

Regular Consumption of Iron Tablets With Anemia in Pregnant Mothers

Ulin Nafiah

DIII Midwifery Study Program Department, Safin Pati University, Indonesia

ulinnafiah20@gmail.com

Address: Jl. Raya Pati - Tayu No. Km 13, Ketanen, Kec. Trangkil, Pati Regency, Central Java

Corresponding Author: ulinnafiah20@gmail.com

Abstract : *Pregnant mothers are one of the groups vulnerable to malnutrition, as there is an increased nutritional need to meet the needs of the mother and the conceived fetus. During pregnancy, the benefits of taking iron tablets or Fe regularly can increase Hb levels so that pregnant mothers do not subsequently have anaemia and can prevent the occurrence of bleeding at the time of delivery, but there are still many pregnant women who are irregular in taking iron pills up to at least 90 tablets. **Objective:** This study aims to find out the link between regular consumption of iron tablets and the incidence of anaemia in pregnant women in the village of Margorejo. **Methods:** The type of surveillance used is analytical observational with a Crosectional approach. The population in this study is a pregnant woman of the third trimester in the village of Margorejo. The sample was taken using a saturated sampling method of 30 respondents. The data analysis used is a know-control correlation test. **Results:** Research results show that the correlation value is 0.541 and the p-value is 0.015 with a significant value of a 0.05. **Conclusion:** there is a link between regular consumption of iron tablets and anaemia in pregnant mothers.*

Keywords: Anemia, Tablet Fe, Nutrition, Pregnancy, Regularity

1. INTRODUCTION

Mother's death and pain are still a serious health problem in the developing world. According to a 2014 World Health Organization (WHO) report, about 99% of all maternal deaths due to problems or complications during pregnancy and childbirth occur in developing countries. The number of maternal deaths in the world is 289,000. AKI in Indonesia occupies the highest number in the Southeast Asian country. (WHO, 2014).

AKI in Indonesia based on the results of the 2015 Inter-Census Population Survey (SUPAS) conducted by the Central Statistical Agency (BPS), recorded 305 per 100,000 live births. Efforts to accelerate the decline of I.C.I. can be made by ensuring that every mother has access to quality health services, such as maternity services, maternity support by trained health personnel in health facilities. (Key, facts, 2018).

Pregnancy anemia is an anemia due to iron deficiency, iron-deficiency anemia in pregnant women is a health problem experienced by women all over the world especially in developing countries. The World Health Organization reports that pregnant mothers with iron deficiency have about 35-75% perinatal and 7-10% neonatal mortality. (Proverawati, 2016).

The most common pregnancy anemia is iron deficiency anemia due to lack of iron intake with food, absorption disorders, which usually occur due to digestive impairment or consumption of inhibitory substances such as coffee, tea, or cereals. (Wiknjosastro, 2014).

Received July 02, 2024; Revised July 19 2024; Accepted July 01 2024; Published July 09, 2024

* Ulin Nafiah, ulinnafiah20@gmail.com

Pregnant mothers are one of the most susceptible to malnutrition, because there is an increase in nutritional needs to meet the needs of mothers and fetuses conceived. (Gulton, 2013).

Anemia in pregnant mothers can increase the risk of premature birth, mother and child death, and infectious diseases. Mother's iron deficiency anemia can affect the growth and development of the fetus/baby during and after pregnancy. Riskesdas 2018 results indicate that in Indonesia 48.9% of pregnant women suffer from anemia. 84.6% of pregnancy anemia occurs in the age group of 15-24 years. To prevent anemia every pregnant mother is expected to get at least 90 blood supplement tablets (TTD) during pregnancy (Profil Kemenkes RI, 2018).

Anemia is a decrease in the quantity or quality of red blood cells in circulation. Pregnancy anemia is a condition of the mother with hemoglobin levels below 11 gr% in the first and third trimesters or less than 10.5 gr% at the second trimester. The most common pregnancy anemia is iron deficiency anemia, a type of anemia that is relatively easy to treat, even inexpensive. (Manuaba, 2013).

Iron in pregnant mothers is needed to enhance synthesis. Hemoglobin as a process of adaptation to the presence of physiological changes in the pregnant woman, i.e. the occurrence of hemodilution (thinning of blood) with an increase in volume of 30% to 40% the peak at 32 to 34 weeks of pregnancy. The iron needs of pregnant mothers depend heavily on the age of pregnancy, i.e. in the first trimester, the iron needs are small because the growth of the fetus is still slow. Entering the second trimester to the third, the blood volume in the woman's body increases. During childbirth, a pregnant woman needs about 40 milligrams of iron a day, or twice as much as a woman who is not pregnant. (Manuaba, 2013).

Efforts to control anemia are carried out through increased coverage of iron supplementation tablets in pregnant mothers. Iron tablets are taken from the 12th week of pregnancy which is continued until the 3rd month of postpartum. Supplementation of iron tablets in pregnant mothers until they breathe get as much as 1 tablet in 1 day in a row – followed for at least 90 days of pregnancy, up to 42 days after delivery (Kemenkes RI, 2019).

Irregular consumption of iron tablets will result in anemia, which will cause problems such as: abortion, prolonged labor due to uterine inertia, post-partum bleeding due to atonia of the uterus, shock, disorders of the breathing power. Very severe anemia with hemoglobin less than 4 gr% ml can lead to death (Saifudin, 2012).

The benefits of regular consumption of iron or Fe tablets during pregnancy can increase Hb levels so that the pregnant mother will not have anemia and no bleeding or not excrete a lot of blood at the time of delivery and the mother is in good condition. (Wiknjosastro, 2014).

It is often the case of a pregnant woman, that she should not take the iron tablets, because of all kinds of things, such as boredom, pain, nausea, fear that the child will be born big, and forgetting, and no one else is warned to take it, so that tablet consumption is not satisfied well. From the circumstances that actually the government, the community or the family can do anything to help the pregnant mother to improve the situation, especially in regular consumption of iron tablets and change their health behavior. In addition, health officials also play an important role in providing information about the benefits of iron tablets. (Triatnawati, 2013).

Regular consumption of iron tablets can prevent anemia because pregnant women who do not consume iron pills have experienced a sharp decrease in ferritin (iron reserves) since the 12th week of pregnancy. However, the regularity of pregnant mothers in taking iron tablets according to the rules and the dosage given is also a very important factor to bear in mind. It is useful to know why anemia in pregnant women is always increasing, because it is useless to give iron tablets when not in consumption (Triatnawati, 2013).

In a preliminary study conducted in the village of Margorejo in August 2023, there were 35 pregnant mothers, of which 25 were non-anemic and 10 were pregnant with anemia. Based on the results of an interview with 10 pregnant women at the time, that 3 pregnancies said they consumed iron tablets regularly with anaemia, while 7 said they did not regularly consume iron Tablets with anemic. So the author is interested in doing research on "Regular consumption of iron tablets with the incidence of anemia in pregnant mothers in the village of Margorejo".

2. METHOD

The type of surveillance used is analytical observational with a Crosectional approach. The free variable studied is the regular consumption of iron tablets, the linked variable of anemia. (Notoatmodjo, 2015). The population in this study is pregnant mothers in the village of Margorejo. The sample was taken using a saturated sampling method of 30 respondents. The data analysis used is a know-control correlation test. The study was conducted between January 2023 and August 2023 with a sample of 30 pregnant mothers in the village of Margorejo. Data collection using a questionnaire that already contains questions related to regular consumption of iron tablets.

3. RESULTS

a. Respondent Parity

Table 1. Frequency distribution based on respondent parity

Pregnant	Frequency	Percentage (%)
Primigravida	13	43.3
Multigravida	17	56.6
Total	30	100

Table 1 shows that out of 30 pregnant mothers the majority of primegravid mothers were 13 (43.3%) respondents, compared to 17 (56.7%) who were multigravid.

b. Univariate analysis

Table 2 Frequency distribution of respondents based on the regularity of pregnant mothers consuming iron tablets in the village of Margorejo

Regularity	Frequency	Percentage (%)
Irregular	13	43.3
Regular	17	56.7
Total	30	100

Table 2 shows that out of 30 respondents, 17 respondents (56.7%) and 13 respondents (43.3%) said they were taking iron tablets regularly.

Table 3 Frequency Distribution of Respondents Based on the Incidence of Anemia in Pregnant Mothers in Margorejo Village

Incidence of Anemia	Frequency	Percentage (%)
Anemia	11	36.7
Not Anemia	19	63.3
Total	30	100

Table 3 shows that the majority of pregnant women in the village of Margorejo did not experience anemia at the time of their pregnancy, namely 19 (63.3%) pregnant mothers who did not have anemia, and 11 (36.7%) pregnant moms who were anemia.

c. Bivariate analysis

Bivariate analysis is an analysis that is performed on two variables that are being studied.

Regularity Level	Kejadian Anemia						R	ρ
	Anemia		Tidak Anemia		Total			
	f	%	f	%	f	%		
Irregular	8	61,5	5	38,5	13	100	0,451	0,015
Regular	3	17,6	14	82,4	17	100		
Total	11	36,7	19	63,3	30	100		

Based on table 4 above, the relationship between regular consumption of iron tablets and the incidence of anemia in pregnant women who are in Margorejo, pregnant mothers suffering from anemia, were more likely to be experienced by pregnant females who consumed iron pills irregularly (61,5%) compared to pregnant mother who regularly consume iron pills (17.6%) while pregnant woman who did not experience anemia was more frequently experienced by the pregnant moms who consume Iron pills on a regular basis (82.4%), compared with pregnant ones who do not (38.5%).

Based on the Kendall tau correlation test, a correlated value of 0.451 has been obtained with a p-value of 0.015. Since the p-value = 0.015 is less than a (0.05), it can be concluded that there is a relationship between regular consumption of iron tablets and the incidence of anemia. This relationship is a positive (r value is marked positive) which means that if the mother regularly consumes iron tablets, then the mother has less and less cases of anemia. Reviewed from the level of severity, the relationship between regular consumption of iron tablet with the occurrence of anaemia has a fairly strong relationship because the correlation value is 0.451, located between 0.400-0,599.

4. DISCUSSION

a. Regular consumption of iron tablets in the village of Margorejo

The results of the study obtained on the basis of table 2 show that some respondents consume iron pills on a regular basis. It is affected because most of the respondents are multigravids because they already have experience and are a second pregnancy so have experience in taking iron tablets in previous pregnancies.

According to Damiati, dkk (2017), attitude is an expression of a person's feelings that reflect his or her liking or dislike of an object whereas according to Thomas and Znaniecki (1920) in Wawan and Goddess (2010) say that attitudes are predispositions to do or not do

a certain behavior, so attitude isn't just a purely psychic inner state of the individual, but rather a process of consciousness that is individual in nature.

Pregnant mother's nutrition is a nutrient that is needed in large quantities for the maternal nutrition and the development of the fetus it contains. (Bobak dkk, 2015). If the nutritional intake of the pregnant mother from food is not balanced with the needs of the body then there will be a nutritional deficiency. Food needs are seen not only in the portions eaten but must be determined by the quality of the nutrients contained in the food consumed. (Amirudin, 2014).

According to Franci (2013) stated that in general, the nutritional status of pregnant mothers greatly affects the growth of the fetus in the womb. Thus, as soon as possible, the pregnant mother should be given health education on nutrition including consumption of iron tablets regularly to meet the needs of the fetus and herself during pregnancy. Iron tablets are 60 mg of iron and 0.5 mg of folic acid given orally or commonly referred to as oral iron therapy. The iron content of the Fe tablets is greater than that of folate. (Arisman, 2014).

Demand for iron increases during pregnancy, especially in the last trimester. If the intake of iron is not added to pregnancy, then iron deficiency anemia is more likely, especially in twins pregnant. (Wiknjosastro, 2014).

From the results of interviews conducted by researchers to several pregnant mothers, she said she didn't want to consume iron pills because of the unpleasant taste and makes it difficult to urinate or faeces become hard.

According to Arisman (2014), said that the side effects of iron tablets are so disturbing that pregnant mothers tend to reject the iron tablet given, such side effects are discomfort in the liver, nausea, vomiting and diarrhea (terkadang konstipasi). Complicators – such complicators rarely diminish the obedience of patients to consume iron tablets. The refusal was actually based on the mother's ignorance that during pregnancy they needed extra iron. Supplementation or administration of Fe tablets is one of the important efforts in preventing and curbing anemia.

According to Arisman (2014), pregnant mothers are less regular in taking iron tablets during pregnancy due to a lack of information on the importance of the iron tablet. Patients should be understood that the side effects of iron tablets are nothing compared to the magnitude of the benefits of iron and should be convinced that one of the main causes is anemia due to iron deficiency or lack of iron. Pregnant mothers in the consumption of iron

tablets should be further enhanced especially in pregnant mothers who are often forgotten and lazy in consuming iron Tablets.

b. Anemia incidence in Margorejo Village

The results obtained from table 3 show that the majority of pregnant mothers in the village of Margorejo did not experience anemia at the time of their pregnancy: 19 (63.3%) mothers did not have anemia and 11 (36.7%) pregnant women were anemia.

Pregnancy anemia can occur due to a lack of foods rich in iron, especially foods of animal origin, and irregularity of the pregnant mother in the consumption of iron tablets. Pregnant mothers are priority targets for the prevention of nutritional anemia, for pregnant mothers up to a daily dose of 1 consecutive tablet for at least 90 days of pregnancy, up to 42 consecutive days after delivery. Where iron tablets are consumed 1 time a day regularly to prevent the incidence of anemia but for pregnant mothers who are anemia then consumption of iron or tablets Fe is recommended daily consume 2 times in the morning and afternoon.

The incidence of anemia in the village of Margorejo in mothers can be seen that most pregnant mothers are multigravid so they better understand or more experienced in consuming iron tablets. From the results of the study of Sarwinanti (2020), stated that the factors associated with the incidence of anemia of pregnant mothers are nutritional, because the research results there is a significant relationship to the nutritional status of mothers with anemia incidence in Puskesmas Kotagede II.

c. The relationship between regular consumption of iron tablets and the occurrence of anemia in pregnant mothers in the village of Margorejo.

Based on the table 4 can be seen also in the pregnant women who regularly consume iron Tablets have anemia as many as 3 (17.6%) and the pregnancy mothers that regularly consumed iron tablet but not anemia so many as 14 (82.4%). This is because pregnant mother who irregularly consumes iron tablet, but no anemia because the pregnant mother not only consumes the iron tablet only but she also consumes foods rich in iron along with foods that are rich in vitamin C for example animal food sources such as meat, chicken and fish. Other sources are eggs, crushed cereals, nuts, green vegetables and some kind of fruit. So the pregnant mother is filled with her iron and not anemia.

Based on table 4 above, the relationship between regular consumption of iron tablets and the incidence of anemia in pregnant women who are in Margorejo, pregnant mothers

who suffer from anemia, is more common among those who consume iron pills on an irregular basis (61,5%) compared to those who regularly consume an iron tablet (17.6%) whereas the women who do not have anemia are more frequently experienced by those who take an iron piller on a regular basis (82.4%), compared with those who don't consume a iron tablet regularly (38.5%). This is because the pregnant mother who consumes an iron pill is still anemic because pregnant Mother consumes less iron-containing foods such as only rice and peanuts and then pregnant moms also more often consume foods containing iron-absorption inhibitors that should be reduced, such as tea that contains tannins, coffee, phytate and phosphate, many of which are in cereals.

Based on the results of the research showed that there was a link between the regular consumption of iron tablets and the incidence of anemia in pregnant mothers in the village of Margorejo.

Based on the Kendall tau correlation test, a correlate value of 0.451 has been obtained with a p-value of 0.015. Since the p-value = 0.015 is less than a (0.05), it can be concluded that there is a relationship between the regularity of mother's consumption of iron tablets and the incidence of anaemia in pregnant women in the village of Margorejo. This is a positive relationship, which means that if you regularly take iron tablets every day, you're free of anemia. The relationship is strong enough because the correlation value (0,451) is between 0.400-0,599.

This study is in line with Ismaini's theory (2016) that the relationship of nutritional status influences the incidence of anemia. Nutritional status is also defined as a state of health resulting from a balance between needs and nutrient intake and is a basic need for pregnant mothers. Other medical factors include malnutrition, lack of iron in the diet, malabsorption, excessive blood loss and chronic diseases, while non-medical factors include family economic well-being, mother's knowledge, regular consumption and maternal behavior. In order to prevent and treat anemia, determination of the causative factors is essential, if the cause is iron absorption problems, an assessment of iron intake from either food or iron supplements is required to identify the nutrients that play a role in anemia.

According to the WHO, 40% of maternal deaths in developing countries are related to pregnancy anaemia and are mostly caused by iron deficiency.

The form of strategy used to improve the regular consumption of iron pills is through health education about the importance of iron tablet supplementation and side effects of taking iron tablets to increase their knowledge about the significance of the iron tablet that

the unpleasant effects are meaningless when compared to the magnitude of the benefits of iron.

5. CONCLUSION

Based on the research results and discussions that have been described and adapted to the research objectives regarding the relationship between the regularity of pregnant women consuming iron tablets and the incidence of anemia in pregnant women in Margorejo Village, it can be concluded as follows:

1. Pregnant women in Margorejo Village are mostly pregnant women with primigravida parity, amounting to 13 (43.3%) respondents, while multigravida mothers are 17 (56.7%) respondents.
2. Most of the pregnant women in Margorejo Village regularly consume iron tablets as many as 17 respondents (56.7%) and those who do not regularly consume iron tablets are 13 respondents (43.3%).
3. Most of the pregnant women in Margorejo Village who did not experience anemia were 19 respondents (63.3%) pregnant women and 11 respondents (36.7%) who experienced anemia were pregnant women.
4. There is a relationship between the regularity of pregnant women consuming iron tablets and the incidence of anemia with $p\text{-value} = 0.015$ ($p\text{-value} \leq 0.05$).
5. The resulting correlation value is 0.451, which shows a positive relationship and has a fairly strong level of closeness.

REFERENCE

- Amiruddin. (2014) *Asupan Gizi Pada Ibu Hamil*. Diakses 25 Mei 2020. <http://www.scribd.com/doc/47810533/makalah-anemia-bumil>.
- Arisman, MB. (2014). *Gizi Dalam Daur Kehidupan Edisi2*. Jakarta: EGC.
- Bobak,I.M., Lowdermilk,D.L., Jensen,M.D. (2015). *Buku ajar keperawatan maternitas*. Jakarta: EGC.
- Depkes RI. (2018). *Pedoman Pengelolaan Program Perbaikan Gizi Kabupaten*. Dirjen.
- Depkes RI. (2018). *Perawatan Kesehatan Masyarakat*. Jakarta.
- Depkes RI. (2019). *Profil Kesehatan Jawa Tengah*.
- Dinkes. (2019). *Laporan Situasi Gizi Kabupaten Pati*.
- Franci. (2013). *Gizi Dalam Kesehatan Reproduksi*. Jakarta: EGC.
- Halimul, H A aziz. (2017). *Riset Keperawatan Dan Teknik Penulisan Ilmiah*. Jakarta: Salemba Media.

- Key, facts. 2018. Maternal Mortality.. <https://www.who.int/newsroom/factsheets/detail/maternal-mortality>.
- Lindung Purbadewi. 2013. Hubungan Tingkat Pengetahuan Tentang Anemia Dengan Kejadian Anemia Pada Ibu Hamil. Diakses pada tanggal 5 November 2019. <https://jurnal.unimus.ac.id/index.php/jgizi/article/view/754/808>
- Manuaba. (2015). *Ilmu Kebidanan, Penyakit Kandungan Dan Keluarga Berencana Untuk Pendidikan Bidan*. Jakarta: EGC.
- Notoatmodjo. (2013). *Metodologi Penelitian Kesehatan*. Jakarta: PT Rhineka Cipta.
- Nursalam. (2013). *Konsep Dan Penerapan Metodologi Penelitian Ilmu Keperawatan Pedoman Skripsi Tesis dan Instrumen Penelitian Keperawatan*. Jakarta : Salemba Medila.
- Permana, V, A, dkk. 2019. *Faktor-Faktor yang Mempengaruhi Kepatuhan Ibu Hamil Dalam Mengonsumsi Tablet Fe Di Puskesmas Griya Antapani Kota Bandung Tahun 2019*. Diakses pada tanggal 13 Desember 2019. <http://ejournal.stikesdhh.ac.id/index.php/Jsm/article/view/107/88>.
- Proverawati. 2016. *Anemia dan Anemia Kehamilan*. Yogyakarta: Nuha Medika.
- Saifuddin. (2012). *Buku Panduan Praktis Pelayanan Kesehatan Maternal dan Neonatal*. Jakarta: Tridarsa Printer.
- Sarwinanti, Larasajeng Permata Sari. 2020. Faktor-Faktor yang Berhubungan dengan Kejadian Anemia Ibu Hami. Artikel <http://repository.urecol.org/index.php/proceeding/article/view/1093/1064>.
- Sarwono. (2015). *Ilmu Kebidanan*. Jakarta: EGC.
- Sonia, Sarwinanti. 2018. Hubungan Kepatuhan Ibu Hamil Mengonsumsi Tablet Fe Dengan Kejadian Anemia Di Puskesmas Kasihan II Bantul Yogyakarta <http://digilib.unisayogya.ac.id/4578/1/NASKA%20PUBLIKASI%20SONIA%201.pdf>
- Suejordan. (2014). *Farmakologi Kebidanan*. JAKARTA: EGC.
- Sugiyono. (2016). *Statistik Untuk Penelitian*. Bandung: CV Alfabeta
- Ulin Nafiah, Umi S, Nur F. 2023. Upaya Promotif dan Rehabilitatif pada Ibu Hamil Anemia Dengan Pendekatan Keluarga. *Jurnal EJOIN : Jurnal Pengabdian Masyarakat*. Nomor ISSN : 2985-5322. Vol.1 No.5. Tahun 2023. Doi: <https://doi.org/10.55681/ejoin.v1i5.904>, <https://ejournal.nusantaraglobal.ac.id/index.php/ejoin/article/view/904>
- Wiknjastro, H. (2010). *Ilmu Kebidanan*. Jakarta: Yayasan Bina Pustaka Sarwono Prawirohardjo.