



THE RELATIONSHIP BETWEEN PREGNANT WOMEN'S KNOWLEDGE ABOUT ANEMIA AND COMPLIANCE WITH THE CONSUMPTION OF IRON SUPPLEMENTS

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ABSTRACT

In pregnant women, iron consumption is used as an effort to overcome iron deficiency. Where the coverage of pregnant women will get a minimum of 90 tablets of Fe tablets during pregnancy because at that time the need for iron is very high. Pregnant women who do not understand the importance of the level of knowledge with adherence to consuming Fe tablets which will have an impact on the mother and also the fetus. This study was conducted to determine the relationship between knowledge of pregnant women and adherence to consuming Fe tablets at the Lamongan Public Health Center. This research is a descriptive observational study with a cross sectional design. The population in this study were pregnant women, totaling 719 samples taken using purposive sampling where the number of samples was taken in consideration. The data obtained is by distributing questionnaires that have been validated and tested for reliability by previous researchers, then the questionnaires are filled in directly by the respondents. Data analysis was carried out in the form of univariate analysis and bivariate analysis using the chi-square test. The results showed that the knowledge of pregnant women about iron was in the good category (83,7%), and the adherence of pregnant women to consume Fe tablets was in the obedient category (17,3%). While the knowledge of pregnant women in the poor category (81,5%), and the compliance of pregnant women in the non-compliant category (18,5%). The conclusion in this study was that there was a significant relationship between knowledge of pregnant women and adherence to consuming Fe tablets at the Lamongan Health Center with $p = 0.001$.

Keywords: compliance; fe tablets; iron; knowledge; pregnant women

How to cite (in APA style)

Anggraeni, F., Mulyani, E., Rahma, A., Supriatiningrum, D. N., & Ariestiningsih, S. R. (2025). The Relationship between Pregnant Women's Knowledge about Anemia and Compliance with the Consumption of Iron Supplements. *Indonesian Journal of Global Health Research*, 7(1), 815-820. <https://doi.org/10.37287/ijghr.v7i1.5413>.

INTRODUCTION

Anemia is a condition in which the number of red blood cells or hemoglobin is insufficient to meet the physiological needs of the body. Anemia is one of the public nutritional health problems, especially in pregnant women where hemoglobin levels are less than 11.0 g/dl for the first and third trimesters and less than 10.5 g/dl for the second trimester. World Health Organization (WHO) data in 2016 showed that the prevalence of anemia in pregnant women was still very high, namely 40.1%. The prevalence of pregnant women is estimated in Asia to be 48.2%, Africa 57.1%, America 24.1% and Europe 25.1% (WHO, 2019).

In pregnancy, anemia has a negative impact on maternal and infant morbidity and mortality. The impact of anemia on the fetus includes intra uterine growth retardation (IUGR), premature birth, babies with congenital defects, low birth weight (LBW), and increased risk of fetal death in the womb. While the impact of anemia on pregnant women is shortness of breath, fatigue, palpitations, hypertension, sleep disorders, preeclampsia, abortion, and increased risk of bleeding before and during childbirth and even maternal death (Auliayahya, 2019). Anemia is still one of the main nutritional problems in Indonesia.

Pregnancy anemia is called a "*potential danger to mother and child*", which is why anemia requires serious attention from all parties involved in health services at the forefront. Based on data from the 2018 Basic Health Research (Riskesdas), it was stated that in Indonesia, 48.9% of pregnant women experience anemia. As much as 84.6% of anemia in pregnant women occurs in the 15-24 year age group (Ministry of Health, 2020). Data on anemia cases in Central Java Province is 57.1% and the highest anemia is in pregnant women in TM III. Meanwhile, the prevalence of anemia in pregnant women in Klaten Regency is 9.19% (Central Java Health Office, 2020).

The government has made efforts to improve the health of pregnant women, which is manifested in the provision of antenatal care (ANC) at least four times during pregnancy (K4). This service is attempted, including to get iron tablets (TTD) at least 90 tablets during pregnancy and simple laboratory test services, namely hemoglobin (Hb) tests. It is interesting to see that the incidence of anemia in pregnant women has increased from year to year which is directly proportional to the proportion of pregnant women who get TTD of (73.2%) but when viewed in more detail the percentage of pregnant women who get TTD $\geq$ 90 tablets is only 38.1% and the rest get $<$ 90 tablets (Riskesdas, 2018).

Knowledge is one of the factors that influences the formation of health behavior (Notoatmojo, 2017). If pregnant women know and understand the negative impacts of anemia and know the preventive measures for anemia, they will be able to avoid various diseases or the risk of anemia in pregnancy. This behavior can affect the reduction in the incidence of anemia in pregnant women (Purbadewi, 2018). Research conducted by Shofiana FI et al¹⁰ at the Maron Health Center, Probolinggo Regency in 2018, showed that there was a significant influence between the knowledge of pregnant women on the consumption of iron tablets ($p = 0.026$). Followed by research by Setiawati (2019) at the Meninting Mataram Health Center in 2018, showing an influence between health education about TTD in pregnant women's classes and compliance with TTD consumption ($p = 0.000$).

In addition to knowledge, compliance with TTD consumption is one of the health behaviors carried out by pregnant women. A high level of compliance can reduce the incidence of anemia in pregnant women (Shofiana, 2018). In the study of Purnamasari G et al (at the Bogor Tengah Health Center in 2016, it showed a high level of compliance of pregnant women in consuming iron tablets, which was 50.9%. In addition, the results of Juwita R's study at the Sikijang Health Center, Pelalawan Regency in 2015, there was a significant relationship between compliance in consuming iron tablets and the incidence of anemia in pregnant women ($p = 0.000$). This study aims to determine the relationship between knowledge and behavior of pregnant women consuming TTD with the incidence of anemia in the Lamongan Health Center work area.

METHOD

This study is an analytical study with a cross-sectional approach. Data collection was carried out in the Lamongan Health Center area from May to October 2024. The population of this study was all pregnant women in Lamongan Regency. The data obtained are data on pregnant women at the Lamongan Health Center. The research sample was 719 pregnant women and used simple random sampling.

RESULT

Based on table 1, it can be seen that the number of pregnant women with high school education is the largest, namely 579 people (80.5%). The largest profession of pregnant women is housewives, namely 539 people (75%)

Table 1.
Education and Employment of Pregnant Women

Variable	f	%
Education		
High School	579	80,5
Diploma	44	6,1
Bachelor's Degree	96	13,4
Employment		
Housewife	539	75,0
Private Sector	138	19,2
Civil Servant	42	5,8

Table 2.
Data on knowledge of pregnant women

Knowledge of pregnant women	f	%
Good	602	83,7
Not Good	117	16,3

Table 3.
Pregnant women's compliance data

Pregnant women's compliance data	F	%
Obedient	586	81,5
Not obey	133	18,5

Based on the discussion above, it can be concluded that the data results show that compliance in pregnant women who consume Fe tablets at the Lamongan Health Center mostly have compliance with a higher compliant category, namely 586 people.

Table 4.
Bivariate Analysis Results

Compliance Knowledge	Obedient		Not obey		Total		P Value
	N	%	N	%	n	%	
Good	484	82,5	86	64,6	570	100	
Not Good	102	17,5	47	35,4	149	100	

The results show the relationship between the two variables, it is found that pregnant women's knowledge about iron is more in the good category, so it can be concluded that pregnant women already know about the importance of iron during pregnancy. Based on the results of the bivariate analysis, it was found that pregnant women who had less knowledge were obedient in consuming low Fe tablets. Meanwhile, respondents who had good knowledge were obedient in consuming Fe tablets, namely in the high category.

DISCUSSION

Mother's knowledge about iron (Fe) tablets will lead to a positive attitude towards compliance with consuming iron (Fe) tablets. Without knowledge of iron tablets (Fe), it is difficult for the mother to instill the habit of using food sources of iron which are important for the health of pregnant women. Lack of knowledge is often seen as an important factor in iron deficiency problems. This can happen because people are less able to apply information about iron (Fe) tablets in their daily lives (Karyuni, 2020).

This study is also supported by research from (Rosyadia Wachdin, 2021) which was conducted on pregnant women at BPM Atika Madiun, where there was a significant relationship between pregnant women's knowledge and compliance in consuming Fe tablets. By concluding that if the knowledge of pregnant women is better, then in consuming Fe tablets they will also be more obedient. Conversely, if the knowledge of pregnant women is

poor, the tendency to consume Fe tablets will also be less obedient. The knowledge of pregnant women will affect their actions. Pregnant women who have knowledge about iron will try to provide plenty of minerals for themselves and their unborn babies. By using the knowledge gained through the use of iron supplements to meet their needs during pregnancy, pregnant women will benefit from having a better understanding of iron, both for themselves and their unborn children (Notoatmodjo, 2014)

CONCLUSION

Based on the results of research on the relationship between pregnant women's knowledge and compliance in consuming Fe tablets at the Lamongan Health Center, there is a significant relationship between pregnant women's knowledge and compliance in consuming Fe tablets at the Lamongan Health Center with a p value = 0.001.

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