


## **Relationship Between Pregnant Women's Knowledge and Compliance in Consumption of Feed Tablets at PMB Novida Efrianti**

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Article Info	ABSTRACT
<b>Article history:</b> Received May 08, 2025 Revised June 03, 2025 Accepted June 27, 2025	Iron plays a crucial role in the body, primarily in the formation of hemoglobin, which transports oxygen in red blood cells. It is especially vital for pregnant women, as sufficient iron is necessary for fetal development. In Indonesia, only 51% of pregnant women receive the recommended 90 Fe tablets during pregnancy, and compliance with consumption is alarmingly low at 37.7%. Data reveals that 48.9% of pregnant women suffer from anemia, with 84.2% of these cases occurring in the 15-24 age group (Indonesian Health Profile, 2021). This study aimed to explore the relationship between maternal knowledge and compliance with Fe tablet consumption at PMB Novi, Panyabungan District, Mandailing Natal Regency. Utilizing a descriptive analytical approach and quantitative methods, the study surveyed 33 pregnant women through total sampling. The results indicated a significant relationship, with a p-value of 0.001 ( $p < 0.05$ ), leading to the rejection of the null hypothesis. This implies that better maternal knowledge correlates with higher compliance in Fe tablet consumption. It is recommended that pregnant women actively seek information on the benefits and proper consumption of Fe tablets to reduce anemia risk. Additionally, health workers should enhance community education regarding maternal health, emphasizing the importance of iron during pregnancy and the advantages of Fe tablet consumption to combat iron deficiency effectively.
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### **1. INTRODUCTION**

During pregnancy, the mother will experience physiological changes, such as increased fluid volume and red blood cells in the body, decreased concentration of nutrient-binding proteins in the blood circulation and decreased micronutrients. Anemia that is often found in pregnancy is iron anemia, this is caused by a lack of iron intake in food, impaired absorption and increased iron needs during pregnancy (Lisnawati & Setiati, 2019).

Iron in the body is used to make hemoglobin and proteins in red blood cells that carry oxygen to body tissues. The body needs iron to make more blood supply to the fetus (Pratiwi & Safitri, 2021).

According to the *World Health Organization* (WHO) in 2021 pregnant women who experience anemia reached 40% of the total pregnant women worldwide with a prevalence of anemia in pregnant women of 41.8%. According to WHO, which is stated in the *prevalence of anemia among pregnant women*, the highest prevalence of anemia is in South Asia, Southeast Asia, and Africa in women of reproductive age. In South and Southeast Asia, almost 58% of the total population experiences anemia, while in North America, Europe and Australia, anemia due to iron

deficiency during pregnancy is rare. Even in the United States, only 5-10% of women suffer from anemia in their productive age (WHO, 2021).

Based on data in Indonesia, nationally, the coverage of pregnant women who received 90 Fe tablets during pregnancy was only 51%. As for maternal compliance in consuming Fe tablets (more than or equal to 90 tablets) during pregnancy, it was only 37.7%. Based on Riskasdes data, pregnant women who experience anemia are 48.9%, meaning 5 out of 10 pregnant women in Indonesia suffer from anemia. As much as 84.2% of anemia in pregnant women occurs in the 15-24 age group (Indonesian Health Profile, 2021).

Based on research conducted on the level of supplement consumption in pregnant women, there are still some pregnant women who do not routinely consume supplements, there are several factors, namely experiencing side effects such as nausea, vomiting, constipation, diarrhea, abdominal pain, having reduced and stopped taking supplements without the knowledge of health workers such as Doctors, Midwives and Nurses, some feel disturbed having to consume vitamin supplements every day so that they consume them irregularly or routinely or forget because they consume them at night. Therefore, the role of health workers can be used as facilitators and communicators so that they must be clear when providing health education to patients. The factor of the lack of public attitudes and knowledge regarding Health and disease is the provision of health education for pregnant women with anemia (Sakina, Hilmi, & Salman, 2022).

Based on the Riskesdas data of North Sumatra Province, pregnant women who received iron supplements were only 67% less than the target of 80% set in the strategic plan in North Sumatra Province 2019, the proportion of anemia sufferers based on age, namely 15-24 years in 2019 was 84.6%, 25-34 as much as 33.7%, 35-44 as much as 33.6%, and 45-55 as much as 24%. From the results of the 2013 Riskesdas, anemia sufferers were 37.1% increasing in 2019 to 48.9% (Riskesdas North Sumatra, 2020).

The coverage of iron supplementation for pregnant women in Mandailing Natal Regency is 64.99%, which has not reached the Mandailing Natal Health Service's strategic plan target of 98%. Based on the Mandailing Natal Regency Health Profile, out of 6,860 pregnant women, 8.37% have anemia (Mandailing Natal Health Service Profile, 2021).

Based on the results of an initial survey conducted by researchers at PMB Novi, Panyabungan District, Mandailing Natal Regency using a measurement aspect in the form of a questionnaire to all pregnant women who visited PMB Novi, a total of 33 pregnant women were obtained.

Based on the background above, the author is interested in conducting research on "The Relationship between Pregnant Women's Knowledge and Compliance with Fe Tablet Consumption at PMB Novi, Panyabungan District, Mandailing Natal Regency".

## 2. METHOD

This study is a descriptive analytical research type that aims to determine the relationship between pregnant women's knowledge and compliance with Fe tablet consumption at PMB Novi, Panyabungan District, Mandailing Natal Regency. The sample in this study were all pregnant women who visited PMB Novi, Panyabungan District, Mandailing Natal Regency. The sampling technique in this study was *total sampling*, which was 33 people.

## 3. RESULTS AND DISCUSSION

The results of this study on the Relationship between Pregnant Women's Knowledge and Compliance with Fe Tablet Consumption at PMB Novida Efrianti, Gunung Tua Panggorengan Village, Panyabungan District, Mandailing Natal Regency with a total of 33 respondents, obtained the following results:

### Univariate Analysis

#### Respondent Characteristics

**Table 1**  
**Frequency distribution of respondents in PMB Novi Panyabunga District and Regency**  
**Mandailing Christmas**

Characteristics	F	%
<b>Age (Years)</b>		
20-29	21	63.6
30-39	12	36.4
<b>Total</b>	<b>33</b>	<b>100</b>
<b>Education</b>	<b>F</b>	<b>%</b>
SD	7	21.2
JUNIOR HIGH SCHOOL	10	30.3
SENIOR HIGH SCHOOL	13	39.4

College	3	9.1
<b>Total</b>	<b>33</b>	<b>100</b>
<b>Work</b>	<b>F</b>	<b>%</b>
Self-employed	10	30.3
Housewife	20	60.6
civil servant	3	9.1
<b>Total</b>	<b>33</b>	<b>100</b>

Table 1 In terms of age, respondents aged 20-29 years were 21 people (63.6%), aged 30-39 years were 12 people (36.4%). In terms of education, respondents had elementary school education of 7 people (21.2%), respondents had junior high school education of 10 people (30.3%), high school education of 13 people (39.4%), and college education of 3 people (9.1%). In terms of occupation, respondents were self-employed of 10 people (30.3%), housewives of 20 people (60.6%), and civil servants of 3 people (9.1%).

#### Knowledge

**Table 2**  
**Frequency distribution of respondents' knowledge in PMB Novi Panyabungan District Regency Mandailing Christmas**

<b>Knowledge</b>	<b>F</b>	<b>%</b>
Good	15	45.5
Enough	10	30.3
Not enough	8	24.2
<b>Amount</b>	<b>33</b>	<b>100.0</b>

The results of table 2 were obtained from 33 respondents, of whom 15 people (45.5%) had good knowledge, 10 people (30.3%) had sufficient knowledge, and 8 people (24.2%) had poor knowledge.

#### Compliance

**Table 3**  
**Frequency distribution of consumption compliance Fe tablets at PMB Novi Subdistrict Panyabungan Regency, Mandailing Natal Regency**

<b>Compliance</b>	<b>F</b>	<b>%</b>
Obedient	22	66.7
Not obey	11	33.3
<b>Amount</b>	<b>33</b>	<b>100.0</b>

The results of table 3 show that the majority of respondents were compliant in consuming Fe tablets, as many as 22 people (66.7%) and respondents who were not compliant in consuming Fe tablets were 11 people (33.3%).

#### Bivariate Analysis

##### The relationship between knowledge and compliance in consuming Fe tablets

**Table 4**  
**The Relationship Between Pregnant Women's Knowledge and Compliance with Consuming Fe Tablets at PMB Novida Efianti, Gunung Tua Village, Panggorengan, Panyabungan District, Mandailing Natal Regency**

<b>Knowledge</b>	<b>Compliance</b>			<b>p-value</b>
	<b>Obedient F %</b>	<b>Not obey F %</b>	<b>Amount F %</b>	
Good	13 39.4	2 6.1	15 45.5	0.001
Enough	8 24.2	2 6.1	10 30.3	
Not enough	1 3.0	7 21.2	8 24.2	
<b>Amount</b>	<b>22 66.7</b>	<b>11 33.3</b>	<b>33 100.0</b>	

Table 4 Based on the research results, it is known that out of 15 respondents (45.5%) who have good knowledge, there are 13 respondents (39.4%) who are compliant, and 2 respondents (6.1%) who are not compliant. Out of 10 respondents (30.3%) with sufficient knowledge, there are 8 respondents (24.2%) who are

compliant and 2 respondents (6.1%) who are not compliant. And those with less knowledge of 8 respondents (24.2%) there is 1 respondent (3.0%) who is compliant and 7 respondents (21.2%) who are not compliant.

*Chi-Square* analysis shows that the  $p$  value = 0.001 ( $p < 0.05$ ), if the cell value is below 20% then the  $p$  value can be taken from *Chi-Square* and if the cell value is above 20% then the  $p$  value can be taken from Fisher's Exact Test. And from the results of the  $p$  value of this study using Fisher's Exact Test because the cell value is 33.3% which means above 20%, it is concluded that  $H_0$  is rejected and  $H_a$  is accepted. Thus it can be interpreted that there is a relationship between maternal knowledge and compliance with Fe tablet consumption at PMB Novida Efianti, Gunung Tua Panggorengan Village, Panyabungan District, Mandailing Natal Regency.

## Discussion

Knowledge is the result of "knowing" and this happens after people sense a particular object. Sensing occurs through the five human senses, namely the senses of sight, hearing, smell, taste and touch. Most of human knowledge is obtained from the eyes and ears (Notoatmodjo, 2017).

Respondents' knowledge is shown by the respondents' ability to correctly answer questions related to the occurrence of anemia in pregnancy. Mothers' knowledge is used as a basis for behavior, one of which is maintaining the mother's health during pregnancy so that the mother does not get anemia. With knowledge, a person can make changes so that the person's behavior can develop (Damayanti, 2019).

Knowledge is the result of remembering events or incidents that have been experienced either intentionally or unintentionally after observing or sensing a particular object which can be an important part of forming an action (Siantarini, et al, 2018).

Compliance in treatment can be interpreted as the behavior of patients who comply with all advice and instructions recommended by medical professionals such as doctors and pharmacists regarding everything that needs to be done to achieve treatment goals such as compliance in taking medication (Panggabean, 2021).

Compliance in consuming iron tablets in Indonesia is still very low, this is due to the lack of public knowledge about the benefits and impacts that may be caused by anemia during pregnancy, other factors are the lipa factor, fear of the baby becoming big, lack of awareness of the importance of iron tablets and the threat of anemia for pregnant women and babies, and side effects such as nausea or dizziness after consuming iron tablets (Amalia, et al, 2017). In Indonesia, the government program requires pregnant women to consume 1 iron tablet a day, a minimum of 90 tablets in 90 days during pregnancy. According to research, non-compliance of pregnant women in consuming iron tablets according to the recommendations of health workers is an impact of their ignorance about the importance of adequate iron intake during pregnancy. The knowledge possessed by pregnant women will affect their behavior. Pregnant women with good nutritional knowledge will try to provide adequate nutrition for themselves and their fetuses.

According to the researcher's assumption that maternal knowledge is directly proportional to maternal compliance in consuming iron tablets. This means that the better the mother's knowledge, the better the mother's compliance in consuming iron tablets at the Marbau Health Center, North Labuhanbatu Regency. Compliance of pregnant women in consuming iron tablets is defined as the obedience of pregnant women to consume iron tablets during pregnancy according to the recommendations of health workers.

This study is in line with the study conducted by Sri Martini, et al. (2020) in Purwodadi District, Grobogan, Central Java, with the results that there is a clear relationship between the level of knowledge of pregnant women about Fe tablets and their compliance in consuming Fe tablets. Respondents with good insight and compliance were (95.7%) and respondents with sufficient insight and compliance were 5 respondents (50.0%).

*Chi-Square* analysis shows that the  $p$  value = 0.001 ( $p < 0.05$ ), if the cell value is below 20% then the  $p$  value can be taken from *Chi-Square* and if the cell value is above 20% then the  $p$  value can be taken from Fisher's Exact Test. And from the results of the  $p$  value of this study using Fisher's Exact Test because the cell value is 33.3% which means above 20%, it is concluded that  $H_0$  is rejected and  $H_a$  is accepted. Thus it can be interpreted that there is a relationship between maternal knowledge and compliance with Fe tablet consumption at PMB Novida Efianti, Gunung Tua Panggorengan Village, Panyabungan District, Mandailing Natal Regency.

Based on the results of research conducted by Krisda, et al. (2023) showed that data from 30 respondents were obtained, 15 people had a good level of knowledge with the compliant category. There were 2 respondents with a low level of knowledge in the compliant category (13.3%), and there were 13 respondents with a low level of knowledge in the non-compliant category (86.7%). A Chi-Square test has been carried out with a  $p$  value = 0.000 ( $p < 0.05$ ) meaning  $H_0$  is rejected, so it can be concluded that there is a significant relationship between the level of knowledge and compliance in consuming Fe tablets with the incidence of anemia in pregnant women in the Poasia Health Center work area.

This study is in line with Regina's research, (2021) which states that there is a significant relationship between the level of knowledge about anemia and compliance with taking iron tablets at the Narmada Health Center, West Lombok Regency.

This shows that knowledge is very important in determining compliance in consuming Fe tablets. Pregnant women will know how to consume Fe tablets, the benefits, and the possible impacts of not consuming Fe tablets

on pregnant women. A person's level of knowledge about Fe tablets affects behavior in choosing foods containing iron (Hamzah, et al., 2021).

#### 4. CONCLUSIONS

Based on the results of the analysis and discussion of the research, the following conclusions can be drawn: The majority of respondents were aged 20-29 years, as many as 21 people (63.6%), with a high school education level of 13 people (39.4%), and more mothers worked as housewives, as many as 20 people (60.6%). The majority of respondents had good knowledge, as many as 15 people (45.5%), and the majority of respondents were compliant in consuming Fe tablets, as many as 22 people (66.7%). There is a relationship between respondents' knowledge and compliance in consuming Fe tablets at PMB Novi in Gunung Tua Panggorengan Village, Panyabungan District, Mandailing Natal Regency with a p value = 0.001.

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