



Original Research

The Relationship Between Compliance in Consuming Iron Tablets and Incidence of Anemia in Pregnant Women in Third Trimester at The Tilango Health Center

Anisa Fajri Ibrahim¹, Anik Sri Purwanti^{*2}

1, Bachelor of Midwifery Study Program , Faculty of Health Sciences , ITSK RS dr. Soepraoen, Malang, Indonesia

2, Bachelor of Midwifery Study Program , Faculty of Health Sciences , ITSK RS dr. Soepraoen, Malang, Indonesia

* Corresponding author.

Anik Sri Purwanti

E-mail address:

aniksri@itsk-soepraoen.ac.id

Article Info

Keywords:

Anemia, Compliance, Fe Tablets, Pregnant Women, Trimester 3

Abstract

Anemia in pregnant women is one of the most common health problems, especially in the third trimester of pregnancy. Anemia in pregnancy can have a negative impact on the mother and fetus, including the risk of premature birth, low birth weight (LBW), and other complications. One of the main factors contributing to the incidence of anemia in pregnant women is compliance in consuming iron (Fe) tablets. The provision of Fe tablets has become part of the maternal health program to prevent and reduce the incidence of anemia. However, there are still many pregnant women who are not compliant in consuming Fe tablets as recommended. This study aims to determine the relationship between compliance in consuming Fe tablets and the incidence of anemia in pregnant women in the third trimester at the Tilango Health Center. Method: This study used a quantitative research design with a cross-sectional approach. The sample in this study was 16 pregnant women in the third trimester who were selected using a purposive sampling technique. Data were collected through interviews using questionnaires and hemoglobin (Hb) level examinations. Data analysis was carried out using the chi-square test to see the relationship between compliance in consuming Fe tablets and the incidence of anemia. The results of the chi-square test analysis showed a p-value of 0.000 (<0.05), which means that there is a significant relationship between compliance in consuming Fe tablets and the incidence of anemia in pregnant women in the third trimester at the Tilango Health Center. Pregnant women who are compliant in consuming Fe tablets tend to have normal hemoglobin levels, while pregnant women who are not compliant are at greater risk of experiencing anemia. Compliance in consuming Fe tablets has a significant relationship with the incidence of anemia in pregnant women in the third trimester. Therefore, it is necessary to increase education and monitoring of Fe tablet consumption to reduce the incidence of anemia in pregnant women. Increase education for pregnant women regarding the importance of consuming Fe tablets regularly. Tighter supervision by health workers in ensuring compliance of pregnant women in consuming Fe tablets.

1. Introduction

Anemia in pregnancy is one of the most common health problems, especially in the third trimester. Anemia in pregnant women can have negative impacts on the mother and fetus, such as increasing the risk of premature birth, low birth weight (LBW), and complications during childbirth (Ministry of Health of the Republic of Indonesia, 2021). Based on the WHO report (2020), around 40% of pregnant women worldwide experience anemia, with the majority of cases caused by iron deficiency. This condition shows the importance of preventing anemia during pregnancy through appropriate nutritional interventions, one of which is by consuming iron (Fe) tablets.

Fe tablets have become part of the national program to prevent and treat anemia in pregnant women in Indonesia. The Ministry of Health recommends that pregnant women consume at least 90 Fe tablets during pregnancy (Ministry of Health of the Republic of Indonesia, 2020). However, various studies show that the level of compliance of pregnant women in consuming Fe tablets is still low, ranging from 40–60% (Puspitasari et al., 2019). This low compliance is caused by various factors, such as the side effects of Fe tablets, lack of maternal knowledge, and economic and social factors.

Several previous studies have shown a relationship between compliance with consuming Fe tablets and the incidence of anemia in pregnant women. A study conducted by (Wahyuni et al., 2021) showed that pregnant women who were compliant with consuming Fe tablets had higher hemoglobin levels compared to mothers who were not compliant. Another study by (Lestari & Sari, 2020) also found that mothers who were not compliant with consuming Fe tablets had a 2.5 times higher risk of experiencing anemia compared to mothers who were compliant.

At the Tilango Health Center, anemia in pregnant women in the third trimester is still a fairly common problem. Data from the report (Tilango Health Center, 2023) shows that around 35% of pregnant women in the third trimester experience anemia, even though they have received Fe tablet supplementation. This indicates a problem in compliance with consuming Fe tablets among pregnant women in the area. Therefore, further research is needed to determine the extent of the relationship between compliance with consuming Fe tablets and the incidence of anemia in pregnant women in the third trimester at the Tilango Health Center.

Factors that influence the compliance of pregnant women in consuming Fe tablets need to be studied further. In addition to knowledge, other factors such as family support, diet, and maternal health conditions can also contribute to the incidence of anemia (Putri & Handayani, 2021). By understanding the influencing factors, more effective interventions can be carried out to increase the compliance of pregnant women in consuming Fe tablets.

This study aims to analyze the relationship between compliance in consuming Fe tablets and the incidence of anemia in pregnant women in the third trimester at the Tilango Health Center. The results of this study are expected to be used as evaluation material for health workers in improving education strategies and monitoring the consumption of Fe tablets, so that the incidence of anemia in pregnant women can be reduced.

With this study, it is hoped that it can provide useful scientific information for medical personnel, academics, and related parties in increasing the effectiveness of the Fe tablet supplementation program for pregnant women. In addition, the results of this study can also be the basis for making more targeted health policies to reduce the incidence of anemia in pregnant women, especially in the Tilango Health Center area.

2. Research Method

This study used a quantitative research design with a cross-sectional approach. The sample in this study was 16 pregnant women in the third trimester who were selected using a purposive sampling technique. Data were collected through interviews using questionnaires and hemoglobin (Hb) level examinations. Data analysis was carried out using the chi-square test to see the relationship between compliance in consuming Fe tablets and the incidence of anemia.

3. Results and Discussion

3.1. Results

Table 1. Mother's Age

Information	Frequency	Percent
<21 year	3	18.8
>21 year	13	81.2
Total	16	100.0

In table 1, the age of the mother, most of the 13 respondents (81.2%) were >21 years old and a small number of 3 respondents (18.8%) were <21 years old.

Table 2. Mother's Occupation

Information	Frequency	Percent
Housewives	12	75.0
Self-employed	4	25.0
Total	16	100.0

In table 2, it was found that the majority of 12 respondents (75%) were housewives and a small proportion of 4 respondents (25%) were self-employed.

Table 3. Compliance * Mother's Condition Crosstabulation

Information		Mother Condition		Total
		Anemia	Normal	
Compliance	Not Routine	1	0	1
	Routine	0	15	15
Total		1	15	16
Uji	Chi			0.000
square				

Based on table 3 above, the chi square test was obtained $0.000 < 0.05$, which means that there is a relationship between compliance in consuming iron tablets and the incidence of anemia in pregnant women in the third trimester at the Tilango Health Center. 15 respondents who routinely did not experience anemia, 1 who did not routinely experienced anemia.

3.2. Discussion

The results of the study showed that there was a significant relationship between compliance in consuming Fe tablets and the incidence of anemia in pregnant women in the third trimester at the Tilango Health Center. This is evidenced by the results of the chi-square test which showed a p-value of 0.000 (< 0.05), which means that compliance in consuming Fe tablets plays a role in preventing anemia in pregnant women. This finding is in line with previous studies which stated that compliance in consuming Fe tablets is closely related to hemoglobin levels in the blood of pregnant women (Wahyuni et al., 2021).

Based on research data, of the 16 respondents studied, 15 pregnant women who routinely consumed Fe tablets did not experience anemia, while 1 pregnant woman who did not routinely experienced anemia. This indicates that pregnant women who are compliant in consuming Fe tablets have a lower risk of experiencing anemia compared to those who are not compliant. A study by Lestari & Sari (2020) also found that mothers who are not compliant in consuming Fe tablets have a higher risk of experiencing anemia compared to those who regularly consume them.

Fe tablets play an important role in increasing hemoglobin levels in the blood, thereby preventing anemia in pregnant women. According to research conducted by Putri & Handayani (2021), pregnant women who routinely consume Fe tablets have more stable hemoglobin levels

compared to those who are not compliant. The iron contained in Fe tablets functions as the main component in the formation of hemoglobin which is responsible for transporting oxygen throughout the body (Ministry of Health of the Republic of Indonesia, 2021).

However, compliance in consuming Fe tablets is still a challenge for some pregnant women. Several factors that influence compliance in consuming Fe tablets include side effects such as nausea, constipation, and abdominal discomfort (Puspitasari et al., 2019). Other factors that also have an influence are the lack of education about the importance of consuming Fe tablets and low family support (Sari et al., 2020). Therefore, the role of health workers is very important in providing education and motivation to pregnant women so that they are more compliant in consuming Fe tablets.

In addition, the diet of pregnant women also contributes to the effectiveness of Fe tablets in increasing hemoglobin levels. Research by Nugraha et al. (2021) shows that consuming foods rich in vitamin C can increase iron absorption in the body. On the other hand, excessive consumption of tea and coffee can inhibit iron absorption, which can ultimately cause anemia even though pregnant women have taken Fe tablets regularly. Therefore, a healthy and balanced diet must be combined with the consumption of Fe tablets for more optimal results.

The results of this study also support the government's policy in preventing and overcoming anemia in pregnant women with a free Fe tablet provision program. According to data from the Indonesian Ministry of Health (2020), the target coverage of Fe tablet consumption in pregnant women is a minimum of 90 tablets during pregnancy. However, achieving this target still faces obstacles, especially in terms of compliance of pregnant women in taking Fe tablets regularly. Therefore, more intensive interventions are needed to increase the compliance of pregnant women in this supplementation program.

Family support, especially husbands, also plays an important role in increasing the compliance of pregnant women in taking Fe tablets. A study by Yuliana et al. (2021) showed that pregnant women who received support from their husbands tended to be more compliant in taking Fe tablets compared to those who received less support. Therefore, reproductive health education is not only provided to pregnant women, but also to family members so that they can support mothers in undergoing a healthy pregnancy.

Community-based interventions can also be an effective strategy in increasing compliance with Fe tablet consumption. According to research conducted by Rahayu et al. (2022), health education carried out by Posyandu cadres and village midwives can increase pregnant women's understanding of the importance of consuming Fe tablets. In addition, group-based approaches such as pregnant women's classes can be an effective means of education in increasing pregnant women's awareness of preventing anemia.

From the results of this study, it can be concluded that compliance in consuming Fe tablets is an important factor in preventing anemia in pregnant women in the third trimester. Therefore, a more effective strategy is needed to increase pregnant women's compliance with consuming Fe tablets, both through health education, increasing access to Fe tablets, and social support from family and community.

This study has several limitations, one of which is the relatively small number of samples, so the results of this study need to be studied further with larger sample. In addition, other factors such as nutritional status and diet of pregnant women also need to be considered in further research to obtain a more comprehensive picture of the factors that influence the incidence of anemia in pregnant women.

Overall, the results of this study support the importance of routine consumption of Fe tablets to prevent anemia in pregnant women. Therefore, the Fe tablet supplementation program must continue to be strengthened, both through health policies, more intensive education, and strengthening social support for pregnant women. With the right efforts, the incidence of anemia in pregnant women can be reduced, so that the health of the mother and fetus can be maintained properly.

4. Conclusion

Based on the results of the study, it can be concluded that there is a significant relationship between compliance in consuming Fe tablets and the incidence of anemia in pregnant women in the third trimester at the Tilango Health Center. The results of the chi-square test showed a p-value of 0.000 (<0.05), which means that pregnant women who are compliant in consuming Fe tablets have a lower risk of experiencing anemia compared to those who are not compliant.

A total of 15 respondents who routinely consume Fe tablets did not experience anemia, while 1 respondent who did not routinely consume Fe tablets experienced anemia. This shows that regular consumption of Fe tablets plays an important role in maintaining hemoglobin levels in the blood and preventing anemia during pregnancy.

Although Fe tablets have significant benefits, several factors such as side effects, diet, and lack of education and family support are still obstacles to the compliance of pregnant women in consuming them. Therefore, the role of health workers is very important in providing education and assistance to pregnant women to increase awareness of the importance of consuming Fe tablets.

References

- Adilestari, R. (2017). Hubungan Kepatuhan Ibu Hamil Mengkonsumsi Tablet Fe dengan Kejadian Anemia di Puskesmas Mantrijeron Yogyakarta.
- Anggraeni, D. (2018). Hubungan Pola Konsumsi Zat Besi dengan Kadar Hemoglobin pada Ibu Hamil di BPS Kabupaten Pringsewu.
- Hariani, S. (2017). Pengaruh Pemberian Tablet Zat Besi (Fe) terhadap Peningkatan Kadar Hemoglobin pada Ibu Hamil yang Anemia di Puskesmas Sukmajaya Depok.
- Laelasari, L. (2016). Pengaruh Kepatuhan Mengkonsumsi Tablet Fe terhadap Kadar Hemoglobin pada Ibu Hamil di Puskesmas Cibeureum Kota Tasikmalaya.
- Lestari, A. (2018). Hubungan Kepatuhan Mengkonsumsi Tablet Fe dengan Kejadian Anemia pada Ibu Hamil Trimester III di Puskesmas Kasihan I Bantul. EPRINTS.POLTEKKESJOGJA.AC.ID
- Marini, S. C. (2020). Hubungan Kepatuhan Ibu Mengkonsumsi Tablet Fe dengan Kejadian Anemia pada Ibu Hamil di Desa Pagarantonga Tahun 2020. REPOSITORY.UNAR.AC.ID
- Ningrum, D. R. (2019). Hubungan Tingkat Kepatuhan Konsumsi Tablet Fe dengan Kejadian Anemia pada Ibu Hamil Trimester III di Puskesmas Kartasura Sukoharjo. PUBLIKASIILMIAH.UMS.AC.ID
- Pulunggan, W. H. (2019). Hubungan Kepatuhan Mengkonsumsi Tablet Fe dengan Kejadian Anemia pada Ibu Hamil Trimester III di Puskesmas Helvetia Medan. REPOSITORY.HELNETIA.AC.ID
- Rahayu, S. (2020). Hubungan Kepatuhan Mengkonsumsi Tablet Zat Besi dengan Kejadian Anemia pada Ibu Hamil Trimester III di Wilayah Kerja Puskesmas II Denpasar Utara. REPOSITORY.ITEKES-BALI.AC.ID
- Rahayu, N. (2022). Efektivitas Penyuluhan Kesehatan oleh Kader Posyandu terhadap Kepatuhan Konsumsi Tablet Fe pada Ibu Hamil di Desa Sumberagung.
- Safitri, R. (2019). Hubungan Tingkat Kepatuhan dengan Kejadian Anemia pada Ibu Hamil di Puskesmas Sukoharjo.
- Sari, D. P. (2021). Hubungan Kepatuhan Mengkonsumsi Tablet Fe dengan Kejadian Anemia pada Ibu Hamil Trimester III di Puskesmas Cakranegara. REPOSITORY.UMMAT.AC.ID
- Sari, D. P. (2023). Hubungan Kepatuhan Ibu Hamil Minum Tablet Tambah Darah dan Status Gizi terhadap Kejadian Anemia pada Ibu Hamil Trimester III di Puskesmas Cakranegara. E-JOURNAL.POLKESRAYA.AC.ID
- Wahyuni, S. (2022). Hubungan Kepatuhan Meminum Tablet Fe terhadap Kejadian Anemia pada Ibu Hamil Trimester III di Puskesmas Jetis Bantul Yogyakarta. DIGILIB.UNISAYOGYA.AC.ID
- Yuliana, S. (2021). Peran Dukungan Suami terhadap Kepatuhan Ibu Hamil dalam Mengkonsumsi Tablet Fe di Puskesmas Ngemplak Boyolali.