MINH MALAHAYATI INTERNATIONAL JOURNAL OF NURSING AND HEALTH SCIENCE
ISSN 2620-9152 (Print)
ISSN 2621-4083 (Online)

Nomor: 85/M/KPT/2020

ARTICLE INFORMATION
Received: March, 06, 2023
Revised: May, 10, 2023
Available online: May, 11, 2023
at : http://ejurnalmalahayati.ac.id/index.php/nursing/index

Nutritional factors associated with anaemia in pregnant women in Tulang Bawang Lampung

Nisrina Fadhilaturrabani[1], Dessy Hermawan[2]*, Nurul Aryastuti[2], Fitri Ekasari Siregar[2], Nova Muhani[2]

[1]UPTD Puskesmas Non Rawat Inap Candra Mukti
[2]Universitas Malahayati
Corresponding author. *E-mail: hermawan.dessy@gmail.com

Abstract

Background: Anemia is the biggest health problem in the world, especially for women who are pregnant, because it can cause fatigue and decreased work productivity. Knowledge is a factor that encourages pregnant women to avoid anemia. If pregnant women know the causes of anemia, the consequences of anemia, and how to prevent it, pregnant women will avoid pregnancy anemia.
Purpose: To find out the determinants of the incidence of Anemia in Pregnant Women at the Non-Inpatient of candra mukti health center and Inpatient health center at capable ponet Tulang Bawang Barat working area in 2022.
Method: Quantitative analytic research with cross sectional design. The sampling technique used proportional stratified random sampling, and 171 people met the inclusion criteria. Data analysis used the Chi Square test and multivariate analysis used multiple logistic regression.
Results: It is known that the distribution of the majority of anemic mothers (59.1 percent). have less knowledge (53.8 percent). have a positive attitude (52.6 percent). obediently consuming Fe tablets (58.5 percent). 1 glass (66.1 percent) of iron absorption inhibiting drinks (tea, coffee, milk). get good family support (59.6 percent). received the support of good health workers (71.9 percent).
Conclusion: There is a significant relationship between knowledge, attitudes, adherence to iron consumption, drinking iron absorption inhibitors (tea, coffee and milk), family support and support from health workers with the incidence of anemia in pregnant women with a p-value of < 0.05. Fe consumption is the dominant factor in the incidence of anemia in pregnant women (p-value = 0.002).

Keywords: Nutritional status; Anaemia; Pregnant women.

INTRODUCTION

The success of maternal health efforts is determined from the indicator Maternal Mortality Rate (MMR), which is a comparison between maternal deaths during pregnancy, childbirth and postpartum due to pregnancy, childbirth and childbirth or their management. In general, there was a reduction in the maternal mortality rate during the 1991-2015 period from 390 to 305 per 100,000 live births. Although there has been a decrease in the maternal mortality rate, this figure has not yet reached the target Sustainable Development Goals (SDGs) 2030 namely reducing MMR to below 70 per 100,000 live births (The Ministry of Health of the Republic of Indonesia, 2019a).

The high maternal mortality rate (MMR) is mostly caused by complications during pregnancy in the form of bleeding which causes the main cause is anemia in pregnant women. Anemia in pregnancy is a picture of Hb levels that are less than 11 g/dL in the first and third trimesters, and Hb <10.5 g/dL in the second

DOI: https://doi.org/10.33024/minh.v5i2.9474

trimester. This is because during pregnancy there is a relatively greater expansion of plasma volume compared to an increase in the number of red blood cells (Tanto, 2014).

Based on data World Health Organization (WHO), anemia in pregnant women is categorized as a global health problem with a prevalence of 29.6% in 2018, where in Indonesia itself from 2017 to 2019 the prevalence of anemia in pregnant women has increased from 43.2% to 44.2%. The prevalence of anemia in pregnant women is estimated to be 49.4% in Asia, 59.1% in Africa, 28.1% in America and 26.1% in Europe. The incidence of anemia in Indonesia is still quite high (World Health Organization, 2021).

Basic Health Research Data shows that the proportion of anemia in pregnant women from 2013 to 2018 has increased from 37.1% to 48.9% and 84.6% of anemia in pregnant women occurs in the age group 15-24 year. Anemia in pregnancy that most often occurs in Indonesia is caused by iron deficiency as much as 62.3% which can cause miscarriage, premature parturition, uterine inertia, prolonged parturition, uterine atony and cause bleeding and shock. The impact that can be caused by iron deficiency anemia in pregnant women is 12% - 28% fetal mortality, 30% perinatal mortality and 7% - 10% neonatal mortality (The Ministry of Health of the Republic of Indonesia, 2019b; Central Bureau of Statistics (Indonesia), 2022).

Nationally, the coverage of pregnant women getting Fe tablets in 2020 is 83.6%. This figure has increased compared to 2019 of 64%. The province with the highest coverage of iron supplements for pregnant women was 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 (The Ministry of Health of the Republic of Indonesia, 2021).

The coverage of pregnant women receiving 90 Fe 3 tablets in Lampung Province in 2020 was 92.02%. Looking at the trend, the coverage of Fe tablets in pregnant women in 2020 in the province has decreased compared to the previous year, namely 93.9%, where this achievement has reached the expected target i.e. 80% for Fe3. This is of course greatly influenced by the role of the family, health service workers in order to motivate mothers and increase pregnant women's knowledge of the importance of Fe tablets. The causes for the decreased coverage of pregnant women getting Fe3 tablets in 2020 are the recording and reporting to private practice midwives that are not reported, the demand for blood-supplementation tablets does not match the existing targets, and the condition of the Covid 19 pandemic which causes limited health services (Lampung Provincial Health Office, 2021).

The prevalence of pregnant women in Lampung Province in 2021 is 8.1%. Meanwhile, the highest cases of anemia in pregnant women were found in West Lampung district at 28.4% and the lowest was in South Lampung district at 4.5%. For the Tulang Bawang Barat Regency, it is 9.8% (Lampung Provincial Health Office, 2022).

In West Tulang Bawang Regency in 2020, which oversees 16 Community Health Centers, the number of pregnant women who carried out Hb checks was found to be 4,748 people. Of these, it was found that 12.95% of pregnant women experienced anemia. Whereas for the Daya Murni Health Center, it ranks 2nd with the most cases of pregnant women 31.22% experienced anemia, which is above the average incidence of anemia in West Tulang Bawang Regency in 2020 (West Tulang Bawang District Health Office, 2021).

The impact of anemia on pregnant women if not treated immediately can increase the possibility of complications in pregnancy and childbirth. In addition, the risk of maternal death, prematurity, low birth weight (LBW), and perinatal mortality will also increase. By identifying the factors that cause anemia, it will be easier to make efforts to treat it (Yeyeh, 2014).

Giving iron tablets during pregnancy is one of the most suitable ways for pregnant women to increase Hb levels to the desired level, because they are very effective where one tablet contains 60 mg of Fe. Each tablet is equivalent to 200 mg of ferrosulfate. During pregnancy, at least 90 tablets are given until 42 weeks after giving birth since the first examination of pregnant women. To prevent the consumption of iron supplement tablets from being more effective, they

Nisrina Fadhilaturrabani[1], Dessy Hermawan[2]*, Nurul Aryastuti[2], Fitri Ekasari Siregar[2], Nova Muhani[2]

[1]UPTD Puskesmas Non Rawat Inap Candra Mukti
[2]Universitas Malahayati
Corresponding author. *E-mail: hermawan.dessy@gmail.com

DOI: https://doi.org/10.33024/minh.v5i2.9474

should be given at night before going to bed to reduce nausea, or taken with food or drinks that contain Vitamin C such as fresh fruit, vegetables and fruit juices (The Ministry of Health of the Republic of Indonesia, 2020).

Some of the factors that cause pregnant women to experience anemia include knowledge, attitudes, adherence to consuming Fe tablets, consuming drinks that have substances that inhibit iron absorption which are often consumed by pregnant women such as caffeine, tannins, oxalate, phytate which can result in inhibition of iron absorption. iron in the body found in tea, coffee and milk, family support, and support from health workers (Murkof, 2014).

Knowledge is one of the factors that stimulate or stimulate the realization of a health behavior. If pregnant women know and understand the consequences of anemia and how to prevent anemia, they will have good health attitudes and behaviors in the hope that they can avoid the various consequences or risks of anemia in pregnancy. Attitude is a factor of a person's behavior patterns to perform an action. Attitudes can be influenced by several factors including internal and external factors. Internal factors can be from the man himself to accept or reject this behavior. While external factors can be from social interaction in the surrounding environment (Purbadewi & Ulvie, 2013).

Compliance with consuming iron tablets is defined as the behavior of pregnant women who comply with all instructions recommended by health workers in consuming iron tablets or obedience of pregnant women in carrying out recommendations from health workers to consume iron tablets. Compliance with consuming iron tablets was measured by the accuracy of the number of tablets consumed, the accuracy of how to consume iron tablets, the frequency of consumption per day. Iron supplementation or administration of Fe tablets is an important effort in preventing and treating anemia, especially iron deficiency anemia. Iron supplementation is an effective way because the iron content is complemented by folic acid which can also prevent anemia due to folic acid deficiency (Almatsier, 2010).

The culture of tea consumption has become a habit for most people in the world. Apart from water, tea is also one of the drinks that is often consumed by most people. There are many types of tea, the first example being black tea consumed by Europeans, North Americans and North Africans (except Morocco), the second is green tea which is mostly consumed by Asians (including Indonesia), and the third is oolong tea which is often consumed by residents of China and Taiwan. The tea that is commonly consumed by Indonesians is green tea. In tea there are substances called tannins. Tannins can bind several types of metals such as iron, calcium, and aluminum, and can also form chemically complex bonds. Because in this position the iron and calcium compounds in food are difficult to absorb by the body so that it can result in a decrease in iron (Fe) (Septiawan & Sugerta, 2016).

Lack of family support for pregnant women will also affect the adherence of pregnant women in consuming Fe tablets. Family support is the attitude, action and acceptance of the family towards its members. Family members view that people who are supportive are always ready to provide help and assistance if needed. Because the family is a person who is very close and highly trusted by pregnant women. This support is in the form of encouragement, motivation, attention, or assistance that can make pregnant women feel happy, safe, and comfortable. So that pregnant women are motivated to improve their health by consuming Fe tablets given by health workers regularly as an effort to prevent anemia during pregnancy. Health workers also have a big impact on the disobedience of mothers consuming Fe tablets, good information and communication from health workers is one way to encourage mothers to obey taking Fe tablets (Susiloningtyas, 2019).

Based on an initial survey conducted at the Non-Inpatient Health Center in Candra Mukti and inpatient Health Centers Capable Poned Daya Pure Tulang Bawang Barat, out of 10 pregnant women who came to check themselves, only 3 pregnant women obediently consumed Fe tablets in accordance with the number of Fe tablets that had been given by the officers. health, while 7 pregnant women did not

Nisrina Fadhilaturrabani[1], Dessy Hermawan[2]*, Nurul Aryastuti[2], Fitri Ekasari Siregar[2], Nova Muhani[2]

[1]UPTD Puskesmas Non Rawat Inap Candra Mukti
[2]Universitas Malahayati
Corresponding author. *E-mail: hermawan.dessy@gmail.com

DOI: https://doi.org/10.33024/minh.v5i2.9474

comply because there were still Fe tablets left that should have been consumed for this month.

RESEARCH METHOD

This type of quantitative analytic research with a Cross-Sectional design. The research was conducted in January 2023.

The population in this study were all pregnant women who had their pregnancies checked in the UPTD Working Area of the Candra Mukti Non-Inpatient Health Center and 172 people in the Inpatient Health Center. The technique for taking the number of samples was proportionate stratified random sampling, and those who met the inclusion criteria and obtained as many as 171 people.

The knowledge variable is categorized as 0 = bad, if the score is <25, and 1 = good, if the score is ≥ 25; for attitudes categorized 0 = negative, if the score is <27 and 1 = positive, if the score is ≥ 27; for adherence to consumption of Fe tablets categorized 0 = non-adherent, if score < 14 and 1 = adherent, if score ≥ 14; for the consumption of beverages containing substances that inhibit iron absorption (tea, coffee, milk) is categorized 0 = consumption of 1 cup of tea measuring 240 ml/day or consumption of coffee 200 ml/day or the equivalent of 1 cup of coffee or consumption of milk 500 ml or 2 cups a day, and 1 = tea consumption above 1 cup of tea measuring 240 ml or coffee consumption above 200 ml/day or the equivalent of 2 cups of coffee or consumption of milk above 500 ml or 2 glasses a day; for family support is categorized 0 = less supportive, if the score is <43 and 1 = supports, if the score is ≥ 43; for the support of health workers it is categorized 0 = not supportive, if the score is < 15 and 1 = is supportive, if the score is ≥ 15. For the dependent variable anemia in pregnant women it is categorized 0 = anemia, if the Hb level is < 11 g/dL, and 1 = not anemic , if Hb level ≥ 11 g/dL. Data analysis used the chi square test and multivariate analysis used multiple logistic regression.

This research has received ethical approval from the Health Research Ethics Commission at the University of Malahayati with number 3133/EC/KEP-UNMAL/I/2023.

RESULTS

Table 1. Characteristics of Respondents (N=171)

Variable	Result (n/%)
Age (Mean ±SD) (Range)(Years)	(28.77±5.810) (16-41)
< 20 thn	9/5.3
20-35 thn	133/77.8
>35 thn	29/16.9
Education Level	
Elementary School	27/15.8
Junior High School	74/43.3
Senior High School	62/36.2
University Graduates	8/4.7
Occupation	
Private Employees	14/8.2
Housewives	120/70.2
Others	37/21.6
Gestational Age	
The First Trimester	7/4.1
The Second Trimester	61/35.7

Nisrina Fadhilaturrabani[1], Dessy Hermawan[2]*, Nurul Aryastuti[2], Fitri Ekasari Siregar[2], Nova Muhani[2]

[1]UPTD Puskesmas Non Rawat Inap Candra Mukti
[2]Universitas Malahayati
Corresponding author. *E-mail: hermawan.dessy@gmail.com

DOI: https://doi.org/10.33024/minh.v5i2.9474

The Third Trimester	103/60.2
Knowledge	
Poor	92/53.8
Good	79/46.2
Attitude	
Negatif	81/47.4
Positif	90/52.6
Adherence to Consumption of Fe Tablets	
No	71/41.5
Yes	100/58.5
Consumption of Tea, Coffee, Milk	
≤ 1 cup tea/coffee/ ≤ 2 cups milk	113/66.1
> 1 cup tea/coffee/ ≥2 cups milk	58/33.9
Family support	
No	69/40.4
Yes	102/59.6
Health Officer Support	
No	48/28.1
Yes	123/71.9
Anemia Incidence	
No	70/40.9
Yes	101/59.1

Based on table 1 the mean age of respondents 28.77 with a standard deviation of 5,810 and range 16-41 years, the age group of the mother <20 years as many as 9 (5.3%), the age group 20-35 years as many as 133 (77.8%) and the age group > 35 years) as many as 29 (16.9%).

Based on the education level of respondents, it can be seen with elementary school education as much as 27 (15.8%), junior high schools are 74 (43.3%), senior high school as many as 62 (36.2%) and university graduates as many as 8 (4.7%).

Based on the occupation of respondents, private employees as many as 14 (8.2%), housewives are 120 (70.2%) and 37 others (21.6%).

Based on the gestational age of respondents, it can be seen that there were 7 pregnant mothers in the first trimester (4.1%), 61 in the second trimester (35.7%) and 103 in the third trimester (60.2%).

Based on the knowledge of respondents, it can be seen that 92 (53.8%) has bad knowledge and 79 (46.2%) has good knowledge.

Based on the attitude of respondents, it can be seen that 81 (47.4%) had a negative attitude and 90 (52.6%) had a positive attitude.

Based on the adherence to consumption of Fe tablets of respondents, it can be seen that 71 people (41.5%) did not adhere to consuming Fe tablets and 100 people obeyed (58.5%).

Based on the consumption of drinks that have substances that inhibit iron absorption (tea, coffee, milk) of respondents, it can be seen that 113 (66.1%) consumed drinks that had inhibitors of iron absorption (tea, coffee, milk) ≤ 1 cup tea/coffee/ ≤ 2 cups milk and 58 (33.9%) > 1 cup tea/coffee / ≥2 cups milk.

Based on family support from respondents, it can be seen that 69 (40.4%) did not get family support and 102 (59.6%) was supported.

Nisrina Fadhilaturrabani[1], Dessy Hermawan[2]*, Nurul Aryastuti[2], Fitri Ekasari Siregar[2], Nova Muhani[2]

[1]UPTD Puskesmas Non Rawat Inap Candra Mukti
[2]Universitas Malahayati
Corresponding author. *E-mail: hermawan.dessy@gmail.com

DOI: https://doi.org/10.33024/minh.v5i2.9474

Based on the health officer support of respondents, it can be seen that 48 (28.1%) did not receive support from health officer and 123 (71.9%) received support.

Based on the anemia incidence of responden, it can be seen that 101 (59.1%) had anemia and 70 (40.9%) did not have anemia.

Table 2. Factors Associated with Anaemia in Pregnant Women

Variable	Anemia Incidence		p-*value*	OR (CI 95%)
	Yes (n=101)	No (n=70)		
Knowledge (n/%)				
Bad	65/64.4	27/38.6	0.002	2.87 (1.53-5.40)
Good	36/35.6	43/61.4		
Attitude (n/%)				
Negatif	59/58.4	22/31.4	0.001	3.06 (1.61-5.82)
Positif	42/41.6	48/68.6		
Adherence to Consumption of Fe Tablets (n/%)				
No	54/53.5	17/24.3	0.000	3.58 (1.83-7.01)
Yes	47/46.5	53/75.7		
Consumption of Tea, Coffee, Milk (n/%)				
≤ 1 cup	74/73.2	39/55.7	0.026	2.17 (1.14-4.15)
>1 cup	27/26.8	31/44.3		
Family Support (n/5)				
No	53/52.5	16/22.9	0.000	3.72 (1.88-7.36)
Yes	48/57.5	54/77.1		
Health Officer Support (n/%)				
No	37/36.6	11/15.7	0.005	3.10 (1.45-6.63)
Yes	64/63.4	59/84.3		

Table 2 above using the bivariate analysis statistical test it is known that of the 92 respondents who had less knowledge, as many as 65 people (64.4%) had anemia and 27 people (38.6%) did not have anemia, while of the 79 respondents who had good knowledge, as many as 43 people (61.4%) did not have anemia and 36 people (35.6%) had anemia.

The test results chi squre (Continuity Correction[b]) shows p-value = 0.002 which is less than the significance value of 5% (0.05), this shows that there is a significant relationship between knowledge and the incidence of anemia in pregnant women. From the analysis above, the value of OR = 2.87 was obtained, which stated that respondents with less knowledge had a 2.87 times more likely to experience anemia.

By using the bivariate analysis statistical test it is known that of the 81 respondents who had a negative attitude, as many as 59 people (58.4%) had anemia and 22 people (31.4%) did not have anemia, while of the 90 respondents who had a positive attitude, as many as 48 people (68.6%) did not have anemia and 42 people (41.6%) had anemia.

The test results chi squre (Continuity Correction[b]) shows p-value = 0.001 which is less than the significance value of 5% (0.05), this shows that there is a significant relationship between attitude and the incidence of anemia in pregnant women. From the analysis above, the value of OR = 3.06 was obtained, which stated that respondents with a negative attitude had a 3.06 times greater likelihood of experiencing anemia.

Nisrina Fadhilaturrabani[1], Dessy Hermawan[2]*, Nurul Aryastuti[2], Fitri Ekasari Siregar[2], Nova Muhani[2]

[1]UPTD Puskesmas Non Rawat Inap Candra Mukti
[2]Universitas Malahayati
Corresponding author. *E-mail: hermawan.dessy@gmail.com

DOI: https://doi.org/10.33024/minh.v5i2.9474

By using the statistical test bivariate analysis it is known that of the 71 respondents who did not comply with taking Fe tablets, 54 people (53.5%) experienced anemia and 17 people (24.3%) did not experience anemia, while out of 100 respondents who adhered to consuming tablets Fe, as many as 53 people (75.7%) did not have anemia and 47 people (46.5%) had anemia.

The test results chi s*qure* (*Continuity Correction*[b]) shows p-*value* = 0.000 which is less than the significance value of 5% (0.05), this shows that there is a significant relationship between adherence to consumption of Fe tablets and the incidence of anemia in pregnant women. From the above analysis, the value of OR = 3.58 was obtained which stated that respondents who did not adhere to consuming Fe tablets had a 3.58 times greater likelihood of experiencing anemia.

By using the statistical test bivariate analysis it is known that of the 113 respondents who consumed drinks containing iron absorption inhibitory substances (tea, coffee, milk) ≤ 1 glass, as many as 39 people (55.7%) did not experience anemia and 74 people (73.2%) experienced anemia, while of the 58 respondents who did consumption of beverages containing substances that inhibit iron absorption (tea, coffee, milk) > 1 cup, 27 people (26.8%) experienced anemia and 31 people (44.3%) did not experience anemia.

The test results chi squre (Continuity Correction[b]) shows p-value = 0.026 which is less than the significance value of 5% (0.05), this shows that there is a significant relationship between the consumption of drinks containing iron absorption inhibitors (tea, coffee, milk) and the incidence of anemia in pregnant women. From the above analysis, the value of OR = 2.17 was obtained which stated that respondents who consumed drinks containing substances that inhibited iron absorption (tea, coffee, milk) > 1 glass per day had a 2.17 times greater chance of experiencing anemia.

By using the statistical test bivariate analysis it is known that of the 69 respondents who did not receive family support, as many as 53 people (52.5%) had anemia and 16 people (22.9%) did not have anemia, while out of 102 respondents who received family support, as many as 54 people (77.1%) did not have anemia and 48 people (57.5%) had anemia.

The test results chi squre (Continuity Correction[b]) shows p-value = 0.000 which is less than the significance value of 5% (0.05), this shows that there is a significant relationship between family support and the incidence of anemia in pregnant women. From the analysis above, the value of OR = 3.72 is obtained, which states that respondents who received less family support had a 3.72 times greater chance of experiencing anemia.

By using the statistical test bivariate analysis it is known that of the 48 respondents who did not receive the support of health workers, 37 people (36.6%) had anemia and 11 people (15.7%) did not have anemia, while out of 123 respondents who received support from health workers health, as many as 59 people (84.3%) did not have anemia and 64 people (63.4%) had anemia.

Thr test results chi squre (Continuity Correction[b]) shows p-value = 0.005 which is less than the significance value of 5% (0.05), this shows that there is a significant relationship between the support of health workers and the incidence of anemia in pregnant women. From the analysis above, the value of OR = 3.10 was obtained which stated that respondents who did not receive the support of health workers had a 3.10 times greater chance of experiencing anemia

.

Nisrina Fadhilaturrabani[1], Dessy Hermawan[2]*, Nurul Aryastuti[2], Fitri Ekasari Siregar[2], Nova Muhani[2]

[1]UPTD Puskesmas Non Rawat Inap Candra Mukti
[2]Universitas Malahayati
Corresponding author. *E-mail: hermawan.dessy@gmail.com

DOI: https://doi.org/10.33024/minh.v5i2.9474

Table 3. Multivariate Test Results of Factors Influencing the Incidence of Anemia

Variabel	B	Sig.	Exp(B)	95% C.I.for EXP(B)	
				Lower	Upper
Knowledge	1.082	.003	2.950	1.441	6.038
Attitude	.862	.020	2.367	1.144	4.899
Adherence to Consumption of Fe Tablets	1.244	.002	3.471	1.606	7.500
Family support	1.039	.007	2.826	1.323	6.036
Consumption of Tea, Coffee, Milk	.936	.016	2.550	1.189	5.468
Constant	-3.136	.000	.043		

Based on table 3, it can be seen that of all the variables that have an influence on the incidence of anemia in pregnant women, the variable compliance with consumption of Fe tablets has the largest OR value among the other variables of 3.47, which means adherence to consumption of Fe tablets is the dominant factor for the incidence of anemia in pregnant mother.

DISCUSSION

Knowledge

The results of this study are in line with research at the Kandai Community Health Center, Kendari City, which obtained a p-value = 0.001 (Jiniliyanti, Nurnasari, & Syahrianti, 2017). The results of this study are also in accordance with research at the Moyudan Community Health Center, Sleman Regency, Yogyakarta City which states that there is a relationship between knowledge and anemia in pregnancy (Purbadewi & Ulvie, 2013). Likewise the results of research at the Mantrijeron Health Center in Yogyakarta City which stated that there was a relationship between knowledge and the incidence of anemia in pregnancy (Verrayanti, Santoso, & Kurniati, 2018). Knowledge is the result of knowing after someone senses a certain object. This sensing is through the five human senses, namely sight, hearing, smell, taste and touch (Notoadmodjo, 2014). Knowledge underlies a person's attitude. The basis for a person to act is knowledge. Knowledge is the result of knowing what happens after humans sense a particular object. Sensing occurs through the five human senses which consist of the senses of sight, hearing, smell, taste and touch. Some are obtained through sight and hearing. Knowledge is a very important domain in shaping one's actions (Notoatmodjo, 2014).

Knowledge or cognitive is a very important factor in shaping a person's actions (overtbehavior). A person's knowledge of objects has different intensities or levels (Notoadmodjo, 2014). Knowledge is influenced by several things, namely education, work, age, experience, culture and information. This also applies to the incidence of anemia in pregnancy. A pregnant woman must have sufficient knowledge to understand anemia in pregnancy. As a supporter, a mother must also have general knowledge about the health and growth and development of her fetus. With sufficient knowledge, later mothers can understand about anemia in pregnancy.

The better the knowledge of pregnant women about anemia, the mother will not experience anemia. This is because a person's knowledge of something will affect his behavior (Azwar, 2013). Behavior to prevent anemia in pregnancy depends on the individual's understanding of it, so that it will encourage individuals to carry out certain behaviors when necessary. Knowledge is influenced by age, education level, previous childbirth experience. Education affects the learning process, the higher a person's education, the easier it is for that person to receive information (Sulistina, Dasna & Iskandar, 2014). The results showed that most of the education of pregnant women was high school, which means that the education of pregnant women was still in the secondary education category so that it affected the knowledge and attitudes of pregnant women. Pregnant

Nisrina Fadhilaturrabani[1], Dessy Hermawan[2]*, Nurul Aryastuti[2], Fitri Ekasari Siregar[2], Nova Muhani[2]

[1]UPTD Puskesmas Non Rawat Inap Candra Mukti
[2]Universitas Malahayati
Corresponding author. *E-mail: hermawan.dessy@gmail.com

DOI: https://doi.org/10.33024/minh.v5i2.9474

women who have less knowledge will tend to ignore their health and will eventually take actions that will harm themselves. Lack of knowledge can be exacerbated by a lack of information due to wrong assumptions or perceptions about anemia in pregnancy and the things that go with it. Information is one of the factors that influence one's knowledge (Notoatmodjo, 2014).

Information can stimulate someone, sources of information can be obtained from print media (newspapers, leaflets, posters), electronic media (television, radio, videos), family, and other sources of information (Pratiwi & Sariyati, 2015). After someone gains knowledge from various sources of information then it will lead to attitudes and behavior (Notoatmodjo, 2014).

Based on the results of the research analysis, the researchers assume that lack of knowledge about anemia has an influence on health behavior, especially when a woman is pregnant, which will result in less optimal health behavior for pregnant women to prevent anemia in pregnancy. Pregnant women who have less knowledge about anemia can result in a lack of consumption of iron-containing foods during pregnancy due to their ignorance.

Attitudes

The results of this study are in line with research at the Padang Tiji Health Center, Pidi Regency, which found a relationship between attitude and the incidence of anemia in pregnant women with a p-value = 0.001 (Safitri, Husna, & Sakdiah, 2021).

Attitude is a person's closed response to a certain stimulus or object, which already involves the opinion and emotion factors concerned. Attitudes involve thoughts, feelings, concerns, and other psychological symptoms (Notoatmodjo, 2014).

Attitude can be interpreted as the readiness/willingness of the respondent to act but has not yet implemented it. This process does not immediately occur by itself, but there are several stages, one of which is the learning process. This learning process occurs because of one's experience with a particular object, by connecting one experience with another. With a lot of experience gained can help someone to determine the attitude towards the actions he will take (Azwar, 2013).

The attitude of pregnant women in preventing anemia can be influenced by personal experience, it can also be influenced by the experiences of other people or the surrounding environment, culture, mass media, religious or educational institutions, and emotions. The support and active role of the family and environment of pregnant women helps in monitoring health during pregnancy, as well as being able to take appropriate action true when health problems are found in pregnant women (Fauziah, 2017). Several factors can influence a person's attitude, for example personal experience. What we have experienced and are currently experiencing will shape and influence our appreciation to social stimuli. Perception will be one of the basis of the formation of attitudes. To be able to have impressions and appreciation, a person must have experiences related to psychological objects that will form positive attitudes and negative attitudes. The formation of an impression of an object is a complex process within an individual that involves the individual concerned, the situation in which the impression is formed, and characteristics objective characteristics possessed by the stimulus. To be the basis for forming attitudes, personal experience occurs in situations that involve emotional factors. In situations that involve emotions, the appreciation of the experience will be deeper and last longer (Azwar, 2013).

Based on the results of the research analysis, the researchers assume that attitude is the most important concept in social psychology which discusses the elements of attitude both as individuals and groups. A pregnant woman will have a more positive attitude if she has had a memorable personal experience in her pregnancy, she will learn more, maintain more and meet the nutritional needs that must be met during pregnancy.

Compliance with Fe Consumption

The results of the above research are in line with research at the Simpang Kiri Health Center, Subulussan City, Aceh Province. Based on the research results, it is known that there is a significant

Nisrina Fadhilaturrabani[1], Dessy Hermawan[2]*, Nurul Aryastuti[2], Fitri Ekasari Siregar[2], Nova Muhani[2]

[1]UPTD Puskesmas Non Rawat Inap Candra Mukti
[2]Universitas Malahayati
Corresponding author. *E-mail: hermawan.dessy@gmail.com

DOI: https://doi.org/10.33024/minh.v5i2.9474

relationship between adherence to Fe consumption and the incidence of anemia. From the analysis above, it is obtained p-value = 0.021 (Pemiliana, Oktafirnanda, & Santi, 2019).

Consumption of iron tablets is strongly influenced by awareness and obedience of pregnant women. Awareness is a supporting factor for pregnant women to adhere to consuming iron tablets properly. According to Rahmawati and Subagio, there are several factors that have a significant role in influencing the compliance of pregnant women in consuming iron tablets, including knowledge, motivation, health services, and family participation. In addition, side effects also have a big influence on the compliance of pregnant women in consuming iron tablets. Side effects of iron tablets include stomach pain, nausea, vomiting, constipation, and diarrhea. High adherence in consuming iron tablets is also due to motivation for achieving better health after consuming iron tablets (Fitarina, 2017). Pregnant women need to consume Fe tablets during pregnancy, because pregnant women's iron needs increase during pregnancy. Fe tablets are iron salts in the form of tablets or capsules which when consumed regularly can increase the number of red blood cells. Pregnant women experience a decrease in red blood cells, so they need additional iron to increase the number of red blood cells and for fetal blood cells. Iron (Fe) is a micro element that is important for the body. This substance is especially needed in hemopobesis (blood formation), namely in the synthesis of hemoglobin (Hb), especially pregnant women whose iron needs increase. In the body most of the Fe can be conjugated with proteins in the form of iron or ferric. The need for pregnant women for iron increases by 200-300%. The estimated iron stored during pregnancy is 1040 mg (Retnorini, Widatiningsih, & Masini, 2017). this amount is impossible to meet only from diet. Therefore iron supplementation needs to be given even for pregnant women with good nutrition.

To prevent iron nutritional anemia, every pregnant woman must get iron tablets of at least 90 tablets during pregnancy given from the first contact. The essential principle of treating anemia due to iron deficiency is iron replacement therapy to treat underlying causes such as gastrointestinal bleeding or parasitic infections (Yusanaini, 2014).

Based on the results of the research analysis, the researchers assume that pregnant women who consume diligently do not experience anemia during pregnancy. makes the absorption of Fe tablets not good by the intestine, causing the iron content of Fe tablets to be wasted, in this case it can be said that there is a relationship between consumption of Fe tablets and the occurrence of anmei in third trimester pregnant women.

Consuming substances that inhibit iron absorption (tea, coffee and milk)

The results of this study are in line with Inda's research (2020) at the Pembina Palembang Health Center where there is a significant relationship between the frequency of tea consumption and anemia (p-value = 0.041). Likewise with research conducted at BPM Midwife "E" Ciwangi Village, Balubur Limbangan District, Garut Regency, there is a relationship between the habit of drinking tea and coffee and cases of anemia in pregnant women (p-value = 0.000) (Iriani & Ulfah, 2019).

Iron absorption is strongly influenced by the combination of foods absorbed when eating certain foods, especially strong tea which will have a real inhibitory effect on iron absorption (Septiawan & Sugerta, 2016). Excessive tannin compounds from tea and coffee in the blood will interfere with the absorption of iron. If the body is deficient in iron, the formation of red blood cells (hemoglobin) is reduced, resulting in anemia. The inhibitory effect of tannins can be avoided by not drinking tea and coffee after eating so as not to interfere with iron absorption. Tannins contained in tea and coffee can reduce iron absorption by up to 80%. Drinking tea or coffee one hour after eating can reduce absorption by up to 85% (Septiawan & Sugerta, 2016).

Tannins are polyphenols found in tea, coffee and several types of vegetables and fruit, and can also inhibit iron absorption by binding to iron. If your body iron is not too high, you should not drink tea or coffee with meals. Tea and coffee contain tannins which are polyphenols which can inhibit the absorption of iron by

Nisrina Fadhilaturrabani[1], Dessy Hermawan[2]*, Nurul Aryastuti[2], Fitri Ekasari Siregar[2], Nova Muhani[2]

[1]UPTD Puskesmas Non Rawat Inap Candra Mukti
[2]Universitas Malahayati
Corresponding author. *E-mail: hermawan.dessy@gmail.com

DOI: https://doi.org/10.33024/minh.v5i2.9474

binding to it. Rosander, et al reported that the absorption of iron is strongly influenced by the combination of foods eaten at mealtimes. Conversely, if you drink tea and coffee, especially strong tea, this will have a real inhibitory effect on iron absorption. It's the same as consuming fresh milk which needs to be avoided because this milk has too high calcium, but low in iron (Septiawan, & Sugerta, 2016).

Based on the results of the research analysis, the researchers assume that consuming tea, coffee and milk can indeed affect hemoglobin levels in the blood, so that it can make a person anemic if the consumption of tea, coffee and fresh milk is excessive or not balanced with foods rich in iron. Consumption of tea, coffee and fresh milk is allowed as long as it is not excessive and balanced with nutritious nutritional intake and the distance between consumption of tea, coffee and fresh milk should not be close to or concurrent with consumption of Fe tablets.

Family Support

The results of this study are in line with research at the Sei Tualang Raso Health Center in Tanjung Balai City with a p-value = 0.000 (Hastuti, 2019).

Family support is the attitude, action, and acceptance of the family towards its members (Friedman, Bowden, & Jones, 2014). Family members view that a supportive person is always ready to provide help and assistance if needed. Basically a mother really wants a healthy pregnancy and child. In order for pregnant women's wishes to come true, support from the family is needed. High family support for pregnant women, especially in consuming Fe tablets which can reduce the incidence of anemia will cause a person to be obedient in consuming Fe tablets. Therefore, it is hoped that the family will always provide support to pregnant women to increase the adherence of pregnant women in consuming Fe tablets. In particular, families accompany pregnant women to seek treatment at health workers when the Fe tablets run out. Accompanying pregnant women during examinations can provide a sense of comfort and security for pregnant women. Families who accompany pregnant women to check themselves at health workers can obtain in-depth information from health workers about the health of their babies and the health of pregnant women. In addition, families can explore and recognize information about danger signs during pregnancy (Mulyani, 2017).

Families who seek information from health workers can increase knowledge about pregnancy. So that the knowledge possessed by the family about pregnancy will greatly help pregnant women in dealing with the ignorance of pregnant women about pregnancy. The information obtained by the family contributes significantly to the perception of pregnant women during pregnancy. So to increase family support this can be done by inviting and involving families to participate in antenatal care visits and classes for pregnant women. Family involvement during pregnancy really supports the health of babies and pregnant women (Mulyani, 2017).

Disobedience of pregnant women in consuming Fe tablets so that the occurrence of anemia in pregnant women occurs due to a lack of knowledge of pregnant women about the benefits of Fe tablets so that mothers are less motivated to consume Fe tablets according to the rules, according to Pranoto the better a person's knowledge, the better the person's behavior. Good knowledge can be formed from the educational background that has been taken before. A high level of education will make it easier for mothers to receive and digest the information they get, a high level of education will increase mother's awareness of the importance of health and help open a mindset to be able to accept advice and suggestions from health workers (Rofiani & Ratnawati, 2016).

The family is the closest person and is around pregnant women every day, especially husbands who are able to increase pregnant women's compliance by providing encouragement and motivation so that mothers want to take Fe tablets regularly during pregnancy and avoid disobedient behavior in maintaining their health. The existence of the family plays a big role in influencing pregnant women, efforts to include the family are an important basis for preventing non-compliance in pregnant women. The biggest influence on family members is the mother, so every change that the mother experiences will have an impact on the family itself, the most important thing for

Nisrina Fadhilaturrabani[1], Dessy Hermawan[2]*, Nurul Aryastuti[2], Fitri Ekasari Siregar[2], Nova Muhani[2]

[1]UPTD Puskesmas Non Rawat Inap Candra Mukti
[2]Universitas Malahayati
Corresponding author. *E-mail: hermawan.dessy@gmail.com

DOI: https://doi.org/10.33024/minh.v5i2.9474

pregnant women is her husband. If a woman is given attention and affection by her partner during pregnancy, it will be easier to make adjustments during pregnancy and reduce the risk of labor complications a little. The husband's role is very necessary, such as increasing knowledge of the importance of iron (Fe) tablets in pregnant women and the benefits for the mother and fetus, especially being able to give or convey to the wife the importance of iron tablets (Rofiani & Ratnawati, 2016).

Based on the results of the research analysis, the researchers assume that in order for pregnant women's wishes to be realized, support from the family is needed. Because the family is a person who is very close and highly trusted by pregnant women. This support is in the form of encouragement, motivation, attention, or assistance that can make pregnant women feel happy, safe, and comfortable. So that pregnant women are motivated to improve their health by consuming Fe tablets given by health workers regularly as an effort to prevent anemia during pregnancy.

The Support of Health Workers

The results of this study are in line with research in Desa Baru, the working area of the Siak Hulu III Health Center, where there is a relationship between the role of health workers and the incidence of anemia in pregnant women (p-value = 0.000) (Astapani, Harahap, & Apriyanti, 2020). Other research states that there is a significant relationship between health worker service factors (such as examination of anemia cases, counseling and administration of Fe tablets) with adherence to Fe tablet consumption. In addition to providing counseling, health workers also have various other important roles in the process of improving health status (Astapani, et al., 2020).

Health workers play an important role in overcoming anemia. Efforts made by health workers are to provide Information and Motivation Communication (IMC) to pregnant women about the dangers of anemia, the importance of additional iron, the important factors of iron-containing foods, the importance of improving health, the importance of Antenatal Care (ANC) so that anemia can be treated early. know and overcome as well as counseling on how to take iron tablets correctly, namely together with water and consuming 1 tablet every night before going to bed (Manuaba, 2010).

Health workers play an active role in every visit of pregnant women, such as identifying high-risk pregnancies, especially anemia with malnutrition, providing health education to pregnant women, and playing a role in the process of treatment and healing of diseases (Prawirohardjo, 2012).

Based on the results of the research analysis, the researchers assumed that the behavior of health workers in providing health services to the community, for example, providing health education to the community. Health services for pregnant women, in addition to prenatal checks, are also accompanied by Fe tablets to prevent iron anemia in pregnant women. The purpose of giving Fe tablets is to prevent iron anemia in pregnant women.

Determinants Affecting the Incidence of Anemia

Based on the results of the multivariate test, it is known that the fulfillment variable for Fe consumption has a p-value = 0.002 with OR = 3.47 greater than the other variables. Based on the explanation above, it can be concluded that adherence to Fe consumption is the dominant variable on the incidence of anemia in pregnant women compared to the variables of knowledge, attitude, consumption of drinks that have inhibitors of iron absorption (tea, coffee, milk), family support. The results of the above research are in line with research based on the 2017 IDHS Data Analysis where the most dominant factor causing anemia in pregnant women is consumption of Fe tablets (Guspaneza, & Martha, 2019).

Compliance with consuming iron tablets was measured by the accuracy of the number of tablets consumed, the accuracy of how to consume iron tablets, the frequency of consumption per day. Iron supplementation or administration of Fe tablets is an important effort in preventing and treating anemia, especially iron deficiency anemia. Iron supplementation is an effective way because the iron content is complemented by folic acid which can also prevent anemia due to folic acid deficiency. Folic acid

Nisrina Fadhilaturrabani[1], Dessy Hermawan[2]*, Nurul Aryastuti[2], Fitri Ekasari Siregar[2], Nova Muhani[2]

[1]UPTD Puskesmas Non Rawat Inap Candra Mukti
[2]Universitas Malahayati
Corresponding author. *E-mail: hermawan.dessy@gmail.com

DOI: https://doi.org/10.33024/minh.v5i2.9474

functions to produce red blood cells. Deficiency of folic acid can cause abnormal red blood cells in patients with the characteristics of being larger, the number is small. A mother is said to comply with taking Fe tablets if ≥ 90 of the amount she should have taken or if the mother consumes Fe tablets 1x1 per day during the first and second trimesters, and is said to be non-compliant if the mother adheres to taking Fe tablets if ≤ 90 of the amount should have been recommended for taken or the mother consumes Fe tablets not every day (irregularly) as much as 1x1 during the second and third trimesters (Purnama, 2014).

Consumption of iron tablets is strongly influenced by the awareness and compliance of pregnant women. Awareness is a supporting factor for pregnant women to adhere to consuming iron tablets properly. According to Rahmawati and Subagio, there are several factors that have a significant role in influencing the compliance of pregnant women in consuming iron tablets, including knowledge, motivation, health services, and family participation. In addition, side effects also have a big influence on the compliance of pregnant women in consuming iron tablets. Side effects of iron tablets include stomach pain, nausea, vomiting, constipation, and diarrhea. High adherence in consuming iron tablets is also due to the motivation for achieving better health after consuming iron tablets (Notoatmodjo, 2014; Pakpahan, Siregar, Susilawaty, Tasnim, Ramdany, Manurung, & Maisyarah, 2021).

CONCLUSION

There is a significant relationship between knowledge, attitudes, adherence to consumption of Fe, consumption of drinks that have inhibitors of iron absorption (tea, coffee and milk), family support and support from health workers with the incidence of anemia in pregnant women with a p-value of < 0.05.

Compliance with Fe consumption is the dominant variable on the incidence of anemia in pregnant women compared to the variables of knowledge, attitudes, consumption of drinks that have inhibitors of iron absorption (tea, coffee, milk), family support with a P-value = 0.002; = 3.47.

SUGGESTION

For pregnant women to pay more attention to their intake of foods that are nutritious and contain lots of iron and vitamins (Fe) which contain iron during pregnancy and it is recommended to consume Fe tablets of at least 90 tablets during pregnancy to prevent or prevent anemia during pregnancy.

For the Puskesmas to provide many policies through the best programs in MCH, especially in terms of preventing anemia in pregnancy, such as providing information about the right dose of taking Fe tablets, the right time to take Fe tablets, and the right way to consume Fe tablets through midwifery care in when pregnant women carry out pregnancy checks or through health education during classes for pregnant women to increase knowledge about how to take Fe tablets properly, correctly and validly.

for Health Workers to increase awareness in carrying out the role of officers as educators and innovators both in hospitals and in the community, such as educating them to carry out counseling activities, such as providing information about the correct dosage for consuming Fe tablets, the right time for consuming Fe tablets, and the correct way to consume Fe tablets.

For families, it is hoped that they will always provide support to pregnant women because the family is the person who is very close and is very trusted by pregnant women. This support is in the form of encouragement, motivation, attention, or assistance that can make pregnant women feel happy, safe and comfortable. Accompanying pregnant women during examinations can provide a sense of comfort and security for pregnant women. Families who accompany pregnant women to check themselves with health workers can dig up in-depth information from health workers about the health of their babies and the health of pregnant women.

For future researchers, it is hoped that they can conduct further research to find out other variables that are thought to influence the incidence of anemia in pregnant women.

Nisrina Fadhilaturrabani[1], Dessy Hermawan[2]*, Nurul Aryastuti[2], Fitri Ekasari Siregar[2], Nova Muhani[2]

[1]UPTD Puskesmas Non Rawat Inap Candra Mukti
[2]Universitas Malahayati
Corresponding author. *E-mail: hermawan.dessy@gmail.com

DOI: https://doi.org/10.33024/minh.v5i2.9474

REFERENCES

Almatsier, S. (2010). Prinsip dasar ilmu gizi, PT. *Gramedia Pustaka Utama, Jakarta*.

Astapani, N., Harahap, D. A., & Apriyanti, F. (2020). Hubungan Cara Konsumsi Tablet Fe Dan Peran Petugas Kesehatan Dengan Kejadian Anemia Pada Ibu Hamil Di Desa Baru Wilayah Kerja Puskesmas Siak Hulu Iii Tahun 2019. *Jurnal Kesehatan Tambusai*, *1*(2), 69-75.

Azwar, S. (2013). Sikap Manusia: Teori dan Pengukurannya. Yogyakarta: Pustaka Pelajar.

Central Bureau of Statistics (Indonesia). (2022). Prevalensi Anemia Pada Ibu Hamil.

Directorate General of Health Services, Ministry of Health of the Republic of Indonesia. (2022). Prevalensi anemia pada ibu hamil. Aksesed from: https://yankes.kemkes.go.id/view_artikel/1132/anemia-dalam-kehamilan.

Fauziah, D. (2017). Hubungan pengetahuan dan sikap ibu hamil tentang anemia dengan kejadian anemia di wilayah kerja Puskesmas Singaparna Kecamatan Singaparna Kabupaten Tasikmalaya tahun 2017. J Bidkesmas.;2:20-9.

Fitarina, F. (2017). Faktor-Faktor Yang Berhubungan dengan Kejadian Anemia pada Ibu Hamil Di Puskesmas Kotabumi II Lampung Utara. *Jurnal Kesehatan Metro Sai Wawai*, *7*(1), 19-25.

Friedman, M. M., Bowden, V. R., & Jones, E. G. (2014). Buku Ajar Keperawatan Keluarga (Riset, teori, dan praktik) Edisi 5. Jakarta : EGC.

Guspaneza, E., & Martha, E. (2019). Analisis Faktor Penyebab Kejadian Anemia pada Ibu Hamil di Indonesia (Analisis Data SDKI 2017). *Jukema (Jurnal Kesehatan Masyarakat Aceh)*, *5*(2), 399-406.

Hastuti, D. (2019). *Faktor yang berhubungan dengan ketidakpatuhan ibu mengkonsumsi tablet fe pada ibu hamil di Puskesmas Sei Tualang Raso Kota Tanjung Balai tahun 2019* (Doctoral dissertation, Institut Kesehatan Helvetia Medan).

Iriani, O. S., & Ulfah, U. (2019). Hubungan Kebiasaan Meminum Teh dan Kopi dengan Kejadian Anemia pada Ibu Hamil di BPM Bidan "E" Desa Ciwangi Kecamatan Balubur Limbangan Kabupaten Garut. *Jurnal Sehat Masada*, *13*(2), 68-71.

Jiniliyanti, H., Nurnasari, N., & Syahrianti, S. (2017). *Hubungan pengetahuan dan sikap ibu tentang anemia dengan kejadian anemia dalam kehamilan di wilayah kerja Puskesmas Kandai Kota Kendari tahun 2017* (Doctoral dissertation, Poltekkes Kemenkes Kendari).

Lampung Provincial Health Office. (2021). *Profil Kesehatan Provinsi Lampung Tahun 2020.* Bandar Lampung. Aksesed from: https://dinkes.lampungprov.go.id/download2/309/buku-profil-kesehatan/5996/profil-kesehatan-provinsi-lampung-tahun-2020.pdf.

Lampung Provincial Health Office. (2022). *Profil Kesehatan Provinsi Lampung Tahun 2021.* Bandar Lampung.

Manuaba, I. B. G. (2010). *Ilmu Kebidanan Penyakit Kandungan dan KB*. Jakarta : EGC

Mulyani S. (2017). Hubungan Tingkat Pengetahuan Dan Dukungan Keluarga Terhadap Kepatuhan Ibu Hamil Mengkonsumsi Tablet Zat Besi. Jambi Med Journal J Kedokteran dan Kesehatan. 5(2).

Murkof, H. (2014). *K*itab Hamil Terlengkap, Sebelum, Selama dan Setelah Melahirkan. Bandung: Qanita.

Notoatmodjo, S. (2014) .Pengantar Ilmu Perilaku Kesehatan. Jakarta: Rineka Cipta.

Nisrina Fadhilaturrabani[1], Dessy Hermawan[2]*, Nurul Aryastuti[2], Fitri Ekasari Siregar[2], Nova Muhani[2]

[1]UPTD Puskesmas Non Rawat Inap Candra Mukti
[2]Universitas Malahayati
Corresponding author. *E-mail: hermawan.dessy@gmail.com

DOI: https://doi.org/10.33024/minh.v5i2.9474

Pakpahan, M., Siregar, D., Susilawaty, A., Tasnim, T., Ramdany, R., Manurung, E. I., & Maisyarah, M. (2021). Promosi Kesehatan dan Perilaku Kesehatan: Yayasan Kita Menulis.

Pemiliana, P. D., Oktafirnanda, Y., & Santi, I. (2019). Faktor Yang Berhubungan Dengan Anemia Pada Ibu Hamil Trimester III Di Puskesmas Simpang Kiri Kota Subulussalam Provinsi Aceh. *Window of Health: Jurnal Kesehatan*, 389-402.

Pratiwi, E. D., & Sariyati, S. (2015). Agama dengan keikutsertaan keluarga berencana (KB) dan pemilihan jenis alat kontrasepsi pada pasangan usia subur (PUS) di Desa Argomulyo Sedayu Bantul Yogyakarta. *JNKI (Jurnal Ners dan Kebidanan Indonesia)(Indonesian Journal of Nursing and Midwifery)*, *3*(1), 1-9.

Prawirohardjo, S. (2012). Buku acuan nasional pelayanan kesehatan maternal dan neonatal. *Jakarta: PT Bina Pustaka Sarwono Prawirohardjo*, *4*, 7-9.

Purbadewi, L., & Ulvie, Y. N. S. (2013). Hubungan tingkat pengetahuan tentang anemia dengan kejadian anemia pada ibu hamil. *Jurnal Gizi*, *2*(1).

Purnama, D.I. (2014). 100 Hal Penting Yang Wajib Diketahui Bumil. Jakarta Selatan: PT Kawan Pustaka.

Retnorini, D. L., Widatiningsih, S., & Masini, M. (2017). Pengaruh pemberian tablet fe dan sari kacang hijau terhadap kadar hemoglobin pada ibu hamil. *Jurnal kebidanan*, *6*(12), 8-16.

Rofiani, R., & Ratnawati, R. (2016). Hubungan Sikap, Motivasi, Dan Perilaku Ibu Dalam Mengkonsumsi Tablet Fe Dengan Kejadian Anemia Pada Ibu Hamil Trimester III di Wilayah Kerja Puskesmas Kedungwuni II Kabupaten Pekalongan.

Safitri, F., Husna, A., & Sakdiah, R. (2021). Analisis Faktor Yang Berhubungan dengan Kejadian Anemia pada Ibu Hamil di Wilayah Kerja Puskesmas Padang Tiji Kabupaten Pidie. *Journal Of Healthcare Technology and Medicine*, *7*(1), 144-161.

Septiawan, Y., & Sugerta, E. (2016). Hubungan Kebiasaan Minum Teh dengan Kejadian Anemia pada Ibu Hamil Trimester II di Puskesmas Kotabumi II Kabupaten Lampung Utara. *Jurnal Kesehatan*, *6*(2).

Sulistina, O., Dasna, I. W., Iskandar, S. M. (2014). Penggunaan Metode Pembelajaran Inkuiri Terbuka dan Inkuiri Terbimbing dalam Meningkatkan Hasil Belajar Kimia Siswa SMA Laboratorium Malang Kelas X. Jurnal Pendidikan dan Pembelajaran (JPP), vol. 17, No. 1, 82-88.

Susiloningtyas, I. (2019). Pemberian zat besi (Fe) dalam Kehamilan. Maj Ilm Sultan Agung.;50(128):73–99.

Tanto, C. (2014). Kapita Selekta kedokteran. Jakarta: Media Aesculapius.

The Ministry of Health of the Republic of Indonesia. (2019a). Profil Kesehatan Republik Indonesia Tahun 2019. Jakarta: Pusdatin Kemenkes RI.

The Ministry of Health of the Republic of Indonesia. (2019b). Riset Kesehatan Dasar (RISKESDAS) Tahun 2018. Jakarta: Badan Penelitian dan Pengembangan Kesehatan.

The Ministry of Health of the Republic of Indonesia. (2020). Pedoman Pemberian Tablet Tambah Darah (TTD) Bagi Ibu hamil Pada Masa Pandemi Covid-19 Bagi Tenaga Kesehatan.

The Ministry of Health of the Republic of Indonesia. (2021). Profil Kesehatan Indonesia tahun 2020.Jakarta. Pusdatin Kemenkes RI.

Verrayanti, R. M D., Santoso, S., & Kurniati, A. (2018). *Hubungan Tingkat Pengetahuan Dan*

Nisrina Fadhilaturrabani[1], Dessy Hermawan[2]*, Nurul Aryastuti[2], Fitri Ekasari Siregar[2], Nova Muhani[2]

[1]UPTD Puskesmas Non Rawat Inap Candra Mukti
[2]Universitas Malahayati
Corresponding author. *E-mail: hermawan.dessy@gmail.com

DOI: https://doi.org/10.33024/minh.v5i2.9474

Perilaku Konsumsi Tablet Tambah Darah Dengan Kejadian Anemia Pada Ibu Hamil Trimester Iii Di Puskesmas Mantrijeron Kota Yogyakarta Tahun 2017 (Doctoral dissertation, Poltekkes Kemenkes Yogyakarta).

West Tulang Bawang District Health Office. (2021). *Profil Kesehatan Kabupaten Tulang Bawang Barat Tahun 2020.*

World Health Organization. (2021).Prevalence of anaemia in women aged 15 – 49, by pregnancy status. Geneva: WHO.

Yeyeh, R. A. (2014). *Asuhan Kebidanan 4; Patologi Kebidanan.* Jakarta: TIM.

Yusnaini, Y. (2014). *Pengaruh konsumsi jambu biji (psidium guajava. L) terhadap perubahan kadar hemoglobin pada ibu hamil anemia yang mendapat suplementasi tablet Fe (Studi Kasus Ibu Hamil di Wilayah Kerja Puskesmas Kecamatan Indrapuri Kabupaten Aceh Besar Propinsi Aceh)* (Doctoral dissertation, Program Pascasarjana Undip).

Nisrina Fadhilaturrabani[1], Dessy Hermawan[2]*, Nurul Aryastuti[2], Fitri Ekasari Siregar[2], Nova Muhani[2]

[1]UPTD Puskesmas Non Rawat Inap Candra Mukti
[2]Universitas Malahayati
Corresponding author. *E-mail: hermawan.dessy@gmail.com

DOI: https://doi.org/10.33024/minh.v5i2.9474