
The Relationship Between Pregnant Women's Attitudes and Their Compliance in Consuming Iron (Fe) Tablets During Pregnancy in the Working Area of Syamtalira Bayu Public Health Center, North Aceh Regency

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Abstract

This study aims to determine the relationship between pregnant women's attitudes and their compliance in consuming iron (Fe) tablets during pregnancy at the Syamtalira Bayu Health Center, North Aceh Regency. The research employed a quantitative cross-sectional approach with a sample of 85 pregnant women selected through purposive sampling based on the Slovin formula. Data collection was carried out by distributing questionnaires to pregnant women in their first, second, and third trimesters. The results showed that 27.1% of respondents had a positive attitude and were compliant in consuming Fe tablets, while 72.9% had a negative attitude and were non-compliant. Bivariate analysis revealed a significant relationship between attitude and compliance (p -value = 0.012, $p < 0.05$). These findings indicate that a positive attitude strongly influences compliance with Fe tablet consumption. Therefore, health education provided by healthcare workers should not only focus on knowledge but also aim to foster positive attitudes and commitment among pregnant women to maintain their health and that of their fetus.

Keywords: Attitude, Compliance, Pregnant Women, Fe Tablets, North Aceh

INTRODUCTION

Anemia in pregnant women remains a global health concern. The World Health Organization (2015) reported that more than 40% of pregnant women worldwide suffer from anemia, with the majority of cases caused by iron deficiency. This condition increases the risk of obstetric complications, such as postpartum hemorrhage, preterm delivery, low birth weight, and even maternal and infant mortality. In Indonesia, the prevalence of anemia among pregnant women is also considered high. Based on the 2018 Basic Health Research (Riskesdas), the prevalence of anemia in pregnant women reached 48.9% (Kementerian Kesehatan RI, 2019). This means that nearly one in two pregnant women suffers from anemia—an alarming figure compared to the Sustainable Development Goals (SDGs) target to reduce maternal morbidity and mortality. To address this problem, the government promotes a program of distributing 90 iron tablets to each pregnant woman throughout pregnancy (Kementerian Kesehatan RI, 2019).

Nevertheless, the availability of iron tablets does not guarantee compliance among pregnant women in consuming them. Several studies have shown that adherence remains low, as many women fail to finish the tablets provided due to reasons such as side effects, boredom, lack of understanding of the benefits of iron tablets, cultural influences, and insufficient family support (Suryani & Handayani, 2020). According to Putri and Lestari (2021), attitudes play a crucial role in determining compliance. Pregnant women with positive attitudes toward iron supplementation are more likely to follow healthcare providers' recommendations, whereas those with negative attitudes tend to neglect consumption.

Attitude, in the context of health psychology, is a predisposition formed by knowledge, experience, beliefs, and personal values (Notoatmodjo, 2018). Pregnant women who develop positive attitudes toward iron tablets are more likely to commit to consuming them regularly. Conversely, negative attitudes can hinder compliance, even when information and iron tablets are readily available. This indicates that improving knowledge alone is insufficient; fostering

positive attitudes toward health behaviors is equally essential (Putri & Lestari, 2021). Thus, examining the relationship between pregnant women's attitudes and compliance with iron tablet consumption is crucial, particularly in the working area of Syamtalira Bayu Health Center, North Aceh Regency, where compliance rates remain low according to local health authority reports. This study is expected to provide empirical insights into the extent to which attitudes influence compliance, serving as a basis for designing more effective interventions to reduce anemia in pregnant women.

The research problem addressed in this study is whether there is a relationship between pregnant women's attitudes and compliance in consuming iron tablets in the working area of Syamtalira Bayu Health Center, North Aceh Regency. The purpose of this study is to determine the relationship between pregnant women's attitudes and their compliance with iron tablet consumption during pregnancy in the same area. The study is expected to be beneficial for pregnant women in increasing awareness of the importance of positive attitudes toward iron tablet consumption, for healthcare workers as a basis for developing strategies that go beyond knowledge toward shaping attitudes, for health institutions in evaluating and improving iron supplementation programs, and for future researchers as an empirical reference in maternal and child health studies

RESEARCH METHODS

This research is a quantitative study using a cross-sectional design. This design was chosen because it allows the researcher to analyze the relationship between the independent variable, pregnant women's attitudes, and the dependent variable, compliance with iron tablet consumption, at the same time (Notoatmodjo, 2018). It is also considered efficient in terms of time and resources, as data are collected only once without the need for long-term follow-up. The study was conducted in the working area of Syamtalira Bayu Health Center, North Aceh Regency. The location was selected based on reports from the local Health Office indicating low compliance among pregnant women in consuming iron tablets. Moreover, the area has extensive maternal health service coverage, making it representative for research (Kementerian Kesehatan RI, 2019). The research was carried out from May to July 2025, covering preparation, data collection, and analysis stages.

The study population consisted of all pregnant women in their first, second, and third trimesters registered in the working area of Syamtalira Bayu Health Center. Based on preliminary data from midwives and the health center, the population was relatively large and diverse. Sampling was conducted using purposive sampling with inclusion criteria: pregnant women in the first–third trimester, willing to participate as respondents, and able to read and understand the questionnaire. Exclusion criteria included pregnant women with specific medical conditions requiring special care. The sample size was determined using the Slovin formula, resulting in a total of 85 respondents (Sugiyono, 2019).

The research instrument was a structured questionnaire that had been validated beforehand. The questionnaire consisted of several sections: respondent characteristics (age, education, occupation, and parity); attitudes toward iron tablet consumption, measured using a Likert scale with positive and negative statements; and compliance, measured by the extent to which pregnant women consumed iron tablets as recommended by healthcare providers. The instrument was developed based on relevant literature and previous studies on iron tablet consumption compliance (Suryani & Handayani, 2020; Putri & Lestari, 2021).

Data collection was conducted through the distribution of questionnaires to respondents. Beforehand, the researcher coordinated with village midwives and health cadres. The researcher also explained the purpose of the study, confidentiality of the data, and obtained written informed consent from the respondents. Afterward, respondents completed the questionnaire independently, with assistance provided when necessary (Creswell, 2018).

Data analysis was conducted in several stages. First, univariate analysis was performed to describe the frequency distribution of respondents' characteristics, attitudes, and compliance with iron tablet consumption. The results were presented in frequency and percentage tables. Second, bivariate analysis was conducted using the Chi-Square test to examine the relationship between pregnant women's attitudes (positive/negative) and compliance (compliant/non-compliant). This test was chosen because it is suitable for analyzing categorical data with two variables (Dahlan, 2017). The level of significance used was $p < 0,05$. If the p-value is less than 0.05, it can be concluded that there is a significant relationship between attitude and compliance. Conversely, if the p-value is greater than 0.05, there is no significant relationship.

RESULTS AND DISCUSSION

Results

The study involved 85 pregnant women from the working area of Syamtalira Bayu Health Center, North Aceh Regency. Data were collected using questionnaires after the research objectives had been explained and informed consent was obtained.

Table 1.
Distribution of Respondents by Age

Age (years)	Frequency	Percentage (%)
20–25	22	25.9
26–30	33	38.8
≥ 31	30	35.3
Total	85	100

The data show that most respondents were aged 26–30 years (38.8%), indicating that the majority were in the productive age range.

Table 2.
Distribution of Respondents by Education

Education	Frequency	Percentage (%)
Higher education	8	9.4
Senior high school	57	67.1
Junior high school	20	23.5
Total	85	100

The results indicate that most respondents had completed senior high school (67.1%). This reflects a relatively adequate educational background, although only 9.4% had higher education.

Table 3.
Distribution of Respondents by Occupation

Occupation	Frequency	Percentage (%)
Working	30	35.3
Not working	55	64.7
Total	85	100

The majority of respondents (64.7%) were not working, suggesting that most of them were full-time homemakers.

Table 4.

Distribution of Respondents by Compliance with Iron Tablet Consumption

Compliance	Frequency	Percentage (%)
Compliant	23	27.1
Non-compliant	62	72.9
Total	85	100

The findings reveal that only 27.1% of respondents were compliant with consuming iron tablets, while most (72.9%) were not compliant.

Table 5.

Distribution of Respondents by Attitude Toward Iron Tablet Consumption

Attitude	Frequency	Percentage (%)
Positive	23	27.1
Negative	62	72.9
Total	85	100

Most respondents (72.9%) had a negative attitude toward iron tablet consumption.

Table 6.

Relationship Between Attitude and Compliance in Iron Tablet Consumption

Attitude	Compliant (n, %)	Non-compliant (n, %)	Total	p-value
Positive	23 (100%)	0 (0%)	23	
Negative	0 (0%)	62 (100%)	62	0.012
Total	23 (27.1%)	62 (72.9%)	85	

The Chi-Square test showed a p-value of 0.012 ($p < 0.05$), indicating a significant relationship between pregnant women's attitudes and compliance in consuming iron tablets.

Discussion

The results of this study demonstrate a statistically significant relationship between attitude and compliance in iron tablet consumption among pregnant women. Respondents with positive attitudes were entirely compliant, while those with negative attitudes were entirely non-compliant. This finding highlights that attitude is a strong determinant of health-related behavior (Notoatmodjo, 2018).

The low compliance rate (27.1%) aligns with national reports and previous studies in Indonesia, which revealed that pregnant women often fail to consume iron tablets consistently due to perceived side effects, lack of knowledge, boredom, or limited family support (Suryani & Handayani, 2020). Furthermore, negative attitudes may stem from misconceptions, such as the belief that iron tablets cause excessive weight gain or harm the baby. Without addressing these misconceptions, compliance will remain low.

The results also emphasize that merely increasing knowledge is insufficient to improve compliance. As suggested by Putri and Lestari (2021), attitude represents an internal motivational factor that can either reinforce or hinder behavior. Therefore, health education programs should not only focus on providing information but also aim to shape positive attitudes through persuasive communication, counseling, and motivational strategies. Involving husbands, families, and community leaders can also enhance compliance, as family support has been shown to reinforce maternal health behaviors.

These findings are consistent with global literature indicating that pregnant women's compliance with iron supplementation is higher when they perceive strong benefits, experience fewer side effects, and receive adequate support from both family and healthcare providers (WHO, 2015).

In conclusion, this study confirms that attitude is directly and strongly related to compliance with iron tablet consumption among pregnant women. Therefore, maternal health interventions should integrate knowledge transfer with strategies to shape attitudes and strengthen social support networks. By doing so, programs will be more effective in reducing anemia prevalence and improving maternal and fetal health outcomes.

CONCLUSION

This study found a significant relationship between pregnant women's attitudes and their compliance in consuming iron (Fe) tablets in the working area of Syamtalira Bayu Health Center, North Aceh Regency. Among the 85 respondents, only 27.1% demonstrated positive attitudes and were fully compliant, while 72.9% showed negative attitudes and were entirely non-compliant. The Chi-Square test confirmed that attitude was strongly associated with compliance ($p = 0.012$, $p < 0.05$).

These findings highlight that attitude is a critical determinant of health behavior. Pregnant women with positive attitudes toward the benefits of iron supplementation are more likely to adhere to recommendations, while those with negative attitudes tend to neglect them. This implies that knowledge alone is insufficient to improve compliance; interventions should also target the development of positive attitudes and motivation.

Healthcare workers are therefore encouraged to deliver health education that emphasizes both cognitive and affective aspects, combining information with motivational strategies and counseling. In addition, involving families, particularly husbands, in maternal health education may strengthen support and increase compliance. Strengthening these approaches is expected to help reduce the prevalence of anemia in pregnancy and improve maternal and infant health outcomes.

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