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Determinant Factors of Anemia in Pregnant Women at Kebomas Health Center

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ABSTRACT

Background: The period of pregnancy is when the body really needs maximum food intake, both physically and spiritually. This study aimed to examine the effect of nutritional intake, trust, and iron consumption compliance on anemia in pregnant women at the Kebomas Health Center.
Subjects and Method: This was cross-sectional study in the Kebomas Health Center Work Area. A sample of 168 pregnant women was selected by simple random sampling. The dependent variable was anemia. The independent variables were nutritional intake, trust, and iron consumption compliance. The data were collected by the questionnaire and analyzed by multiple logistic regression.
Results: Anemia in pregnant women increased with poor nutritional intake (aOR= 19.52; 95% CI= 14.87 to 38.37; p= 0.001), less trust (aOR= 18.37; 95% CI= 13.34 to 36.09; p= 0.001), and inadherent to iron consumption (aOR= 14.82; 95% CI= 10.28 to 27.34; p <0.001).
Conclusion: Anemia in pregnant women increases with poor nutritional intake, less trust, and inadherent to iron consumption.

Keywords: nutrition intake, compliance, anemia.

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BACKGROUND

The period of pregnancy is when the body really needs maximum food intake, both physically and spiritually. Pregnant women are very vulnerable to the decreased ability of the body to work optimally. Pregnant women usually often complain of fatigue, headache, shortness of breath, pale face and various other complaints. All these complaints are an indication that the pregnant woman is suffering from anemia during pregnancy. This anemia can simply be interpreted as a lack of red blood cells in the blood than usual (Chunningham, 2014).

According to WHO, 40% of maternal deaths in developing countries are related to anemia in pregnancy. Most anemia in pregnancy is caused by deficiency and acute bleeding (Syaifuddin, 2012). Based on data from the World Health Organization/ WHO in 2020, it is reported that the prevalence of anemia in pregnant women in the world is

41.8% and the prevalence of anemia in pregnant women in Asia is 48.2% (WHO, 2020). Based on the results of the 2018 Basic Health Research (Riskesdas), the incidence of anemia in Indonesia is still high, there are 48.9% where there is an increase from 2013 where the incidence of anemia in pregnant women is 37.1%, pregnant women who experience anemia include: the average age of 15-24 years is 84.6%, the average age of 25-34 years is 33.7%, the average age of 35-44 years is 33.

Data from the East Java Health Office the number of pregnant women experiencing anemia is 18.2%, while in Gresik Regency the number of pregnant women experiencing anemia is 10.9% (Gresik Health Office, 2020). anemia from 302 pregnant women with high risk (Final Report of the Gresik District Health Office, 2020).

The percentage distribution of Fe tablets at the Kebomas Health Center in 2020 was good at 92.08%, the number of pregnant women at the Kebomas Health Center was 1124 people. However, the prevalence of anemia is still quite high at 16% (Year-End Report of the Gresik District Health Office, 2020). Based on these problems, a preliminary study was conducted by examining the Hb levels of 70 pregnant women in the working area of the Kebomas Health Center. It was found that 12 pregnant women suffered from anemia with an average Hb level of 10 g/dl.

Giving blood-added tablets aims to overcome iron deficiency which can cause anemia in pregnancy. Fe tablet supplementation is one of the most effective prevention and control programs for iron deficiency anemia in increasing hemoglobin levels in pregnant women and can reduce the prevalence of anemia in pregnant women by 20-25%. Fe tablets contain 200 mg of ferrous sulfate and 0.25 mg of folic acid bound to lactose. Pregnant women are recommended to consume at least 90 Fe tablets with a dose of 1 tablet per day in a row for 90 days of pregnancy (Dewi, 2018)

Several researchers revealed that the incidence of anemia in pregnant women was related to the low level of compliance of pregnant women in consuming Fe tablets. The results of Fitri's research (2015) showed that the level of adherence of pregnant women to consume Fe tablets, but only 27.5% were obedient to taking iron supplements. Previous research by Aurora and Mulyani (2017) showed that the results of the level of knowledge of pregnant women about iron deficiency anemia were mostly categorized as adequate, namely as much as 48.3%, most pregnant women were obedient to consuming Fe tablets as much as 59.8%, but the rest was 40.2 % of pregnant women are not obedient (Aurora and Mulyani, 2017).

Common symptoms of anemia, also known as anemic syndrome, are found in iron deficiency anemia when the hemoglobin level is less than 7-8 g/dl. These symptoms include weakness, lethargy, fatigue, dizzy eyes, and ringing in the ears. Anemia is symptomatic if the hemoglobin < 7 g / dl, then the symptoms and signs of anemia will be obvious. On physical examination, the patient was pale, especially in the conjunctiva and the tissue under the nails. Therefore, to take a deeper look at the severity of anemia, a conjunctival examination should also be carried out (Handayani, 2014).

There are many factors that cause pregnant women to experience anemia, not only regarding adherence to the consumption of blood-added tablets, such as nutritional intake factors for pregnant women and family beliefs about culture and taboo taboos in society. Based on the above conditions, the authors are interested in researching the analysis of the determinants of the incidence of anemia in pregnant women in the Public Health Center Work Area.

SUBJECTS AND METHOD

1. Study Design

In this study, the researcher used an observational quantitative design with a cross-sectional approach, which is a study to study the dynamics of the correlation between risk factors and effects, by approaching, observing or collecting data at once (point time approach), meaning that each subject The study was observed only once and measurements were made on the status of the character or variable of the subject at the time of examination. This does not mean that all research subjects are observed at the same time (Soekidjo, 2012). This study will analyze the nutritional intake, trust and adherence to drug consumption on the incidence of anemia in pregnant women in the Kebomas Health Center Work Area

2. Population and Sample

The total population is 168 subject and a sample of 119 subject is taken by using simple random sampling technique.

3. Study Variables

The dependent variable was incidence of anemia.

The independent variables were nutritional intake, trust and obedience.

4. Operational Definition of Variabel

Incident anemia was a medical condition in which the number of red blood cells or hemoglobin is less than normal.

Intake nutrition was Intake of food containing macronutrients and micronutrients.

Trust was trust attribute product, benefit product, and benefit object.

Compliance was ability control self and consuming drug by regular.

5. Study Instrument

The instrument used is a questionnaire sheet to analyze the effect of nutritional intake, trust and adherence to drug consumption on the incidence of anemia in pregnant women in the Work Area of the Kebomas Health Center.

6. Data Analysis

Data analysis using Linear Regression test.

7. Research Ethics

The ethical test has been carried out and the results have passed the ethical clearance test at the IIK Strada Indonesia ethics commission.

RESULTS

1. Variable Characteristics

Table 1 showed that almost half of the subject had good nutritional intake as many as 47 subjects (40.5%). In addition, 42 subjects (36.2%) had adequate nutritional intake. While a number of 27 subject (23.3%) had less nutritional intake.

Table 2 showed that almost half of the subject had good trust as many as 47 subjects (40.5%). In addition, 41 subject (35.5%) have sufficient confidence category. Meanwhile, a number of 28 subjects (24.1%) had less confidence in the category.

Table 3 showed that almost half of the subject had good category compliance as many as 48 subjects (41.4%). In addition, a number of 40 subjects (34.5%) had sufficient category compliance. Meanwhile, a number of 28 subjects (24.1%) had poor compliance category.

Table 4 showed that almost half of the subject did not experience anemia as many as 44 subjects (37.93%). In addition, 41 subjects (35.34%) had mild anemia category. In addition, a number of 24 subjects (20.69%) had moderate category of anemia. Meanwhile, a number of 7 subject (6.03%) experienced severe anemia.

2. Bivariate Analysis

Based on the table above, it is known that almost half of the respondents who had good nutritional intake were found not to have anemia as many as 31 subjects (26.72%). a small proportion of subjects who had good category of trust were found not to have anemia as many as 20 subjects

(17.24%). And a small proportion of respondents who had good compliance were found not to have anemia as many as 26 subjects (22.41%).

Table 1. Sample characteristic based on intake, trust, obedience, and anemia in the Public Health Center Work Area was held on September 1-10 2022

Characteristic	Frequency (N)	Percentage (%)
Intake		
Well	47	40.5
Enough	42	36.2
Not enough	27	23.3
Trust		
Well	47	40.5
Enough	41	35.3
Not enough	28	24.1
Compliance		
Well	48	41.4
Enough	40	34.5
Not enough	28	24.1
Incidence of anemia		
No Anemia	44	37.93
Mild Anemia	41	35.34
Moderate Anemia	24	20.69
Severe Anemia	7	6.03

Table 2. Bivariate analysis of intake, trust, obedience with anemia in the Public Health Center Work Area was held on September 1-10 2022

Independent Variable	Anemia Incidence										p
	Not Anemia		Mild Anemia		Moderate Anemia		Severe Anemia		Total		
Intake	N	%	N	%	N	%	N	%	N	%	
Well	31	26.72	12	10.34	4	3.45	0	0	47	40.57	0.027
Enough	9	7.76	23	19.83	8	6.90	2	1.72	42	36.21	
Not enough	4	3.45	6	5.17	12	10.34	5	4.31	27	23.81	
Trust											
Well	23	19.32	18	15.52	8	6.90	1	0.86	50	42.01	0.030
Enough	18	52.25	14	12.07	9	6.03	4	1.72	41	35.34	
Less	6	5.17	9	7.76	9	7.76	4	3.45	28	24.14	
Compliance											
Well	29	24.36	15	12.93	7	6.03	0	0	51	42.85	0.041
Enough	13	11.21	19	16.38	6	5.17	2	1.72	40	34.48	
Less	5	4.31	7	6.03	11	9.48	5	4.31	28	24.41	

3. Analysis Multivariat

Multivariat analysis is intended to determine the effect of each independent variable on the dependent variable by conducting a linear regression test. Table 3 show that the multiple logistic regression analysis shows that the incidence of anemia in pregnant women increased with less nutritional intake (aOR= 19.52; 95% CI = 14.87 to 38.37; p = 0.001); less trust (aOR= 18.37; 95% CI= 13.34 to 36.09; p= 0.001); and non-compliance with drug consumption (aOR= 14.82; 95% CI= 10.28 to 27.34; p <0.001), and there were statistically significant.

Table 3. Results of logistic regression analysis of the determinants of the incidence of anemia in pregnant women in the Public Health Center Work Area was held on September 1-10 2022 with a total of 116 subjects

Independent Variables	aOR	95% CI		p
		Lower Limit	Upper Limit	
Insufficient nutritional intake	19.52	14.87	38.37	0.001
Trust (Less)	18.37	13.34	36.09	0.001
Compliance (Less)	14.82	10.28	27.34	<0.001
N observation = 116				
-1 log likelihood = 24.98				
Negelkerke R^2 = 80.1 %				

DISCUSSION

1. Prevalence of nutritional status in pregnant women

The results showed that almost half of the subject had good nutritional intake as many as 47 subject (40.5%). In addition, 42 subjects (36.2%) had adequate nutritional intake. While a number of 27 subjects (23.3%) had less nutritional intake.

Food intake affects a person's nutritional status. Poor maternal nutrition before pregnancy or during pregnancy can cause stunted fetal growth (IPM), babies born with low birth weight (LBW), impaired growth and brain development of babies and an increased risk of illness and death (Sekartika 2013). Healthy dietmust be confirmed even before starting pregnancy because maternal nutrition before pregnancy is an important factor that affects fertility, during pregnancy, as well as pregnancy complications (Purnamasari et al., 2016).

A healthy diet is a diet that meets the recommended nutritional adequacy rate (RDA). The recommended nutritional adequacy rate (RDA) or the Recommended Dietary Allowance (RDA) is the level of consumption of essential nutrients that can meet the needs of almost all healthy people (Supariasa et al., 2012). The content of nutrients in various types of food can be seen in the Food Ingredients Composition Table (DKBM) (Atmarita, 2015).

Macronutrients are the largest component of the composition of the diet and function to supply energy and important nutrients that are useful for the needs of cell or tissue growth, maintenance functions and body activities. In the body there are three classes of food substances that can be oxidized to obtain energy, namely proteins, fats and carbohydrates (Garrow, 2014).

Micronutrient status should be determined as part of preparation for pregnancy. In addition to the need for important energy carriers (macronutrients), micronutrient needs are also very important to support the metabolism of macronutrients, especially iron (Fe) (Garrow, 2014).

Iron is a useful part for binding oxygen in erythrocytes. This substance is needed by the body 15-30 mg per day. Adult women have about 2.1 g of Fe, of which 1.6 grams is hemoglobin. Hemoglobin consists of four units: each unit contains a heme group and a protein chain. Iron is found in liver, meat, eggs, nuts, cheese, fish, green vegetables, cereals, and fruits (Waluyo, 2004). Inadequate Fe intake, increased Fe requirements during pregnancy and lactation (physiological changes), and heavy blood loss are the main causes of anemia in women(Almatsier, 2014).

2. Prevalence of trust to health workers in pregnant women

The results showed that almost half of the

subject had good trust as many as 47 subjects (40.5%). In addition, 41 subjects (35.5%) have sufficient confidence category. Meanwhile, a number of 28 subjects (24.1%) had less confidence in the category.

Patient trust is the patient's belief that health workers will act according to the patient's needs and will provide the necessary health care and treatment (Anderson et al., 2016; Thom and Campbell, 1997; Wu et al., 2016). Patient trust is important because it provides the basis for continued collaboration in the future, which has aspects of thinking, feeling and socially oriented. Trust can also be described as a rational choice made based on the recognition of the motivation of others. So patient trust is an important element in the relationship between doctors, nurses, midwives and other health workers in hospitals.

Customer trust in the producer or service provider will increase the value of the relationship, so trust is the main element in assessing the quality of the relationship between service providers and consumers. A low level of trust will affect the greater the risk of consumer movement from one service provider to a similar service provider or better known as turnover. Creating patient trust is far more important than just building complete infrastructure and complete, luxurious and technologically advanced facilities.

Belief in the use of something if it has a negative impact will cause fear by users and even feel traumatized to use and consume drugs given by the health center. The level of knowledge of something but people also prefer to use something will be safe or not the product can be consumed (Wilujeng, 2018).

Trust is an important element in interpersonal relationships, including the relationship between midwives, nurses, doctors and other health workers with patients in health care institutions, especially maternity and pediatric units. Although research results show that the majority of patients continue to trust healthcare professionals to act in their best interests, there is growing concern that rapid and widespread changes in the healthcare system have placed great stress on that trust and may undermine it. Recent concerns about patient trust have sparked recognition of the need for a better understanding of the role of trust in patient-health care relationships.

3. Prevalence of adherence to iron tablet consumption in pregnant women

The results showed that almost half of the subject had good category compliance as many as 48 subjects (41.4%). In addition, a number of 40 subjects (34.5%) had sufficient category compliance. Meanwhile, a number of 28 subjects (24.1%) had poor compliance category.

Becoming a mother is an important phase in a woman's life journey. Pregnancy, childbirth and breastfeeding are a mother's natural cycle and are the happiest and most unforgettable moments of their lives. For this reason, mothers must understand that the health of the baby to be born is very dependent on the health of the mother herself. Pregnant women need to pay attention to their pregnancy by carrying out routine pregnancy checks. Pregnancy check-up is a planned program in the form of observation, education and medical treatment for pregnant women, to obtain a safe and satisfying pregnancy and delivery process (Mufdlilah, 2009).

The non-adherence of pregnant women to take iron tablets can reflect how big the chance of getting anemia. Providing information about anemia will increase if their knowledge increases, it will affect their pregnancy because knowledge plays a very important role so that pregnant wo-

men are obedient to taking iron (Yunita, 2011). According to Wawan and Dewi (2011) the factors that influence knowledge are education, age, information/ mass media, socio-cultural and economic, environment and experience.

According to Wiknjosastro (2010) cited by Asih, anemia in pregnancy is a condition of the mother with hemoglobin levels below 11 g% in the 1st and 3rd trimesters or levels <10.5 g% in the 2nd trimester. Gestational age of 10 weeks and peaks between 32- and 36-weeks' gestation. The opinion of Utomo et al. (2015) compliance is a human behavior that obeys the rules, orders, procedures and discipline. Factors that affect compliance include age, education, knowledge and occupation.

According to Yuanita's (2011) research show that Fe tablets or blood-added tablets are 60 mg of iron and 0.5 mg of folic acid given orally or commonly referred to as oral iron therapy. The iron content in Fe tablets is greater than folic acid, this is because iron deficiency anemia is the main cause of anemia in pregnant women compared to other nutritional deficiencies.

4. Prevalence of anemia incidence in pregnant women at the Kebomas Health Center

The results showed that almost half of the subject did not experience anemia as many as 44 subjects (37.93%). In addition, 41 subjects (35.34%) had mild anemia category. In addition, a number of 24 subjects (20.69%) had moderate category of anemia. Meanwhile, a number of 7 subjects (6.03%) experienced severe anemia.

According to Arisman (2014), anemia is a condition of decreased hemoglobin, hematocrit, and red blood cell counts below the normal values set for individuals. Anemia is a condition in which the levels of hemoglobin, hematocrit, and red blood cells are lower than normal values, as a result of a deficiency of one or several essential food elements that can affect the onset of the deficiency. Anemia is a condition where there is a deficiency in both the number and size of erythrocytes or the amount of hemoglobin so that the exchange of oxygen and carbon dioxide between the blood and tissue cells is limited. Iron deficiency anemia is a condition / condition as a result of the inability of the erythropoiesis system to maintain normal Hb levels, as a result of lack of consumption of one or more nutrients (Beaton and Bengoa in Sulistyoningsih, 2014).

According to Proverawati (2013) Anemia in pregnancy is defined as a decrease in hemoglobin levels of less than 11 g/dl during pregnancy in the 1st and 3rd trimesters and less than 10 g/dl during the postpartum and 2nd trimester. This is known as hydroemia or hypervolemia. However, the increase in blood cells is less than the increase in plasma, resulting in blood thinning. The comparison is as follows: plasma 30%, blood cells 18%, and hemoglobin 19%. The increase in blood flow in pregnancy begins at 10 weeks of gestation and reaches its peak between 32 and 36 weeks of gestation.

Anemia in pregnancy can have harmful effects on the mother and fetus. Anemia in pregnant women can increase the risk of postpartum hemorrhage. If anemia occurs early in pregnancy, it can cause premature labor (Proverawati and Asfuah, 2013).

5. Effect of nutritional intake on anemia in pregnant women

Based on the results of linear regression analysis shows that pregnant women with poor nutrition can increase the incidence of anemia by 19.52 units, and this result is statistically significant (b= 19.52; 95% CI= 14.87 to 38.37; p= 0.001).

Anemia is one of the most common nutritional disorders and is a major nutri-

tional problem in Indonesia. The prevalence of anemia in pregnant women is 14% in developed countries and 51% in developing countries. It is further estimated that 90,000 deaths are due to anemia. The incidence of anemia in Africa, Southeast Asia and the Western Pacific Region has a very high coverage with more than 90% of the population from survey data conducted on children and mothers, especially pregnant women.

Another factor that causes anemia in pregnancy is pregnant women with malnutrition (less nutritional status). Nutrition during pregnancy is very important, not only because the food obtained affects the health of the mother and baby, but also affects breastfeeding later. Energy requirements for a normal pregnancy need to be increased by about 80,000 Kcal over a period of approximately 280 days. This means that you need an extra extra of approximately 300 calories per day during pregnancy (Lubis, 2016).

During the early stages of pregnancy, pregnant women need to consume more food than before, a proper diet as well as a balanced intake of macronutrients. Adequate food intake patterns are very important to support physical health, mental development, fetus, and decrease pregnancy complications (Sulistyowati, 2011). According to researchers, nutritional status reflects the nutritional adequacy of pregnant women. Pregnant women with good nutritional status are the safest conditions for pregnancy and are not at risk of CED, so pregnant women with this nutrition are also not at risk of pregnancy anemia because protein needs are met so that iron absorption is not impaired.

6. Effect of trust on anemia in pregnant women at the Kebomas Health Center

Based on the results of linear regression analysis shows that pregnant women with distrust about trust attribute products, product benefits, and benefit objects can increase the incidence of anemia by 18.37 units, and this result is statistically significant (b = 18.37; 95% CI= 13.34 to 36.09; p= 0.001).

Trust in health workers is the main element in the successful management of patients' illnesses. No matter how modern the medical facilities and how smart the doctors who treat patients are, it will be meaningless if there is no trust. Patient confidence will increase along with the increasing quantity and quality of communication between doctors, nurses, midwives and other health workers with patients and their families. The low intensity of communication between health workers and patients and their families will lead to coercion which negatively affects the patient's level of trust. Patient trust will also increase if there is good communication, on the other hand the hospital's inability to foster good communication with patients, including with their families, allows lowering the level of patient trust.

Patients' trust in health services in health facilities can be seen as the extent to which they believe in the ability of health care providers to meet their expectations, as well as the extent to which they believe in the ability of health care providers. The level of patient confidence in good intentions, service guarantees, and credibility from the hospital leads to the emergence of patient trust in the hospital. In addition to trust in hospitals, trust in doctors, nurses, midwives and other health workers in hospitals is also a factor that influences patient trust in hospitals in general.

Anemia according to (Ahmad, 2016) is defined as a condition where the Hb level is low due to pathological conditions. Iron deficiency is one of the causes of anemia, but not the only cause of anemia. Other

causes are chronic infections, particularly malaria and folic acid deficiency. Meanwhile, Fe deficiency is defined as an abnormal Fe biochemical state with or without anemia. Usually, Fe deficiency is the result of low bioavailability of Fe intake, increased Fe requirements during pregnancy and lactation, and increased blood loss due to intestinal worms or schistosomiasis (Fatmah, 2012). Iron deficiency anemia occurs at the stage of severe anemia which results in the body's low ability to maintain temperature, it can even threaten the patient's life.

Trust is an important element for doctors, nurses, midwives and other health workers in providing their services. Good health services can be measured by the extent to which the level of trust given by the community to service providers and health workers. Pregnant women as consumers can assess the standard of health care practices provided by health facilities, the ethics and professionalism of health care workers in health facilities. If these standards cannot be met, consumers will no longer trust the services provided by health service providers.

7. Effect ofadherence to iron tablet consumption on anemia in pregnant women at the Kebomas Health Center

Based on the results of linear regression analysis shows that pregnant women with adherence to drug consumption can increase the incidence of anemia by 14.82 units, and this result is statistically significant (b = 14.82; 95% CI= 10.28 to 27.34; p <0.001).

The degree of public health can be seen, among others, from the mortality rate, morbidity rate and nutritional status. The 2012 Indonesian Health Demographic Survey showed a significant increase in MMR, which was 359 maternal deaths per 100,000 live births (Central Bureau of Statistics RI 2012). The three main factors that cause maternal mortality are bleeding, hypertension during pregnancy or pre-eclampsia and infection. Bleeding occupies the highest percentage of maternal deaths (28%), anemia and chronic energy deficiency (KEK) in pregnant women are the main causes of bleeding and infection which is the main factor in maternal death.

We can detect health problems during pregnancy with antenatal examinations so that we can prevent iron deficiency anemia during pregnancy through iron supplementation which is vital for the growth and early function of the fetal brain. Giving Fe tablets to pregnant women is also one of the regular procedures for pregnant women services given by midwives in visits 1 to 4. The number of iron supplements given during pregnancy is 90 tablets (Fe3). The records made were that pregnant women received their iron tablets, regardless of whether the tablets were taken or not. In 2016 the coverage of giving Fe-1 tablets at the Pejeruk Health Center was 107.93% and the coverage of Fe-3 tablets was 92.26%.

The results of this study are in line with Putri S's research (2015) which states that there is a relationship between the consumption of Fe tablets and the incidence of anemia in pregnant women in the second and third trimesters (p <0.001). The level of anemia is influenced by adherence to consuming Fe tablets as measured by the accuracy of the number of Fe tablets consumed, the frequency of Fe tablets consumed and the method of consumption of Fe tablets. In addition, Hidayah and Anasari (2012) conducted a study which stated that there was a relationship between the adherence of pregnant women to consuming Fe tablets with the incidence of anemia in Pageraji Village, Cilongok District, Banyumas Regency with p = 0.005.

The study of Salman et al. (2015) stated that the results of statistical analysis

with the chi squer test showed that the value of = 0.003 was below = 0.05, so it can be concluded that there is a significant relationship between the pattern of iron consumption and the incidence of anemia in the work area. Connect Makmur Health Center 2015. Iron is an essential micro-element for the body. This substance is mainly needed in hemopoboesis (blood formation), namely the synthesis of hemoglobin (Hb). Hemoglobin (Hb) is an oxygen that delivers erythrocytes to function important for the body. Hemoglobin consists of Fe (iron), protoporphyrin, and globin (1/3 weight of Hb consists of Fe) Sulistyaningsih, 2011).

8. Effects of nutrition intake, trust and adherence to iron tablet consumption on anemia in pregnant women

Based on the results of multiple linear regression analysis shows that with a p <0.001, then H1 is accepted so it can be concluded that simultaneously there is an effect of nutritional intake, belief and drug consumption compliance on the incidence of anemia in pregnant women in the Kebomas Health Center Work Area with the magnitude of the effect 80.1%.

The period of pregnancy is when the body really needs maximum food intake, both physically and spiritually. Pregnant women are very vulnerable to the decreased ability of the body to work optimally. Pregnant women usually often complain of fatigue, headache, shortness of breath, pale face and various other complaints. All these complaints are an indication that the pregnant woman is suffering from anemia during pregnancy. This anemia can simply be interpreted as a lack of red blood cells in the blood than usual (Chunningham, 2014).

Giving blood-added tablets aims to overcome iron deficiency which can cause anemia in pregnancy. Fe tablet supplementation is one of the most effective prevention and control programs for iron deficiency anemia in increasing hemoglobin levels in pregnant women and can reduce the prevalence of anemia in pregnant women by 20-25%. Fe tablets contain 200 mg of ferrous sulfate and 0.25 mg of folic acid bound to lactose. Pregnant women are recommended to consume at least 90 Fe tablets with a dose of 1 tablet per day in a row for 90 days of pregnancy (Dewi, 2018).

Several researchers revealed that the incide1nce of anemia in pregnant women was related to the low level of compliance of pregnant women in consuming Fe tablets. The results of Fitri's research (2015) showed that the level of adherence of pregnant women to consume Fe tablets, but only 27.5% were obedient to taking iron supplements. Previous research by Aurora and Mulyani (2017) showed that the results of the level of knowledge of pregnant women about iron deficiency anemia were mostly categorized as adequate, namely as much as 48.3%, most pregnant women were obedient to consuming Fe tablets as much as 59.8%, but the rest was 40.2 % of pregnant women are not obedient (Aurora and Mulyani, 2017).

Common symptoms of anemia, also known as anemic syndrome, are found in iron deficiency anemia when the hemoglobin level is less than 7-8 g/dl. These symptoms include weakness, lethargy, fatigue, dizzy eyes, and ringing in the ears. Anemia is symptomatic if the hemoglobin < 7 g / dl, then the symptoms and signs of anemia will be obvious. On physical examination, the patient was pale, especially in the conjunctiva and the tissue under the nails. Therefore, to take a deeper look at the severity of anemia, a conjunctival examination should also be carried out (Handayani, 2014).

AUTHOR CONTRIBUTION

Katmini and Dyan Eka Puspitasari collaborated to develop a proposal. Katmini prepared all research administration documents (research permits) and data collection. Dyan Eka Puspitasari analyzed data, interpret and publish.

FUNDING AND SPONSORSHIP

The study was self-funded.

CONFLICT OF INTERESTS

There is no conflict of interest in this study.

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