

Contents lists available at [IOCS](https://www.iocspublisher.org)**Science Midwifery**journal homepage: [www.midwifery.iocspublisher.org](http://www.midwifery.iocspublisher.org)

# Correlation between adequacy of fe tablet consumption, nutritional status and diet with anemia in pregnant women at BPM Hj. Carnah N, S.ST Karawang in 2021

Sinta<sup>1</sup>, Kuswati<sup>2</sup><sup>1,2</sup>Department of Midwifery, Advanced Indonesian College of Health Sciences, Indonesia**ARTICLE INFO***Article history:*

Received Oct 21, 2022

Revised Nov 11, 2022

Accepted Nov 29, 2022

*Keywords:*

Anemia  
Adequate Consumption of Fe  
Tablets  
Diet

**ABSTRACT**

Anemia is a medical condition in which the number of red blood cells or hemoglobin is less than normal. Anemia in pregnant women is a condition in which hemoglobin levels in the blood are lower than the normal value for hemoglobin levels below 11 g% in the first and third trimesters or <10.5 g% in the second trimester. The purpose of this study was to determine the relationship between adequate consumption of Fe Tablet, nutritional status and diet with anemia in pregnant women at BPM Hj. Carnah N, S.ST Karawang in 2021. This research is a descriptive analytic study with a cross-sectional approach, the sample in this study was taken using a total sampling of 55 people. How to collect data by distributing questionnaires. The results of the Chi-square statistical test for the adequacy of FeTablet consumption (P-value = 0.002) with OR 7333, nutritional status (P-value = 0.005) with OR 5937, and diet (P value = 0.007) with OR 5.714 . The conclusion is that there is a relationship between the adequacy of Fe Tablet consumption and anemia in pregnant women at BPM Hj. Carnah N, S.ST Karawang in 2021. This research resulted in an achievement where a tool in the form of a leaflet was made to make it easier to educate by making it as attractive as possible.

*This is an open access article under the [CC BY-NC](https://creativecommons.org/licenses/by-nc/4.0/) license.*

**Corresponding Author:**

Sinta,  
Midwifery Department,  
Advanced Indonesian College of Health Sciences,  
Jln. Hope No. 50, Lenteng Agung, South Jakarta. 12610, Indonesia  
Email: itasita125@gmail.com

**INTRODUCTION**

Pregnancy is a condition in which the spermatozoa meet or fertilize and the egg or ovum is followed by the event of the entry of the products of conception into the endometrium which is called nidation or implantation (Setiawati, 2019). Pregnant women are a group that is vulnerable to nutritional problems, especially anemia due to iron (Fe) deficiency. Lack of adequate intake of iron (Fe) results in the onset of nutritional anemia. Symptoms appear through Hb levels below 11 gr%, pale, lethargic, tired, weak and bleeding occurs (RI Ministry of Health, 2015).

Anemia is defined as a condition where the level of hemoglobin (Hb) in the blood is lower than the normal value for groups of people according to age and sex. Nutritional anemia is a condition in which the hemoglobin level in the blood is lower than normal as a result of the inability

of the red blood cell-forming tissues to produce red blood cells to maintain hemoglobin levels at normal levels. Iron nutritional anemia is anemia that arises due to iron deficiency so that the formation of red blood cells and other functions in the body is disrupted (Merryana Adriani, 2016).

Anemia in pregnancy is the condition of the mother with a hemoglobin level below 11 g% in the first and third trimesters or less than 10.5 g% in the second trimester. Anemia that often occurs in pregnancy is iron deficiency anemia, a type of anemia whose treatment is relatively easy, even inexpensive (Suryani, Ruwayda, & Izhar, 2019). Iron nutritional anemia is anemia that arises due to iron deficiency so that the formation of red blood cells and other functions in the body is disrupted. The etiology of iron deficiency anemia in pregnancy is digestive and absorption disorders, hypervolemia, causing blood dilution, increased iron requirements, lack of iron in the diet, and the increase in blood is not proportional to the increase in plasma (Mutiarasari, 2019).

Anemia that occurs during pregnancy is caused by various factors such as conditions that cause a decrease in hemoglobin concentration in the blood such as malaria and HIV, parasitic infections and micronutrient deficiencies and the main cause is iron deficiency during pregnancy (Astried Eka Candra Fortuna, & Joko, 2019).

Around the world in 2015 around 830 women died every day, this was caused by complications during pregnancy or childbirth. 6 One of the problems being faced by the Indonesian government is the high number of pregnant women suffering from anemia (Atikah, 2011). According to WHO, the prevalence of anemia in pregnancy globally reaches 38.8% or around 32 million pregnant women experience anemia, while the prevalence of anemia during pregnancy in Southeast Asia reaches 48.2%, the prevalence of anemia in Indonesia in 2013 to 2018 has increased, namely by 37.1% and increased to 48.9% (Thena, 2018).

Based on the profile of the West Java Provincial Health Office in 2016, the incidence of anemia in pregnant women in the first trimester was 20%, in the second trimester was 70% and in the third trimester was 70%. 9 Data obtained from the Karawang Health Office, the percentage of anemia in pregnant women in the district Karawang in 2018 was 8.60% (Wiyono, 2016).

Impacts that can be caused when a mother experiences anemia during pregnancy such as cardiovascular symptoms, decreased physical and mental performance, decreased immunity and fatigue, meanwhile the impact of anemia that can occur on the fetus such as impaired fetal growth in the womb, the occurrence of prematurity, death fetus in the womb, rupture of the membranes, the occurrence of defects in the respiratory system and low birth weight (LBW) (Evi, 2016).

According to Basic Health Research data, the government has made efforts to reduce the prevalence of anemia by giving 90 Fe tablets during pregnancy. According to Basic Health Research data in 2018 the number of pregnant women who received Fe tablets was 73.2% and the rest did not receive Fe tablets. However, this effort has not been able to reduce the incidence of anemia during pregnancy due to the lack of knowledge and understanding of mothers about consumption of Fe tablets and the importance of nutrition during pregnancy which continues to cause anemia in pregnant women (Setiawati, 2019).

Several factors can cause anemia in pregnancy including gravida, age, parity, education level, economic status, adequacy of consumption of Fe tablets and diet (Sinaga, Lubis, & Siagian, 2015). Adequacy of consuming Fe tablets is defined as the behavior of pregnant women who comply with all instructions recommended by health workers in consuming iron tablets. Adequacy of consumption of Fe tablets is obtained by calculating the remaining tablets. Pregnant women are categorized as sufficient if their compliance rate reaches 90%. The results of research conducted by Ruwayda, a population of 526 people with a sample of 97 pregnant women, was taken by quota sampling. Respondents were pregnant women who visited the Maternal and Child Health polyclinic at the Simpang Wire Health Center. In conclusion, there is a relationship between the adequacy of consumption of Fe tablets ( $p=0.006$ ) (Suryani, Ruwayda, & Izhar, 2019).

Diet is the way a person, group of people and family chooses the type and amount of food eaten daily by one or more people and is typical for a particular group. Planting a diet with a variety

of foods must be done from infancy, when the baby is still eating Nasi Tim, that is, when he is only six months and over, the mother must know and be able to adopt a healthy diet. During pregnancy or breastfeeding, mothers must pay attention to the food consumed. Nutritious food is food that contains energy, building materials, and substances that meet nutritional needs. This nutritious food is to meet the needs of the fetus and increase milk production (Sinaga, Lubis, & Siagian, 2015). The results of the research that was conducted by Wigutomo Gozali, the results of this study showed that most of the 17 (68%) respondents had mild anemia and (44%) respondents had an adequate diet. The diet of pregnant women is significantly related to the incidence of anemia ( $p < 0.05$ ). The relationship between diet and the incidence of anemia is strong, with the interpretation that the less the diet of pregnant women, the higher the incidence of anemia. Pregnant women are expected to have a good diet according to the amount needed during pregnancy (Almatsier, 2016).

According to Dhini Anggraini Dhillon, factors associated with the incidence of anemia in pregnancy include economic status and nutritional status (Sugondo, 2006). Nutritional status is a measure of success in fulfilling nutrition as indicated by body weight. Nutritional status is also defined as a health status resulting from a balance between nutritional needs and inputs for the development and maintenance of health. The results of the research conducted by Diah Mutiarasari showed that there was no relationship between maternal age and the incidence of anemia with a P-value ( $0.613 > 0.05$ ) and there was a relationship between nutritional status and the incidence of anemia with a P-value ( $0.012 < 0.05$ ), with an OR of 6,500 with 95% CI at 1.316-32.097. In addition, nutritional status contributes 30.6% in influencing the occurrence of anemia (Mutiarasari, 2019).

Throughout the stages of pregnancy, pregnant women need more food consumption than before, proper food patterns, as well as a balanced intake of macronutrients. Fulfillment of increased food intake plays an important role in the health of pregnant women and the fetus. Adequate food intake patterns from the early stages of pregnancy are very important to support the physical health and mental development of the fetus. Malnutrition in pregnancy will hamper the growth and development of the fetus, as well as hinder the formation of fetal brain function. Fetuses who are malnourished are at risk of being born with low body weight and when they grow up will be at higher risk of suffering from degenerative diseases (diabetes, hypertension, heart disease, and stroke) than those who are not malnourished (Salman et al, 2016).

Data obtained from a preliminary study, the number of pregnant women in April 2021 was 60 people. Based on the preliminary study that the researchers conducted on 10 third trimester pregnant women at BPM Hj. Carnah N, S.ST Karawang on April 30 2021, it was found that 7 pregnant women had anemia with Hb levels  $< 11$  gr%, out of 10 respondents there were 7 pregnant women who did not consume Fe tablets every day, in one month the mother only spent 15-25 Fe tablets and there are even mothers who don't take them at all, pregnant women should spend 30/31 Fe tablets in one month. Among the 10 pregnant women there were 6 people who had abnormal nutritional status, because after calculating the mother's BMI it was  $< 18.5$ . As well as 7 out of 10 pregnant women who only consume 3-4 servings of rice or staple food (should be 6 servings), consume only 2-3 servings of vegetables (should be 4 servings), only 2-3 servings of fruit (should be 4 servings) and drink only 6-7 glasses per day (should be 8-12 glasses per day).

Based on the background described, the authors are interested in conducting research on "the relationship between the adequacy of consumption of Fe tablets, nutritional status and diet with anemia in pregnant women at BPM Hj. Carnah N, S.ST Karawang in 2021". The purpose of this study was to determine the relationship between the adequacy of consumption of Fe tablets, nutritional status and diet with anemia in pregnant women at BPM Hj. Carnah N, S.ST Karawang in 2021.

## RESEARCH METHOD

This research is a quantitative research using descriptive analytic research methods. Quantitative research is a research method that applies quantification to the variables, describes the distribution of variables numerically (using absolute numbers in the form of frequencies and relative values in

the form of percentages) then examines the relationship between variables using statistical formulas (Wibowo, 2014). Quantitative type research is used because researchers take samples from one population by using a questionnaire as a measuring tool for data collection (Notoatmodjo, 2005).

This research design is cross sectional, namely research where the research is carried out at the time of data collection between the independent variables and the dependent variable which is carried out together at the same time. In this study, only knowing the relationship between the adequacy of consumption of Fe tablets, nutritional status and diet with anemia in pregnant women at BPM Hj. Carnah N, S.ST Karawang in 2021. This research was conducted at BPM Hj. Carnah N, S.ST Karawang. In this study the questionnaire format used was closed questions where the possible answers were predetermined by the researcher and the respondents were not given the opportunity to provide other answers (Sujarweni, 2016).

Population is a generalized area consisting of objects or subjects that have certain qualities and characteristics determined by researchers to be studied and then conclusions drawn (Notoatmodjo, 2005). The population in this study were all pregnant women in the first, second and third trimesters at BPM Hj. Carnah N, S.ST Karawang in 2021 as many as 55 people. The sample can be termed part or representative of the population being studied. The research sample is a portion taken from the entire object under study which is considered representative of the entire population and taken using a certain technique. The sample size is taken if the subject is less than 100, it is better if the entire population is used as a sample in the study (Notoatmodjo, 2005). The sample in this study was taken using total sampling, namely all existing populations were used as research samples, namely all pregnant women in the first, second and third trimesters at BPM Hj. Carnah N, S.ST Karawang in 2021 as many as 55 people.

The data processing used in this study is SPSS version 18 which includes univariate analysis explaining or describing the characteristics of each variable studied using computerization and bivariate analysis analysis carried out to explain and analyze the relationship between the independent variables and the dependent variable using the Chi test Square (Notoatmodjo, 2005).

## RESULTS AND DISCUSSIONS

### Research Result

#### Univariate analysis

Univariate analysis is an analysis to describe each independent variable (adequacy of consumption of Fe tablets, nutritional status and diet) and the dependent variable (anemia in pregnant women).

**Table 1.** Distribution of the frequency of anemia in pregnant women, adequacy of consumption of Fe tablets, nutritional status, and diet.

Variable	Frequency (F)	Percentage (%)
Anemia in Pregnant Women		
Anemia	24	43.6%
Not Anemia	31	53.4%
Adequacy Consumption of Fe Tablets		
Enough	27	49.1%
Not enough	28	50.9%
Nutritional status		
No SEZ	26	47.3%
KEK	29	52.7%
Dietary habit		
Well	22	40.0%

Not good 33 60.0%

Source: SPSS Version 18 of 2022

Based on table 1, it can be concluded that from 55 respondents it can be seen that the majority of respondents experienced anemia, namely 31 respondents (56.4%), while respondents who were not anemic, namely 24 respondents (43.6%). The frequency distribution of the adequacy of consumption of Fe tablets shows that out of 55 respondents there are a large proportion of respondents with insufficient consumption of Fe tablets, namely 28 respondents (50.9%), while respondents with sufficient consumption of Fe tablets are 27 respondents (49.1%). The frequency distribution of nutritional status shows that out of 55 respondents, most of the respondents had KEK nutritional status, namely 29 respondents (52.7%), while respondents who had nutritional status not KEK, namely 26 respondents (47.3%). The frequency distribution of eating patterns shows that out of 55 respondents, most of the respondents had bad eating patterns, namely 33 respondents (60.0%), while respondents with good eating patterns, namely 22 respondents (40.0%).

### Bivariate Analysis

This analysis was conducted to determine whether or not there was a relationship between the independent variables and the dependent variable, namely whether there was a relationship between the adequacy of consumption of Fe tablets, nutritional status and diet with anemia in pregnant women at BPM Hj. Carnah N, S.ST Karawang in 2021.

**Table 2.** Relationship between adequacy of fe tablet consumption, nutritional status, and diet with anemia in pregnant women at BPM Hj. Carnah N, S.ST Karawang in 2021

Research variable	Anemia in Pregnant Women				Total		P-Value	OR
	Not Anemia		Anemia		N	%		
	N	%	N	%				
<b>Adequacy Consumption of Fe Tablets</b>								
Enough	18	66.7%	9	33.3%	27	100%	0.002	7,333 (2.155-24.501)
Not enough	6	21.4%	22	78.6%	28	100%		
<b>Nutritional status</b>								
No SEZ	17	65.4%	9	34.6%	26	100%	0.005	5,937 (1837-19187)
KEK	7	24.1%	22	75.9%	29	100%		
<b>Dietary habit</b>								
Well	15	68.2%	7	31.8%	22	100%	0.007	5,714 (1756-18,591)
Not good	9	27.3%	24	72.7%	33	100%		

Source: SPSS Version 18 of 2022

Based on table 2 analysis of the relationship between the adequacy of consumption of Fe tablets and anemia in pregnant women at BPM Hj. Carnah N, S.ST in 2021 it can be seen that of the 28 respondents with insufficient consumption of Fe tablets, 22 respondents (78.6%) experienced anemia, and 6 respondents (21.4%) who were not anemic. Meanwhile, 18 respondents (66.7%) had adequate consumption of Fe tablets who were not anemic, and 9 respondents (33.3%) had anemia.

The results of the Chi-square statistical test obtained a P-value = 0.002 where the P-value <  $\alpha$  (0.05) so that it can be concluded that there is a significant relationship between the adequacy of consumption of Fe tablets and anemia in pregnant women at BPM Hj. Carnah N, S.ST Karawang in 2021. The P-value is obtained from Continuity Correction because based on the processing results of the SPSS program, it is obtained from table 2x2 that there is no expected count value of less than 5, and has an Odds Ratio value of 7,333 meaning that respondents with sufficient Insufficient

consumption of Fe tablets has a 7 times chance of experiencing anemia compared to respondents who consume sufficient Fe tablets.

Based on table 2 analysis of the relationship between nutritional status and anemia in pregnant women at BPM Hj. Carnah N, S.ST in 2021 it can be seen that out of 29 respondents with KEK nutritional status, there were 22 respondents (75.9%) experiencing anemia, and 7 respondents (24.1%) who were not anemic. Meanwhile, 17 respondents (65.4%) were not anemic, and 9 respondents (34.6%) were anemic. The results of the Chi-square statistical test obtained a P-value = 0.005 where the P-value  $< \alpha$  (0.05) so that it can be concluded that there is a significant relationship between nutritional status and anemia in pregnant women at BPM Hj. Carnah N, S.ST Karawang in 2021.

The P-value is obtained from Continuity Correction because based on the processing results of the SPSS program, information is obtained from the 2x2 table that there is no expected count value less than 5, and it has an Odds Ratio value of 5,937 meaning that respondents with KEK nutritional status have 6 times the chance of experiencing anemia compared to respondent n with nutritional status not KEK. Based on table 2 analysis of the relationship between diet and anemia in pregnant women at BPM Hj. Carnah N, S.ST in 2021 it can be seen that of the 33 respondents with a bad eating pattern, 24 respondents (72.7%) experienced anemia, and 9 respondents (27.3%) who were not anemic. Meanwhile, of the 22 respondents with a good diet, 15 respondents (68.2%) were not anemic, and 7 respondents (31.8%) were anemic.

The results of the Chi-square statistical test obtained a P-value = 0.007 where the P-value  $< \alpha$  (0.05) so that it can be concluded that there is a significant relationship between diet and anemia in pregnant women at BPM Hj. Carnah N, S.ST Karawang in 2021. The P-value is obtained from Continuity Correction because based on the processing results of the SPSS program, it is obtained from the 2x2 table that there is no expected count value of less than 5, and has an Odds Ratio value of 5,714 meaning that respondents with a pattern eating unhealthy has a 6 times chance of experiencing anemia compared to respondents with a good diet.

## Discussion

### **Correlation between Adequacy of Fe Tablet Consumption and Anemia in Pregnant Women at BPM Hj. Carnah N, S.ST Karawang in 2021**

Based on the results of bivariate analysis the relationship between adequacy of consumption of Fe tablets and anemia in pregnant women at BPM Hj. Carnah N, S.ST Karawang in 2021, the results obtained from the Chi-square statistical test where the P-Value is 0.002 where the P-value  $< \alpha$  (0.05) means that  $H_0$  is rejected, which means that there is a significant relationship between consumption adequacy Fe tablets with anemia in pregnant women at BPM Hj. Carnah N, S.ST Karawang in 2021.

Iron tablets or iron tablets are supplements that contain iron. Iron is a mineral needed to form red blood cells (Hb). Iron (Fe) tablets are tablets containing 60 mg of elemental iron and 0.25 mg of folic acid per tablet. Fe is a very important element in the formation of hemoglobin, which is a red compound found in red blood cells that is used to transport oxygen and carbon dioxide in the body. Pregnant women need to consume Fe tablets during pregnancy, because the iron needs of pregnant women increase during pregnancy, if the intake of iron tablets during pregnancy is less then it can cause iron deficiency anemia. 14 The benefits of consuming iron (Fe) are for the synthesis of hemoglobin in the blood, producing heat for adenotriphosphate in cellular respiration, to compensate for the increased blood volume that occurs during pregnancy and to ensure adequate fetal growth and development (Kowel, Pelealu, & Pangemanan, 2014).

The results of this study are in line with research conducted by Ruwayda, a population of 526 people with a sample of 97 pregnant women, the sample was taken by quota sampling. Respondents were pregnant women who visited the Maternal and Child Health polyclinic at the

Simpang Wire Health Center. In conclusion, there is a relationship between the adequacy of consumption of Fe tablets ( $p=0.006$ ) (Suryani, Ruwayda, & Izhar, 2019).

According to the researcher's assumption, the adequacy of consumption of Fe tablets is obtained by calculating the remaining tablets. Pregnant women are categorized as sufficient if their compliance rate reaches 90%. Adequacy of consumption of Fe tablets has a relationship with the incidence of anemia in pregnant women because iron deficiency anemia is the most common problem. Iron deficiency is a reduced amount of iron in the body. At the level of iron deficiency anemia is the last level of iron deficiency. Iron reserves are greatly reduced or even absent altogether. There are biochemical changes in the body such as greatly decreased serum iron, decreased Hb levels and an increase in the number of FEP, clinical symptoms have been seen and changes in the epithelium have occurred. At this level anemia has occurred.

### **Relationship between Nutritional Status and Anemia in Pregnant Women at BPM Hj. Carnah N, S.ST Karawang in 2021**

Based on the results of bivariate analysis of the relationship between nutritional status and anemia in pregnant women at BPM Hj. Carnah N, S.ST Karawang in 2021, the results obtained from the Chi-square statistical test where the P-Value is 0.005 where the P-value  $<\alpha$  (0.05) means that  $H_0$  is rejected, which means that there is a significant relationship between nutritional status with anemia in pregnant women at BPM Hj. Carnah N, S.ST Karawang in 2021.

Nutritional status is an expression of the state of the balance of nutrients in the form of certain variables. Nutritional status is an indicator of good or bad daily food supply. Nutritional status is a condition caused by the status of a balance between the amount of intake of nutrients and the amount needed by the body for various biological functions (physical growth, development, activity, health maintenance and others). Good nutritional status is needed to maintain a degree of fitness and health, to help the growth of children from the womb, children in their infancy, adults to support the development of leisure life as well as sports. Nutritional status is also important because it is a risk factor for morbidity or death (Achmadi, 2013).

The results of this study are in line with the research conducted by Diah Mutiarasari, the results showed that there was no relationship between maternal age and the incidence of anemia with a P-value ( $0.613 > 0.05$ ) and there was a relationship between nutritional status and the incidence of anemia with a P-value ( $0.012 < 0.05$ ), with OR of 6,500 with 95% CI at 1,316-32,097. In addition, nutritional status contributes 30.6% in influencing the occurrence of anemia (Mutiarasari, 2019).

According to the researcher's assumption, a person's nutritional status is strongly influenced by the consumption of nutrients. Incorrect or inappropriate nutritional intake for pregnant women will cause health problems, such as anemia in pregnant women. One of the determinants of nutritional status that is easy, inexpensive, and fast is LILA which reflects energy reserves so that it can reflect Chronic Energy Deficiency (KEK) in pregnant women.

### **The Relationship between Diet and Anemia in Pregnant Women at BPM Hj. Carnah N, S.ST Karawang in 2021**

Based on the results of bivariate analysis of the relationship between diet and anemia in pregnant women at BPM Hj. Carnah N, S.ST Karawang in 2021, the results obtained from the Chi-square statistical test where the P-Value is 0.007 where the P-value  $<\alpha$  (0.05) means that  $H_0$  is rejected, which means that there is a significant relationship between eating patterns with anemia in pregnant women at BPM Hj. Carnah N, S.ST Karawang in 2021.

Diet is a variety of information that provides an overview of the amount and type of food eaten every day by a person and is a characteristic of a particular society. A balanced menu is a menu that consists of a wide variety of foods in appropriate amounts and portions, so as to meet a person's nutritional needs to maintain and repair body cells and life processes as well as growth and development (Fatah, 2014). A good diet always refers to balanced nutrition, namely the fulfillment

of all nutrients according to needs and in balance. While there are six nutritional elements that must be met, namely carbohydrates, proteins, fats, vitamins, minerals and water. Carbohydrates, proteins and fats are macro-nutrients as a source of energy, while vitamins and minerals are micro-nutrients as regulators of the body's metabolism (Wijayanti, 2019).

The results of this study are in line with the research conducted by Wigutomo Gozali, the results of this study indicate that the majority of 17 (68%) respondents had mild anemia and (44%) respondents had an adequate diet. The diet of pregnant women is significantly related to the incidence of anemia ( $p < 0.05$ ). The relationship between diet and the incidence of anemia is strong, with the interpretation that the less the diet of pregnant women, the higher the incidence of anemia. Pregnant women are expected to have a good diet according to the amount needed during pregnancy (Almatsier, 2016).

According to the researcher's assumption, wrong eating patterns have an impact on the occurrence of nutritional disorders, including anemia, poor weight gain in pregnant women and impaired fetal growth. The direct causes of anemia include deficiency of nutritional intake from food, consumption of substances that inhibit iron absorption, infectious diseases, malabsorption, bleeding and increased needs during pregnancy.

## CONCLUSION

Based on the univariate results, the frequency distribution of anemia in pregnant women, the adequacy of consumption of Fe tablets, nutritional status and diet in BPM Hj. Carnah N, S.ST Karawang in 2021, it can be seen that most of the respondents experienced anemia, namely as many as 31 respondents (56.4%), most of the respondents with sufficient consumption of Fe tablets were not enough, namely as many as 28 respondents (50.9%), most of the respondents had KEK nutritional status, namely 29 respondents (52.7%) and the majority of respondents with bad eating patterns, namely as many as 33 respondents (60.0%).

There is a relationship between the adequacy of consumption of Fe tablets with anemia in pregnant women at BPM Hj. Carnah N, S.ST Karawang in 2021, with a P-Value of 0.002. There is a relationship between nutritional status and anemia in pregnant women at BPM Hj. Carnah N, S.ST Karawang in 2021, with a P-Value of 0.005. There is a relationship between diet and anemia in pregnant women at BPM Hj. Carnah N, S.ST Karawang in 2021, with a P-Value of 0.007.

With this research, it is expected that pregnant women regularly consume Fe tablets because the need for iron in pregnant women increases dramatically so that pregnant women really need additional iron supplements to meet the needs of the body and growth and development of the fetus. It is expected that midwives will monitor the adequacy of consumption of Fe tablets and handle the incidence of anemia in pregnant women.

## References

- Almatsier, S. (2016). Prinsip ilmu gizi dasar. *PT Gramedia Pustaka Utama, Jakarta*, 181-84.
- Astried Eka Candra Fortuna, E. C. F., & Joko, S. (2019). *Kajian Karakteristik Kurang Energi Kronis (KEK) Pada Ibu Hamil di Wilayah Kerja Puskesmas Kasihan I Bantul* (Doctoral dissertation, Poltekkes Kemenkes Yogyakarta).
- Atikah, P. (2011). Anemia dan anemia kehamilan. *NuhaMedika: Yogyakarta*.
- Evi, P. (2016). Evidence-Based dalam Kebidanan, Kehamilan dan Nifas.
- Fatah, N. (2014). *Hubungan Pola Makan Terhadap Pertumbuhan Anak Di Sd Negeri 1 Karangjambe Kecamatan Wanadadi Kabupaten Banjarnegara* (Doctoral Dissertation, Universitas Muhammadiyah Purwokerto).
- Kemenkes RI. (2015). *Pedoman Penatalaksanaan Pemberian Tablet Tambah Darah*. Jakarta: Kementerian Kesehatan RI.
- Kowel, C. L., Pelealu, F. J., & Pangemanan, J. M. (2014). Hubungan antara pengetahuan ibu hamil dengan kepatuhan mengkonsumsi tablet zat besi (Fe) di Kecamatan Tereran. *Manado: Universitas Sam Ratulangi*.
- Merryana Adriani, S. K. M. (2016). *Pengantar gizi masyarakat*. Prenada Media.

- Mutiarasari, D. (2019). hubungan status gizi dengan kejadian anemia pada ibu hamil di Puskesmas Tinggede. *Healthy Tadulako Journal (Jurnal Kesehatan Tadulako)*, 5(2), 42-48.
- Notoatmodjo, S. (2005). Metodologi penelitian kesehatan.
- Salman, Y., Ideris, I., Muharramah, S. M., Borneo, S. H., & Borneo, A. S. H. (2016). Hubungan Pola Konsumsi Zat Besi Dan Kepatuhan Mengonsumsi Tablet Fe Dengan Kejadian Anemia Pada Ibu Hamil Di Wilayah Kerja Puskesmas Sambung Makmur Tahun 2015. *Jurnal Kesehatan Indonesia*, 6(2).
- Setiawati, N. M. J. (2019). *Gambaran Asuhan Keperawatan pada Ibu Hamil dengan Kesiapan Peningkatan Pengetahuan tentang Anemia selama Kehamilan di Puskesmas Banjar I Tahun 2019* (Doctoral dissertation, Politeknik Kesehatan Kemenkes Denpasar Jurusan Keperawatan).
- Sinaga, E., Lubis, Z., & Siagian, A. (2015). Hubungan Asupan Protein Dan Zat Besi Dengan Status Anemia Pada Ibu Hamil Di Desa Naga Timbul Kecamatan Tanjung Morawakabupaten Deli Serdang Tahun 2014. *Gizi, Kesehatan Reproduksi dan Epidemiologi*, 1(1).
- Sugondo, S. O. (2006). Dalam: Sudoyo AW, Setiyohadi B, Alwi I, Simadibrata M, Setiati S, editor. *Buku ajar Ilmu Penyakit Dalam. Edisi Keempat. Jakarta: Pusat Penerbitan Departemen Ilmu Penyakit Dalam FKUIndonesia, 1941-7.*
- Sujarweni, V. W. (2016). Kupas tuntas penelitian akuntansi dengan SPSS.
- Suryani, S., Ruwayda, R., & Izhar, M. D. (2019). Behavior of Woman Prostitutes for Conseling and Testing of HIV. *Aloha International Journal of Health Advancement (AIJHA)*, 2(5), 101-105.
- Thena, E. L. M. (2018). *Hubungan Dukungan Suami dan Status Gizi dengan Kejadian Anemia pada Ibu Hamil di Wilayah Kerja Puskesmas Ladja Kabupaten Ngada NTT* (Doctoral dissertation, Universitas Airlangga).
- Wibowo, A. (2014). *Metodologi Penelitian Praktis Bidang Kesehatan*, Jakarta: PT. RajaGrafindo Persada.
- Wijayanti, I. T. (2019). Pola makan ibu hamil yang mempengaruhi kejadian KEK di Puskesmas Gabus I Kabupaten Pati. *Jurnal SMART Kebidanan*, 6(1), 5-9.
- Wiyono, S. (2016). *Buku Ajar Epidemiologi Gizi Konsep dan Aplikasi. Jakarta: Sagung Seto, 111-123.*