

FACTORS ASSOCIATED WITH ADHERENCE OF PREGNANT WOMEN CONSUMING FE TABLETS

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ABSTRAK : FAKTOR YANG BERHUBUNGAN DENGAN KEPATUHAN IBU HAMIL MENGONSUMSI TABLET FE

Latar belakang : Data ibu hamil melakukan kunjungan di Puskesmas Negara Ratu pada. pada tahun 2021 jumlah kunjungan ibu hamil berjumlah 704 dengan kejadian anemia sebanyak 289 (41,0%) ibu dengan kadar Hb antara 9-11 gr% dan sebanyak 16 (2,2%) ibu dengan kadar Hb < 8 gr%. Pemberian suplemen zat besi salah satu cara yang dianggap paling cocok bagi ibu hamil untuk meningkatkan kadar Hb sampai tahap yang diinginkan. Dampak dari ibu tidak patuh dalam mengonsumsi tablet besi dapat memberikan peluang lebih besar untuk terkena anemia, hal ini dapat beresiko untuk terjadinya abortus, partus prematurus, partus lama, perdarahan postpartum, infeksi, syok bahkan kematian. Banyak faktor yang mempengaruhi kepatuhan ibu dalam mengonsumsi tablet besi antara lain konseling dari petugas kesehatan, dukungan keluarga, dan pengetahuan ibu hamil mengenai tablet besi. Tujuan penelitian ini diketahui faktor yang berhubungan dengan kepatuhan ibu hamil mengonsumsi tablet Fe di Puskesmas Negara Ratu Kabupaten Lampung Utara Tahun 2023.

Metode penelitian dilakukan secara deskriptif dengan pendekatan *cross sectional*. Populasi penelitian ini adalah seluruh Ibu Hamil Trimester II dan III yang melakukan pemeriksaan di Puskesmas Negara Ratu Kabupaten Lampung Utara Tahun 2023 sebanyak 48 responden dengan sampel sebanyak 43 responden. Pengumpulan data menggunakan lembar kuesioner. Analisa data secara univariat dan bivariat (*Uji chi square*).

Hasil penelitian Ada hubungan pendidikan, pengetahuan, kepatuhan peran petugas kesehatan dengan kepatuhan ibu hamil mengonsumsi tablet Fe di Puskesmas Negara Ratu Kabupaten Lampung Utara Tahun 2023

Kesimpulan diketahui ada hubungan pendidikan ($p\text{-value} = 0,022$), pengetahuan ($p\text{-value} = 0,004$), dukungan suami ($p\text{-value} = 0,010$), peran petugas kesehatan ($p\text{-value} = 0,013$) dengan kepatuhan ibu hamil dalam mengonsumsi tablet Fe di Puskesmas Negara Ratu Kabupaten Lampung Utara Tahun 2023.

Saran bagi tenaga kesehatan agar dapat memberikan penyuluhan kesehatan dalam rangka meningkatkan mutu pelayanan kesehatan khususnya penyuluhan kesehatan tentang anemia pada ibu hamil dan ibu hamil lebih mengerti pentingnya mengonsumsi tablet besi (Fe).

Kata Kunci : pendidikan, pengetahuan, dukungan suami, peran petugas kesehatan, kepatuhan konsumsi tablet fe

ABSTRACT

Background: The data shows that in 2021, there were a total of 704 visits by pregnant women to the Negara Ratu Community Health Center. Out of these visits, 289 (41.0%) pregnant women had anemia with hemoglobin (Hb) levels between 9-11 g/dL, and 16 (2.2%) pregnant women had Hb levels < 8 g/dL. Providing iron supplements is considered one of the most suitable methods for pregnant women to increase their Hb levels to the desired range. The impact of pregnant women not adhering to iron tablet consumption can significantly increase the risk of anemia, which, in turn, can lead to various complications such as abortion, premature birth, prolonged labor, postpartum bleeding, infections, shock, and even death. Several factors influence pregnant women's adherence to iron tablet consumption, including counseling from healthcare providers, family support, and the pregnant women's knowledge about iron tablets.

The purpose of this research is to identify the factors associated with pregnant women's adherence to consuming iron tablets at the Negara Ratu Primary Health Care in North Lampung Regency in 2023.

The research method was descriptive with a *cross sectional* approach. The population of this study were all pregnant women in Trimester II and III who conducted examinations at the Negara Ratu Primary Health Care, North Lampung Regency in 2023 as many as 48 respondents with a sample of 43 respondents. Data collection using a questionnaire sheet. Univariate and bivariate data analysis (*chi square test*).

The results of the study There was a relationship between education, knowledge, adherence with the role of health workers with the compliance of pregnant women consuming Fe tablets at the Negara Ratu Primary Health Care, North Lampung Regency in 2023.

Conclusion that there was a relationship between education (p-value = 0.022), knowledge (p-value = 0.004), husband support (p-value = 0.010), the role of health workers (p-value = 0.013) with the compliance of pregnant women in consuming Fe tablets at the Negara Ratu Health Center, North Lampung Regency in 2023.

Suggestions for health workers to provide health counseling in order to improve the quality of health services, especially health counseling about anemia in pregnant women and pregnant women understand the importance of taking iron tablets (Fe).

Keywords: education, knowledge, husband support, health worker role, adherence to iron tablet consumption.

INTRODUCTION

Anemia is a condition where the circulating *erythrocyte* mass and or Haemoglobin (Hb) mass cannot fulfill its function to provide oxygen to body tissues. A decrease in Hb can cause lethargy, fatigue, *palpitations*, *tachycardia*, shortness of breath, *angina pectoris* (Bakta, 2018). Anemia in pregnancy is a condition where the hemoglobin concentration in pregnant women is below 11g/dl, which has an effect on increasing the incidence of prematurity, maternal mortality, infant mortality and infection. Iron deficiency anemia in pregnant women is not only related to the growth and development of the fetus while in the womb but also has an impact on the baby after birth (Priyanti et al., 2020)

The prevalence of anemia in pregnant women in Asia is estimated at 48.2%, Africa 57.1%, America 24.1%, and Europe 25.1% (Amini, 2018). The coverage of giving blood supplement tablets to pregnant women in Indonesia in 2020 is 83.6%. This figure increased compared to 2019 by 64%. The province with the highest coverage of blood-added tablets in pregnant women is DKI Jakarta at 99.3%, followed by North Kalimantan and Bali. Meanwhile, the province with the lowest achievement was Papua at 25.3%, followed by West Papua and Maluku. (Ministry of Health, 2021).

Data on pregnant women visiting the Negara Ratu Primary Health Care in 2020 amounted to 679 pregnant women with the number of anemic pregnant women totaling 150 (22.0%) mothers. In 2021, the number of visits by pregnant women was 704 with anemia incidence of 289 (41.0%) mothers with Hb levels between 9-11 gr% and 16 (2.2%) mothers with Hb levels <8 gr%. The government, in this case the Negara Ratu Primary Health Care, has provided free examination facilities for pregnant women and provided blood enhancement tablets, it can be seen that the coverage of the distribution of blood enhancement tablets has reached 99%, but cases of anemia are still very high, this can be seen in the cases of complications during childbirth where out of

704 women giving birth, 185 (26.2%) experienced complications such as prolonged partus due to maternal fatigue, prolongation of stage II, uterine contractions that were not optimal and cases of bleeding (MR of Negara Ratu Health Care, 2022).

Based on the results of a preliminary study survey that researchers have conducted at the research site for 5 pregnant women, as many as 3 (60%) mothers experience anemia with HB levels of 9 gr / dl, and from the results of unstructured interviews it is known that as many as 4 (80%) mothers do not consume blood enhancing tablets according to the instructions given, because sometimes they forget, no one reminds them, mothers do not know the impact if the mother has anemia so that the mother does not consider that the consumption of Fe tablets has benefits both for her and for the fetus she is carrying. out of 5 mothers, as many as 3 people with a high school education level and as many as 1 mother with an undergraduate education level and as many as 1 mother with a junior high school education level. Health workers have made efforts to increase compliance with Fe tablet consumption such as explaining during the examination, but these efforts have not been maximized because there are still many mothers who do not consume Fe tablets as recommended.

Based on the data above, the researcher is interested in examining the factors associated with the adherence of pregnant women consuming Fe tablets at the Negara Ratu Primary Health Center, North Lampung Regency in 2023.

RESEARCH METHODS

The research conducted a quantitative study using a cross-sectional approach. The research was carried out between April and May 2023 at the Negara Ratu Primary Health Care in Sungkai Utara Sub-District, North Lampung Regency. The study included all pregnant women in the second and third trimesters who visited the Negara Ratu Primary Health Care, with an average monthly visitation of 48

pregnant women in these trimesters. The sample size selected for the study was 43 participants. The measuring instrument used was a questionnaire, with calculations based on the total number of pills provided by the healthcare providers minus the number of remaining pills. The result was then divided by the number of days the mother consumed the iron tablets (Fe). This value was then multiplied by 100. If the calculated value is greater than 90%, the pregnant mother is categorized as adherent. Good knowledge of the pregnant mothers was defined as a value greater than 50%. Positive healthcare provider roles were measured with a value higher than 12.5, while spousal support was

considered supportive with a value of 13.4. Subsequently, the data was analyzed using univariate and bivariate methods, employing the Chi-square test for bivariate analysis.

RESEARCH RESULTS

Univariate Analysis

Based on table 1, it is known that out of 43 respondents, 30 (69.8%) were aged 18-25 years, 25 (58.1%) respondents with junior high school education, 43 (100.0%) Respondents with the occupation of being a housewife, 27 (62.8%) respondents with primipara parity.

Table 1
Respondent Characteristics

Variables	Category	N	%
Age	18-25 years old	30	69.8
	>25 years	13	30.2
Education	Junior High School	25	58.1
	Senior High School	18	41.9
Occupation	Housewife	43	100.0
Parity	Primiparous	27	62.8
	Multiparous	16	37.2

Table 2
Frequency distribution of maternal education at the Negara Ratu Primary Health Care, North Lampung Regency in 2023

Education	N	%
Basic	22	51.2
High	21	48.8

Based on table 2, it is known that out of 43 respondents, 22 (51.2%) respondents have basic education and 21 (48.8%) respondents have higher education.

Table 3
Frequency distribution of maternal knowledge at the Negara Ratu Primary Health Care, North Lampung Regency in 2023

Knowledge	N	%
Inadequate knowledge	20	46.5
Good Knowledge	23	53.5

Based on table 3, it is known that out of 43 respondents, 20 (46.5%) respondents have Inadequate knowledge and 23 (53.5%) respondents have good knowledge.

Table 4
Frequency distribution of husband support at the Negara Ratu Primary Health Care, North Lampung Regency in 2023

Husband support	N	%
Less supportive	19	44.2
Support	24	55.8

Based on table 4, it is known that out of 43 respondents, 19 (44.2%) respondents received less support from their husbands and 24 (55.8%) respondents received support from their husbands.

Table 5
Frequency distribution of the role of health workers at the Negara Ratu Primary Health Care, North Lampung Regency in 2023

Role of Health Workers	N	%
Negative	12	27.9
Positive	31	72.1

Based on table 5, it is known that out of 43 respondents, 12 (27.9%) respondents with a negative role of health workers and 31 (72.1%) respondents with a positive role of health workers.

Table 6
Frequency distribution of adherence to taking Fe tablets at the Negara Ratu Primary Health Care, North Lampung Regency in 2023

Adherence to taking Fe tablets	N	%
Non-adherence	21	48.8
Adherence	22	51.2

Based on Table 6, it is evident that out of the 43 respondents, 21 (48.8%) respondents are non-

adherence in taking medication, while 22 (51.2%) respondents are adherence in taking medication

Bivariate Test

Based on table 7, it is known that out of 22 respondents with primary education as many as 15 (68.2%) respondents did not comply with taking Fe tablets and as many as 7 (31.8%) respondents adhered with taking Fe tablets. Of the 21 respondents with higher education, 6 (28.6%) respondents did not adhere with consuming Fe tablets and as many as 15 (71.4%) respondents adhered with consuming Fe tablets.

Table 7
The relationship between education and adherence of pregnant women consuming Fe tablets at the Negara Ratu Health Center, North Lampung Regency in 2023.

Education	Adherence to taking fe tablets				Total		P-Value	OR 95% CI
	Non-compliant		Compliant		N	%		
	n	%	n	%	N	%		
Basic	15	68.2	7	31.8	22	100,0	0.022	5.357 (1.454 10.742)
High	6	28.6	15	71.4	21	100,0		

The statistical test results obtained *p-value* = 0.022 which means $p < \alpha = 0.05$ (H_a is accepted and H_o is rejected), it can be concluded that there is a relationship between education and adherence of pregnant women consuming Fe tablets at the Negara Ratu Primary Health Care, North Lampung Regency

in 2023, with an OR value of 5.3 meaning that respondents with basic education have a 5.3 times chance of choosing not to comply with taking Fe tablets when compared to higher education respondents.

Table 8
The relationship between knowledge about anemia and adherence of pregnant women consuming Fe tablets at the Negara Ratu Primary Health Care, North Lampung Regency in 2023.

Knowledge	Adherence to taking fe tablets				Total		P-Value	OR 95% CI
	Non-adherence		Adherence		N	%		
	n	%	n	%	N	%		
Inadequate Knowledge	15	75.0	5	25.0	20	100,0	0.004	8.500 (2.149-16.618)
Good Knowledge	6	26.1	17	73.9	23	100,0		

Based on table 8, it is known that out of 20 respondents with inadequate knowledge, 15 (75.0%) respondents did not adhere with taking Fe tablets and as many as 5 (25.0%) respondents adhered with taking Fe tablets. Of the 23 respondents with good knowledge, 6 (26.1%) respondents did not adhere with taking Fe tablets and as many as 17 (73.9%) respondents adhered with taking Fe tablets.

The statistical test results obtained *p-value* = 0.004 which means $p < \alpha = 0.05$ (H_a is accepted and

H_o is rejected), it can be concluded that there is a relationship between knowledge about anemia and adherence of pregnant women taking Fe tablets at the Negara Ratu Primary Health Care, North Lampung Regency in 2023, with an OR value of 8.5, meaning that respondents with inadequate knowledge have an 8.5 times chance of choosing not to comply with taking Fe tablets when compared to respondents with good knowledge.

Table 9

Relationship between husband's support and adherence of pregnant women consuming Fe tablets at the Negara Ratu Primary Health Care, North Lampung Regency in 2023

Husband Support	Adherence to taking fe tablets				Total		P-Value	OR 95% CI
	Non-adherence		Adherence					
	n	%	n	%	N	%		
Less supportive	14	73.7	5	26.3	19	100,0	0.010	6.800 (1.766-13.181)
Support	7	29.2	17	70.8	24	100,0		

Based on table 9, it is known that of the 19 respondents with less supportive husbands, 14 (73.7%) respondents did not adhere to taking Fe tablets and as many as 5 (26.3%) respondents adhered to taking Fe tablets. Of the 24 respondents with supportive husbands, 7 (29.2%) respondents did not adhere to taking Fe tablets and as many as 17 (70.8%) respondents adhered to taking Fe tablets.

The results of the statistical test obtained *p-value* = 0.010 which means $p < \alpha = 0.05$ (H_a is

accepted and H_0 is rejected), it can be concluded that there is a relationship between husband support and adherence of pregnant women taking Fe tablets at the Negara Ratu Health Center, North Lampung Regency in 2023, with an OR value of 6.8 meaning that respondents with less supportive husband support have a 6.8 times chance of choosing not to comply with taking Fe tablets when compared to respondents with supportive husband support.

Table 10
The relationship between the role of health workers and the adherence of pregnant women to consume Fe tablets at the Negara Ratu Primry Health Care, North Lampung Regency in 2023.

The role of health workers	Adherence to taking fe tablets				Total		P-Value	OR 95% CI
	Non-adherence		Adherence					
	n	%	n	%	N	%		
Negative	10	83.3	2	16.7	12	100,0	0.013	9.091 (1.682-18.123)
Positive	11	35.5	20	64.5	31	100.0		

Based on table 10, it is known that of the 12 respondents with a negative health worker role, 10 (83.3%) respondents did not adhere with consuming Fe tablets and as many as 2 (16.7%) respondents adhered with consuming Fe tablets. Of the 31 respondents with a positive health worker role, 11 (35.5%) respondents did not adhere with taking Fe tablets and as many as 20 (64.5%) respondents adhered with taking Fe tablets.

The results of the statistical test obtained *p-value* = 0.013 which means $p < \alpha = 0.05$ (H_a is accepted and H_0 is rejected), it can be concluded that there is a relationship between the role of health workers and the adherence of pregnant women consuming Fe tablets at the Negara Ratu Primary Health Care, North Lampung Regency in 2023, with an OR value of 9.0 meaning that respondents with a negative health worker role have a 9.0 times chance of choosing not to adhere with taking Fe tablets when compared to respondents with a positive health worker role.

DISCUSSION

Bivariate Analysis

The relationship between education and adherence of pregnant women consuming Fe tablets at the Negara Ratu Primary Health Care, North Lampung Regency, 2023

Based on the results of statistical tests obtained *p-value* = 0.022 which means $p < \alpha = 0.05$ (H_a is accepted and H_0 is rejected), it can be concluded that there is a relationship between education and compliance of pregnant women taking Fe tablets at the Negara Ratu Primary Health Care, North Lampung Regency in 2023, with an OR value of 5.3 meaning that respondents with basic education have a 5.3 times chance of choosing not to adhere with taking Fe tablets when compared to higher education respondents.

Based on the results of the study, it is known that of the 21 respondents with higher education, 6 (28.6%) respondents did not adhere with consuming Fe tablets, this could be due to other factors such as the mother not liking the taste of the Fe tablets consumed so that the mother did not consume according to the rules that had been recommended,

in addition to the side effects felt by the mother after consuming Fe tablets such as difficulty defecating and this can be overcome by the mother should eat more foods with high fiber jam when consuming Fe tablets can be consumed along with juice consumption, As many as 15 (71.4%) respondents adhered to taking Fe tablets According to the researcher, maternal education is very influential on how a person acts and looks for solutions in his life. Highly educated people will usually take rational action. Self-educated people are more receptive to new ideas. Likewise, a highly educated mother will check her pregnancy regularly in order to maintain the condition and the child in her womb.

The relationship between knowledge about anemia and adherence of pregnant women consuming Fe tablets at the Negara Ratu Primary Health Care, North Lampung Regency, 2023

Based on statistical tests obtained $p\text{-value} = 0.004$ which means $p < \alpha = 0.05$ (H_a is accepted and H_o is rejected), it can be concluded that there is a relationship between knowledge about anemia and adherence of pregnant women taking Fe tablets at the Negara Ratu Health Center, North Lampung Regency in 2023, with an OR value of 8.5 meaning that respondents with poor knowledge have an 8.5 times chance of choosing not to adhere with taking Fe tablets when compared to respondents with good knowledge.

In the opinion of the researchers, pregnant women should actively increase their knowledge regarding the importance of iron tablets during pregnancy so that they can be more compliant in taking iron tablets to avoid anemia during pregnancy. Husbands should be able to provide optimal support to their wives because it is related to the health of the mother and fetus. Midwives should continue to provide counseling, education, and information (IEC) to pregnant women and husbands so as to increase the mother's awareness to always be obedient in taking iron tablets to avoid the incidence of anemia.

Relationship between husband's support and adherence of pregnant women consuming Fe tablets at the Negara Ratu Primary Health Care, North Lampung Regency in 2023

Based on the results of statistical tests obtained $p\text{-value} = 0.010$ which means $p < \alpha = 0.05$ (H_a is accepted and H_o is rejected), it can be concluded that there is a relationship between husband support and compliance of pregnant women taking Fe tablets at the Negara Ratu Health Center, North Lampung Regency in 2023, with an OR value of 6.8 meaning that respondents with less supportive

husband support have a 6.8 times chance of choosing not to comply with taking Fe tablets when compared to respondents with supportive husband support.

Husband support is a form of love, responsibility, attention, and the husband's function as the head of the household who protects, nurtures, and loves his wife and children. Husbands with an adult maturity age need to have a high awareness of the importance of pregnant women's compliance in taking iron tablets during pregnancy. This is because the need for iron for mothers has increased in order to fulfill iron intake for both pregnant women and the fetus they are carrying. Therefore, husband's support is very important in fostering pregnant women's compliance in taking iron tablets.

The relationship between the role of health workers and the adherence of pregnant women to consume Fe tablets at the Negara Ratu Primary Health Care, North Lampung Regency, 2023

Based on statistical tests obtained $p\text{-value} = 0.013$ which means $p < \alpha = 0.05$ (H_a is accepted and H_o is rejected), it can be concluded that there is a relationship between the role of health workers with the adherence compliance of pregnant women consuming Fe tablets at the Negara Ratu Health Center, North Lampung Regency in 2023, with an OR value of 9.0 meaning that respondents with a negative health worker role have a 9.0 times chance of choosing not to comply with taking Fe tablets when compared to respondents with a positive health worker role.

According to the Ministry of Health (2014) the role of health workers is a support system for patients by providing assistance in the form of information or advice, real assistance, or actions that have emotional benefits or affect the behavior of the recipient Broadly speaking, there are important roles that must be carried out by health workers as the spearhead in improving public health, including health promotion, taking comprehensive action and care for patients, providing support, and making referrals.

Based on research conducted by researchers, it was found that more than half of the respondents were not adherence in consuming Fe tablets with the role of health workers in the good category. The non- adherence was due to pregnant women not understanding the instructions given by health workers due to the low level of education that had been taken so that only a little information provided by health workers could be absorbed by the mother.

CONCLUSION

It is known that as many as 22 (51.2%) respondents have basic education and as many as 21 (48.8%) respondents have higher education as many as 20 (46.5%) respondents have poor knowledge and as many as 23 (53.5%) respondents have good knowledge. as many as 19 (44.2%) respondents received less support from their husbands and as many as 24 (55.8%) respondents received support from their husbands. as many as 12 (27.9%) respondents with a negative role of health workers and as many as 31 (72.1%) respondents with a positive role of health workers. as many as 21 (48.8%) respondents did not adhere with taking medicine and as many as 22 (51.2%) respondents with adherence taking medicine. There is a relationship between education and compliance of pregnant women consuming Fe tablets There is a relationship between knowledge about anemia and adherence of pregnant women consuming Fe tablets There is a relationship between husband's support and adherence of pregnant women consuming Fe tablets There is a relationship between the role of health workers and adherence of pregnant women consuming Fe tablets at the Negara Ratu Primary Health Care, North Lampung Regency in 2023.

SUGGESTION

Pregnant women are more orderly in consuming Fe tablets, taking Fe tablets on schedule by making a reminder alarm to take Fe tablets, making routine ANC visits. For Negara Ratu Primary Health Care can provide health counseling in order to improve the quality of health services, especially

health counseling about anemia in pregnant women and the importance of taking iron tablets (Fe). For Malahayati University, it can be a material in community service by academics in the university environment. For further researchers, it can be used as a reference for conducting similar research, or developing similar research by adding new variables using different research methodologies.

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