, and iron to bind the blood in the mother will decrease.[5]

Anemia in pregnant women is influenced by various factors, including nutritional intake, gestational diabetes, multiple pregnancies, teenage pregnancies, and inflammation or infection during pregnancy. Apart from that, other factors influence anemia, namely the mother's age, mother's education level, family income, and consumption of blood-boosting tablets. Mothers under 20 years of age and pregnant mothers over 35 years of age are at 3,921 times greater risk of experiencing anemia. The majority of pregnant women who experience anemia are mothers from families with low incomes. Level of education and employment are factors that indirectly influence the incidence of anemia. The low consumption of blood-boosting tablets by pregnant women occurs for several reasons. One of them is that the mother feels healthy, so she does not need additional consumption of blood-boosting tablets and there are side effects that arise after consuming blood-boosting tablets.[6]

In contrast to the results of research by Sariestya Rismawati and Etin Rohmatin in 2019, there was no specific relationship between age, education, employment, and knowledge of pregnant women on the incidence of anemia. However, this research is in line with existing research that the consumption of blood-boosting tablets is the factor that has the most influence on the incidence of anemia. Researchers also added another important factor in the incidence of anemia in pregnant women, namely ANC visits at available health facilities.

Anemia is currently still an unsolved health problem. According to Riskesdas 2018, the incidence of anemia in pregnant women in Indonesia is still relatively high, namely 48.9%, this figure has increased compared to 2013, which was 37.1%. The highest number of cases of anemia in pregnant women is dominated by rural areas with a prevalence of 49.5%, while in urban areas it is 48.3%.[7]

Maternal death during pregnancy is divided into two based on the cause, namely direct and indirect. Bleeding is one of the indirect causes of death in pregnant women which can be caused by anemia. The prevalence of bleeding as a result of anemia in Central Java in 2021 is 10.7%. Meanwhile, in Pemalang Regency, it is at 18.75%.[8]

Methods

Scope of Research

The scope of this research is Obstetrics-Gynecology.

Place and Time of Research

The research was conducted at the Purwoharjo Primary Health Care Health Center, Pemalang Regency in August-October 2023. Purwoharjo Health Center is located on Jl. Raya Sidorejo, Purwoharjo, Comal District. Purwoharjo Health Center has a working area of ten villages with a total working area of 3,003.14 km², including Tumbal Village, Pecangakan Village, Sikayu Village, Purwosari Village, Purwoharjo Village, Sidorejo Village, Lowa

Village, Ambokulon Village, Gedeg Village, and Kauman Village. Place and time of research.

Type and Research Design

The research design used in this research is descriptive observational, namely research that does not use intervention to see the picture or describe problems in a certain population.

Population and Sample

The target population in this study was all pregnant women at the Purwoharjo Primary Health Care Health Center, Pemalang Regency. The target population in this study is pregnant women who routinely undergo ANC at the Purwoharjo Health Center, Pemalang Regency. The sample for this research was pregnant women at the Purwoharjo Primary Health Care Health Center, Pemalang Regency who met the research criteria. The inclusion criteria for this study were pregnant women who were in the third trimester and pregnant women who had Hb <11 gr/dl. The exclusion criteria in this study were mothers who had a history of anemia before pregnancy, mothers with hearing or vision problems, pregnant women who had experienced bleeding and were hospitalized, mothers who had infections, and mothers who were unwilling to be respondents. In the research period from August to October, there were 143 pregnant women in the third trimester and 62 pregnant women who met the inclusion and exclusion criteria.

Research Variables

The variables in this study were the age of the pregnant mother, pregnancy distance, parity, multiple pregnancies, chronic diseases, knowledge, nutritional status, compliance with iron supplement consumption, and ANC compliance.

How to Collect Data

This research used tools in the form of cameras for documentation in the form of photos during research, questionnaires for collecting primary data, and software for processing data. The data used in this research are secondary data and primary data. Secondary data was obtained from ANC results of pregnant women at the Purwoharjo Primary Health Care Health Center, Pemalang Regency within a predetermined time to see the relationship between the sample and the research conducted. Primary data was obtained by filling out a questionnaire by the sample.

Data Analysis

Once collected, the data is processed using data entry, editing, coding, and tabulation. Data processing steps are Editing, Coding, Data Entry, Data Tabulation, and Computer Output.

Ethics approval

This research has received ethical approval from the health research ethics committee KEPK RSI Sultan Agung No. 182/KEPK-RSISA/VII/2023.

Results

Data analysis in this research is univariate analysis. Univariate analysis is used to describe each variable without looking for relationships between existing variables using the frequency distribution.

Age

Of the 62 respondents in this study, 44 respondents (71%) were aged 20-35 years, and 18 respondents (29%) were aged between 35 years.

Pregnancy Spacing

Of the 62 respondents in this study, 54 respondents (87.1%) had a pregnancy distance of >2 years, and 8 respondents (12.9%) had a pregnancy distance of >2 years.

Parity

It is known that of the 62 respondents, 33 respondents (53.2%) had parity of 2 children. The parity of respondents showed that 17 respondents (27.4%) did not have children, 9 respondents (14.5%) had 1 child, 7 respondents (11.3%) had 2 children, 15 respondents (24.2%) had 3 children, 10 respondents (16.1%) have 4 children, and 4 respondents (6.5%) have 5 children.

Multiple Pregnancy

The results of the questionnaire have been distributed to respondents on the

identity sheet. It is known that none of the 62 respondents in this research experienced multiple pregnancies.

Chronic Disease

The results of questionnaires that have been distributed to respondents regarding chronic diseases are contained in the identity sheet. It is known that of the 62 respondents, 60 respondents (96.8%) did not have any disease during pregnancy, 1 respondent (1.6%) had gastritis during pregnancy, and 1 respondent (1.6%) had tuberculosis during pregnancy. pregnancy.

Knowledge About Anemia

The results of the questionnaire that was distributed to respondents showed knowledge about anemia. It is known that of the 62 respondents, 25 respondents (40.3%) had good knowledge about anemia, 24 respondents (38.7%) had sufficient knowledge about anemia, and 13 respondents (21%) had very good knowledge about anemia.

Nutritional status

The results of the questionnaire that has been distributed to respondents regarding nutritional status on the identity sheet. Nutritional status in this study used the 58system58or measure of the respondent's LILA contained in the KIA book on the results of the last examination. It is known that of the 62 respondents, 38 respondents (61.3%) had a LILA size of 23.5 cm. In this study, poor nutritional status was indicated by a LILA size of 23.5 cm.

Compliance with Iron Consumption

Results of questionnaires that have been distributed to respondents regarding compliance with iron consumption. It is known that of the 62 respondents, 33 respondents (53.2%) were not compliant in consuming iron, and 29 respondents (46.8%) were compliant in consuming iron.

ANC Compliance

The results of the questionnaire that was distributed to respondents regarding ANC compliance were based on the KIA book. It is known that all 62 respondents (100%) have performed ANC >3 times. This is because the respondents in this study were pregnant women who were in their third trimester and experienced anemia. The Primary Health Care always monitor pregnant women who have risks during pregnancy, one of which is anemia, so that pregnant women with this condition are always monitored by the Primary Health Care to carry out routine ANC and the Primary Health Care also organizes routine laboratory examinations at the beginning of each trimester of pregnancy.

Anemia

The results of the questionnaire showed that 37 respondents (59.7%) had very mild anemia, 21 respondents had mild anemia (33.9%), 4 respondents had moderate anemia (6.5%), and 0 respondents had severe anemia (0%).

Discussion

Prevalence of Anemia in Pregnant Women in the Third Trimester at the Purwoharjo Primary Health Care Health Center

Prevalence is said to be the proportion of pregnant women with anemia in the third trimester who meet the inclusion and exclusion criteria to all pregnant women with anemia in the third trimester. From Primary Health Care data obtained during the research period, namely from August-October 2023, it is known that during that time there were 143 pregnant women who were in the third trimester and of them 62 pregnant women experienced anemia. Respondents who carry out research each month are different, namely respondents who have carried out research in the previous month will not be included in the research again in the following month. From the large number of respondents who experienced anemia in the third trimester, it can be seen that the prevalence was 43%. This figure is below the prevalence of anemia in pregnant women in Indonesia, which is 48.9%, and the prevalence of anemia in Central Java is 43.5%.[9]

The prevalence of anemia which is below the Ministry of Health's prevalence occurs because the Primary Health Care Health Center routinely monitors pregnant women who are at risk by routinely checking Hb levels in the first and third

trimesters and always routinely providing iron supplements. It is hoped that this figure will continue to decrease along with awareness among pregnant women about anemia that can occur.

Factors that influence the incidence of anemia in pregnant women in the third trimester at the Purwoharjo Primary Health Care Health Center

Anemia that occurs during pregnancy in one study is called "potential danger to mother and child", so it requires attention from various parties who serve the health of mothers and children, as well as pregnant women and their families.[10] The most common anemia that occurs is iron deficiency anemia, this is due to a lack of sufficient iron consumed which results in absorption disorders, digestive disorders, and bleeding. Factors that influence the occurrence of anemia in pregnancy vary, including the age of the pregnant mother, pregnancy spacing, parity, multiple pregnancies, chronic diseases, knowledge about anemia, nutritional status, compliance with iron consumption, and ANC compliance. In this research, results have been obtained regarding the frequency distribution of these factors, the depiction of which is presented in the form of a pie chart.

a. Age

The results of this study showed that 44 respondents (71%) experienced anemia in the third trimester. This figure is higher than the age group at risk, namely 35 years old, 18 respondents (29%). This is in line with research by Senja Atika Sari (2021) that pregnancy anemia most often occurs in the 20-35 year age range.[11]

According to researchers, this happens because the majority of pregnant women are in the productive age category and in their first pregnancy. In the first pregnancy that occurs at the age of 20-35 years, pregnant women still don't know how to maintain a good pregnancy to avoid the risk of pregnancy and still don't know what efforts can be taken. For this reason, it is hoped that future researchers can carry out further research to find out factors that further contribute to the occurrence of anemia in pregnancy. In research conducted by Isnaini, et al (2021) it is explained that pregnant women in their first pregnancy experience a transition period to becoming a mother. The obstacle that is often faced is the gap between the knowledge possessed and the knowledge needed.[12]

The results of this study also explain that 18 respondents (29%) were 18 respondents (29%) in the third trimester of pregnancy who experienced anemia. This is in line with research by Nuzulul Rahmi (2020) that those aged 35 years are at risk of experiencing anemia because at the age of 35 years, the reproductive organs have begun to decline in function and the strength to push is reduced.[13]

In the research, it was found that the youngest respondent was 19 years old and the oldest respondent was 42 years old. Public education is needed regarding the ideal age for pregnancy to reduce the risk factors for anemia. The Ministry of Health's ideal age for pregnancy is 20-35 years. If mothers who are 35 years old do not have children, they are allowed to get pregnant, but with special and intense supervision from health workers.

b. Pregnancy

The results of this study showed that more respondents who experienced anemia in the third trimester with a pregnancy interval of >2 years were included in the no-risk group, namely 54 respondents (87.1%) compared to pregnant women with a risky pregnancy interval of 2 years. In this study, the majority of respondents had pregnancies >2 years apart because most of the respondents were still in their first pregnancy, so they were categorized as pregnancies >2 years apart.

This research is not in line with research conducted by Nurma Ika and Krisdiyanti (2022) which states that a pregnancy distance of <2 years is more at risk of experiencing anemia compared to a pregnancy distance of >2 years. Pregnancy spacing that is too close, namely <2 years, can be a factor causing anemia in pregnant women. This is because the reproductive system has not returned to what it was before pregnancy.

[14] . Pregnancy requires a lot of nutrition, if the mother's condition has not returned then the nutritional reserves are not sufficient after the previous pregnancy.

In this study, 8 respondents (12.9%) still found respondents with pregnancies that were too close, namely <2 years. This is because there are still many mothers who fail to use contraception and there are still mothers who think that contraception is not in line with public beliefs. In research conducted by Eska Reviani Hadijah, et al (2023), it was explained that 85.7% of respondents had no interest in using contraceptives because of local community beliefs, so there were still many people who were pregnant close to their previous pregnancy.[15]

c. Parity

In this study, 8 respondents (12.9%) still found respondents with pregnancies that were too close, namely <2 years. This is because there are still many mothers who fail to use contraception and there are still mothers who think that contraception is not in line with public beliefs. In research conducted by Eska Reviani Hadijah, et al (2023), it was explained that 85.7% of respondents had no interest in using contraceptives because of local community beliefs, so there were still many people who were pregnant close to their previous pregnancy.[15] The results of the research showed that more respondents experienced anemia in the third trimester with parity <2 times, namely 33 respondents (53.2%) compared to children >2 (46.8%). This is in line with research by Desi Mailan Sari (2022) with the results that the majority of pregnant women are in their first to second pregnancy.[16]

In this study, the majority of respondents were those with no risk parity, namely <2 children. This happened because most of the respondents were still in their first pregnancy. Apart from that, the research also found several respondents who had experienced abortion and were said to have not had children. In research conducted by Willy Astriana (2019), it was explained that mothers with their first pregnancy did not have the experience to maintain health during pregnancy.[17]

This research is not in line with research conducted by Ririn Riyani, et al (2020) which states that parity who are at risk more often experience anemia.[18] At risk parity, the amount of nutritional reserves in the mother's body is still insufficient, so she will easily experience anemia. The more frequently a woman gives birth, the greater the risk of blood loss and this will result in a decrease in Hb levels.

Parity is the number of mothers giving birth. Parity is a factor that can cause anemia because women who frequently become pregnant or give birth will lose iron reserves in the body. The more frequently you become pregnant or give birth, the less iron reserves in the body will be. In this study, there were still mothers with parity >2 times who were included in the at-risk group, namely 21 respondents (33.9%). This figure is still considered high because many pregnant women still fail to use contraception and some think that having many children brings good luck. This follows research conducted by Karmila, et al (2020) which explains that mothers with parity > 2 children tend not to use contraception.[19]

The assumption that many children have a lot of good fortune is what makes the government's family planning program fail. The majority of respondents in the study did not agree with the BKKBN's "two children is enough" slogan and chose not to use any contraceptives.

d. Multiple Pregnancy

The results of this study showed that all respondents (100%) who experienced anemia in the third trimester were not in multiple pregnancies. Research conducted by Sri Yusendang, et al (2019) showed that the majority of respondents did not experience multiple pregnancies.[20]

Multiple pregnancies occur when a pregnant woman carries more than one live fetus. Pregnant women with multiple pregnancies need more nutrition than those with single pregnancies. When nutrition during

pregnancy is inadequate, pregnant women will be at risk of experiencing anemia. Based on the results of research conducted by Nur Azizah, et al (2023), multiple pregnancies cause pregnant women to need more nutrition and if it is not provided properly, it will have an impact on the mother, fetus, and baby being born.[21] This has been proven by the existence of a relationship between multiple pregnancies and the risk of anemia and giving birth to LBW babies.

e. Chronic Disease

The results of this study showed that among respondents who experienced anemia in the third trimester, 1 respondent (1.6%) had gastritis, 1 respondent (1.6%) had tuberculosis, and 60 respondents (96.8%) did not suffer from the disease. any chronic. Research conducted by Akhmad Mahyuni (2019) showed that there were pregnant women with a history of TB and other infectious diseases. This shows that the disease can affect the physical condition and nutrition of pregnant women.[22]

Chronic disease causes the mother's body to become weak, which will have an impact on pregnancy. Pregnant women with a previous history of chronic disease can have an impact on later delivery. Research conducted by Rifatolistia Tampubolon (2021) explains that there are pregnant women with anemia who have a history of the disease who will find it difficult during the pregnancy phase.[23] A history of illness experienced during pregnancy results in disruption of the existing red blood cells and usually pregnancy complications will appear when entering the third trimester and before giving birth.

f. Knowledge About Anemia

The results of this study showed that there were 24 respondents (38.7%) who experienced anemia in the third trimester, 25 respondents (40.3%) had good knowledge, and 13 respondents (21%) had very good knowledge. The following research was conducted that many respondents had good knowledge about anemia.

In this study, most respondents were in the good knowledge category but still experienced anemia. This happens because the majority of respondents still lack adequate nutrition during pregnancy. Most of the respondents are housewives, so economic factors are also one of the reasons why nutritional needs are still lacking even though mothers know about the food they should consume. Research conducted by Obai, et al (2016) explains that being a housewife is one of the risks of pregnant women experiencing anemia because most housewives depend only on their husband's income to meet their daily needs, so the nutritional intake that should be consumed during pregnancy becomes unconsumable.[24]

In this study, there were still 24 respondents with sufficient knowledge (38.7%). This shows that there are still many pregnant women with sufficient knowledge about anemia. Lack of socialization and information about anemia is one of the factors causing the low level of knowledge among pregnant women. Knowledge makes it difficult for pregnant women to find information about the foods they should consume so that their nutritional and iron needs during pregnancy are met to avoid anemia.

The relatively low level of education is a factor in the low level of knowledge. It is known that from the research results the majority of respondents had a final level of education, namely junior high school and high school. Pregnant women are also less interested in seeking information about anemia. This is because knowledge can influence a person's attitudes and actions in making decisions, one of which is regarding nutritional intake and other things that have an impact on the occurrence of anemia during pregnancy.

g. Nutritional status

The results of this research are regarding the nutritional status of

pregnant women in the third trimester who experience anemia. The indicator for measuring nutritional status in this study is by looking at the size of LILA in pregnant women. Pregnant women with a LILA size >23.5 cm are included in the well-nourished category, while pregnant women with a LILA size are the results of this research regarding the nutritional status of pregnant women in the third trimester who experience anemia. The indicator for measuring nutritional status in this study is by looking at the size of LILA in pregnant women. Pregnant women with a LILA size >23.5 cm are included in the category with good nutrition, while pregnant women with a LILA size <23.5 cm are included in the category with poor nutrition. From the research results, it is known that more respondents experienced anemia in the third trimester with poor nutritional status, namely 38 respondents (61.3%), compared to pregnant women with good nutritional status, namely 24 respondents (38.7%).

This research is in line with research conducted by Alfian and Ilham (2023) explaining that pregnant women with a LILA size <23.5 cm tend to experience anemia. LILA size <23.5 cm generally occurs in families with low economic levels, due to lack of iron and protein intake in daily food. Pregnant women with poor nutrition will affect the growth of the fetus they are carrying.[25]

Ppregnant women with poor nutrition will experience a lack of nutrition in the body which results in anemia. Insufficient nutritional status indicates that pregnant women are lacking in adequate intake of iron and protein in the food they consume.

h. Compliance with Iron Consumption

The results of this study showed that 33 respondents (53.2%) had anemia in the third trimester who did not comply with taking iron supplements, this figure was higher than the 29 respondents (46) who complied with pregnant women in the third trimester. .8%). This is in line with research conducted by Riska Afriani (2023) which stated that the majority of respondents were not compliant in consuming iron supplements.[26]

According to researchers, mothers who do not comply with taking iron supplements are because the side effects that arise after consuming iron supplements make pregnant women feel disturbed. Pregnant women also often make mistakes when consuming at the right time. Often when consuming iron supplements, pregnant women use coffee or tea which can interfere with the process of absorbing iron in the body. This is following research conducted by Ana Samiatul (2019) that most pregnant women who do not comply with consuming iron supplements are because the mother feels nauseous and ultimately does not want to consume it anymore even though the relevant midwife has recommended consuming it every night.[27]

From this research, it was also discovered that 29 respondents (46.8%) out of 62 respondents adhered to taking iron supplements. This shows that currently, pregnant women are starting to realize the importance of iron tablets during pregnancy. Mothers who comply with taking iron supplements but still experience anemia could also be because in this study laboratory tests were not carried out regarding the type of anemia that occurred, so even though the mother complied with taking iron supplements, she still experienced anemia.

In research conducted by Agarwal (2021) it is explained that to diagnose anemia in pregnancy, routine Hb level measurements can be carried out, ferritin level evaluation examinations if there is a high suspicion of iron deficiency anemia, and additional screening examinations for other hemoglobin disorders such as in thalassemia anemia.[28]

According to the Ministry of Health (2022), the number of iron supplements that must be consumed during pregnancy is a minimum of 90 tablets. 7 Iron plays an important role in reducing the risk of anemia during

pregnancy. During pregnancy, the body's physiological processes will occur, namely the dilution of red blood cells, so pregnant women need additional iron for the needs of the mother and fetus.

i. ANC Compliance

The results of this study showed that all pregnant women in the third trimester with anemia overall, namely 62 respondents (100%) were compliant in carrying out ANC, having carried out ANC >3 times. This happens because the Purwoharjo Primary Health Care Health Center monitors all pregnant women who experience anemia to carry out routine examinations through health workers at the Primary Health Care Health Center who are then appointed as the person in charge of each village that is still within the Primary Health Care' working area.

In this study, all respondents complied with ANC visits but still experienced anemia. Researchers think that one of the causes is poor quality ANC. According to the Ministry of Health, the standard for integrated antenatal care includes a minimum of 10T, namely:

1. Weigh yourself and measure your height
2. Measure blood pressure
3. Nutritional status value (LILA)
4. Measure the height of the top of the uterus
5. Determine fetal presentation and fetal heart rate
6. Screen tetanus immunization status and provide tetanus-diphtheria (Td) immunization if necessary.
7. Giving a minimum of 90 blood supplement tablets during pregnancy
8. Laboratory tests
9. Management
10. Interview

This research is in line with research conducted by Adriana (2022) which stated that some respondents still experienced anemia even though they had ANC regularly. [29]

This research shows that anemia is influenced by various factors. Anemia can occur due to a lack of nutrition in the mother's body during pregnancy. ANC itself aims to monitor the condition of the mother and baby, but not as an indicator of nutritional fulfillment in the mother's body.

Knowledge about anemia and compliance with iron supplement consumption

In this study, respondents with sufficient, good, or very good knowledge had non-compliance in consuming iron supplements, although in varying amounts. This means that knowledge does not influence whether or not respondents comply with taking iron supplements.

A good proportion of knowledge will increase the compliance of pregnant women in consuming iron supplements. Compliance with consuming iron supplements is a form of behavior because there is knowledge that can be obtained from anywhere.

Another research is research conducted by Putri Wulandini (2020) which explains that even though pregnant women's knowledge is in the sufficient category, they are still obedient in consuming iron supplements.[30]

The lack of compliance in consuming iron supplements is motivated by several reasons, including insufficient program support (low service provider-user dynamics, lack of delivery of access, and lack of training from medical personnel). 85 This happened at the Purwoharjo Primary Health Care Health Center due to a lack of delivery. access such as the Primary Health Care health center is less effective in providing education about pregnant women, so pregnant women are not interested in paying attention to the delivery from the Primary Health Care health center.

Conclusion

Based on secondary data obtained from the Purwoharjo Primary Health Care Health Center during the research period, namely August-October, 62 of 143 pregnant women (43%) were in the third trimester and experienced anemia. Based on all the variables studied, the results

showed that poor nutritional status of 38 respondents (61.3%) and non-compliance with iron supplement consumption of 33 respondents (53.2%) were the factors that contributed most to the occurrence of anemia in the third trimester of pregnancy at the Primary Health Care Health Center. Purwoharjo. Efforts that have been made by the Primary Health Care Health Center include routinely conduct pregnancy class activities every month to educate pregnant women, carry out laboratory examinations in the first trimester and third trimester and if there is a risk in the laboratory examination in the first trimester, then in the second trimester a laboratory examination will be carried out again. And if a pregnant woman is found to be at high risk, such as severe anemia, the Primary Health Care Health Center will immediately refer her to the hospital.

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