

THE RELATIONSHIP BETWEEN PREGNANT WOMEN'S KNOWLEDGE AND COMPLIANCE WITH FE TABLET CONSUMPTION IN PMB NURBAITI, NORTH ACEH DISTRICT ACEH PROVINCE IN 2024

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ABSTRACT

Background: The World Health Organization (WHO) states that approximately 40% of maternal mortality rates (MMR) are caused by iron deficiency anemia, which leads to bleeding. Data from the 2022 Aceh Provincial Health Profile indicate that the proportion of pregnant women receiving iron tablets (90 tablets) is 92.70% in Lhokseumawe City, with the lowest coverage of 49.03% in Simeulue Regency; the provincial average is 73.20%. The low coverage of iron tablets in Aceh Province is attributable to an overestimation of the target population of pregnant women based on actual field data. Another possible cause is the taste of the iron tablets, which can cause nausea and vomiting (Aceh Health Profile, 2022). **Objective:** To determine the relationship between pregnant women's knowledge and adherence to iron tablet consumption at the Nurbaiti PMB in North Aceh Regency in 2024. **Method:** This study used a cross-sectional approach. Data analysis employed the chi-square test. This study was conducted at the Siti Fujana BPM in East Aceh Regency. The population comprised 30 individuals; the sampling technique was total sampling. **Results:** The majority of respondents had insufficient knowledge and did not exclusively breastfeed (20 respondents (52.6%)), while the majority of respondents had good knowledge and solely breastfed (10 respondents (26.3%)). **Conclusion:** The majority of pregnant women had good knowledge (13 respondents (43.3%)), and 17 respondents (56.7%) had poor knowledge. The majority of pregnant women did not experience anemia (13 respondents (43.3%)), and 18 respondents (60.0%) experienced anemia. There was a significant association between maternal knowledge, adherence to iron tablet use, and anemia incidence ($p=0.013$).

Keywords: Pregnant Women; Knowledge; Compliance; Iron Tablets; Anemia Prevention

Introduction

The World Health Organization (WHO) reports that around 40% of (Sinaga, SN, 2022). MMR (Maternal Mortality Rate) is caused by iron deficiency anemia, leading to bleeding. (Kementrian Kesehatan, 2023). In Asia, anemia prevalence is relatively high at 72.6% and remains a significant concern in developing countries like

Indonesia. (ASEAN Statistics, 2021). Anemia in pregnant women can lead to a 5% increase in abortions, a 5% rise in premature deliveries, and fetal growth retardation. (Manurung, H R, 2022). His disorders increase by 5%, and the first stage of labor may be prolonged, leading to neglected labor by 5%. During the puerperium, uterine subinvolution occurs, causing postpartum hemorrhage by 27%,

puerperal infection by 11%, and a 15% reduction in breast milk production. (Situmorang *et al.*, 2025).

Despite the ongoing provision of Fe tablets, the prevalence of anemia among pregnant women continues to rise. Bidang's research (Sinaga *et al.*, 2024) suggests that this increase is due to the difficulty pregnant women face in taking Fe tablets, resulting in non-compliance with their use. (WHO 2021, 2021).

Pregnant women often find it difficult to take Fe tablets due to side effects like nausea, vomiting, stomach cramps, heartburn, and constipation. (Sinaga *et al.*, 2024).

Research Methods

This research is a quantitative and analytical study conducted at Nurbaiti PMB in North Aceh Regency, Aceh Province, involving a total sample of 30 pregnant women. It uses a cross-sectional design, meaning each subject participated only once or for a brief period. The entire pregnant population attending antenatal care at this facility was included through total sampling. Data were collected directly via interviews and questionnaires during 2024, focusing on assessing pregnant women's knowledge and attitudes toward iron tablet adherence during pregnancy.

1. Conducting research preparation at Mitra Husada Health College, Medan.
2. Arranging permits for data collection at the Nurbaiti Health Center (PMB) in North Aceh Regency.
3. Collecting data from the Patient Administration and Medical Information Section at the Nurbaiti Health Center (PMB) in North Aceh Regency.
4. The collected data were then analyzed using univariate and bivariate methods.
5. Concluding and reporting on the research conducted.

Data Processing Methods

1. Editing: The process of manually editing the collected data and checking it for completeness and clarity.
2. Coding: The process of coding the data obtained during data processing. This involves assigning a predetermined code to the data.
3. Tabulating: The data entered into the computer is arranged in a Table and analyzed.
4. The respondents' answers are coded statistically.
5. Processing: The tabulated data is processed manually or by computer for analysis.
6. Cleaning: The process of checking and verifying the accuracy of the entered data.

The purpose of univariate analysis is to describe each variable under study, typically using a frequency distribution table. In univariate analysis, the relationship between variables is assessed. This step is essential for determining whether a relationship exists between the two variables. Bivariate analysis is performed once the characteristics of each variable are understood. In this study, data were analyzed using the chi-square test at a 95% confidence level ($p\text{-value} \leq \alpha$). This test aims to verify the research hypothesis. If the p-value is less than or equal to 0.05, the hypothesis is accepted; if it is greater than 0.05, the hypothesis is rejected. (Dkk, 2023).

Results

Respondent characteristics based on age, education, and occupation show that 9 pregnant women (30.0%) are aged 20-35, while 21 women (70.0%) are aged 36-45. Regarding education, four respondents (13.3%) completed elementary school, seven (23.3%) completed junior high, 17

(56.7%) finished high school, and two (6.7%) hold a bachelor's degree. In terms of occupation, 17 respondents (56.7%) are employed, and 13 (43.3%) are unemployed. This data is from a questionnaire evaluating Pregnant women's knowledge of iron tablets, adherence, and anemia incidence. Thirteen women (56.7%) demonstrated good knowledge, while 17 (56.7%) had poor understanding. Regarding anemia, 13 (60.0%) pregnant women did not develop anemia, whereas 18 (40.0%) did. A bivariate analysis was performed to explore the relationship between knowledge of iron

tablet adherence and anemia incidence among pregnant women at Nurbaiti PMB, North Aceh Regency, in 2024. This analysis was based on data collected through a questionnaire. The chi-square test revealed a correlation between pregnant women's knowledge about the use of Fe tablets and the occurrence of anemia. Specifically, 30.0% of mothers with good knowledge were anemic, whereas 46.7% of those with poor knowledge were anemic. The test yielded a p-value of 0.013, indicating a statistically significant association between knowledge level and anemia incidence.

Table 1 Bivariate Results of the Relationship between Pregnant Women's Knowledge of Compliance with Iron Tablet Consumption and the Incidence of Anemia in PMB Nurbaiti, North Aceh Regency in 2024

Level of Knowledge of Pregnant Women Regarding Compliance with Iron Tablet Consumption	Occurrence anemia				Total		p Value
	No Anemia				Anemia		
	n	%	n	%	n	%	
≥2 year	3	30,0	4	13,3	13	43,3	0.004
<2 year	9	10,0	14	46,6	17	56,7	
Total	12	40,0	18	60,6	30	100,0	

Discussion

Knowledge Level of Pregnant Women Regarding Compliance with Iron Tablet Consumption at the Nurbaiti PMB in North Aceh Regency in 2024. One method used to assess knowledge is through a written questionnaire. questionnaire contains the material to be measured, tailored to the dominant cognitive level. Knowledge or cognition significantly influences a person's actions (Bidang, Sugiyono, 2020). Research indicates that pregnant women with higher health knowledge are more likely to engage in health-promoting behaviors. In a 2024 study on anemia incidence among Nurbaiti Prenatal Care (PMB) clients in North Aceh Regency,

results showed that 13 pregnant women (43.3%) did not have anemia, while 18 respondents (60.0%). Damayanty et al. (2024) explain that anemia during pregnancy can lead to numerous complications, such as miscarriage, preterm labor, fetal growth problems, a higher risk of infection, and issues with the umbilical cord. decompensation (Hb <6 g), hyperemesis gravidarum, antepartum bleeding, and premature rupture of membranes (PROM). Anemia raises the risk of complications during pregnancy and delivery, leading to higher maternal and infant mortality and potentially resulting in low birth weight, as noted by Bidang (Sitanggang et al., 2022). The impact of anemia on pregnancy varies from mild

symptoms to severe threats to pregnancy survival, according to Bidang (Situmorang et al., 2025). This is supported by research on "The Relationship Between Pregnancy Anemia and Premature Rupture of Membranes," which reports a p-value of 0.01, indicating a significant association between pregnancy anemia and The study investigated the relationship between pregnant women's knowledge levels, their adherence to taking iron tablets, and the occurrence of anemia. The Chi-Square test showed these relationships were statistically significant. Specifically, 30.0% of mothers with good knowledge did not develop anemia, whereas 46.7% of mothers with lesser knowledge did. with poor knowledge who did. (Sinaga et al., 2024). The chi-square test produced a p-value of 0.004, showing a significant link between pregnant women's knowledge of Fe tablet use and the occurrence of anemia.

Conclusions And Suggestions

Conclusion: Among pregnant women, 13 (43.3%) possess good knowledge, while 17 (56.7%) have poor knowledge. Most pregnant women without anemia are 13 (43.3%), whereas 18 (60.0%) of those with anemia. A significant link exists between pregnant women's knowledge of iron tablet intake and anemia ($p = 0.013$). This suggests that increased knowledge about iron tablet adherence correlates with higher compliance. **Recommendation:** For Theorists: These findings should expand their understanding. The study aims to improve knowledge and benefits for students, especially midwifery students. by clarifying how pregnant women's knowledge influences their adherence to iron tablet use and the occurrence of anemia. It can be referenced and included in the bibliography. For respondents: Based on the study results and its implementation, it is hoped that pregnant women will follow

iron tablet guidelines and reduce the risk of anemia, especially in closely spaced pregnancies.

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