The Influenced of Fe Tablet Consumption and Family Support on The Incident of Anemia In Pregnant Women

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Abstract: pregnant women are very susceptible to iron deficiency anemia because in pregnancy the need for oxygen is higher so that it triggers an increase in erythropoietin production. Anemia in pregnancy is a condition of the mother with a hemoglobin level (Hb) <11 gr% in the first and third trimesters while in the second trimester hemoglobin level <10.5gr% in the second trimester. The number of pregnant women who have anemia is 308 pregnant women. The Purpose of this research is to find out the factors that influence anemia in pregnant women. The Method research was conducted in a descriptive analytic cross-sectional design, using Univariate and Bivariate analysis methods. Total population of 116 people and a sample of 54 people, data collection techniques, namely secondary and primary data, were analyzed using univariate and Bivariate. The Results There is an influence between inadequate intake of iron (Fe) (P value = 0,000 <α = 0.05 and Family Support (P value = 0,000 <α = 0.05) with the incidence of anemia in pregnant women. The conclusion from the results of the study is the influence between inadequate intake of iron (Fe) and family support with the incidence of anemia in pregnant women. The Recommendation, to the Puskemsas Suak Ribee in order to provide information to pregnant women to maintain health and eating patterns during pregnancy and explain the factors that cause anemia during pregnancy in mothers and how to avoid anemia during pregnancy.

Keywords: Tablet Fe, family support, anemia

Introduction

The three main factors of quality of life index are education, health and economy. These factors are closely related to the nutritional status of the community which can be described especially in the nutritional status of children under five and pregnant women. The quality of babies born is greatly influenced by the condition of the mother before and during pregnancy. If the nutrients received from the mother are inadequate then the fetus will have unfavorable consequences in the next life (Misaroh and Atikah, 2016).

The four main nutritional problems in Indonesia are Chronic Energy Deficiency (KEK), Iodine Deficiency Disorders (GAKY), Vitamin A Deficiency (VAD), and iron Nutrition Anemia (AGB). One of the nutrition-prone groups targeted by the program is teenagers and pregnant women. Problems that often occur in adolescents and pregnant women are anemia, iron deficiency, and excess or underweight (Sulistyoningsih, 2016).

Anemia in pregnancy is a condition of the mother with hemoglobin (Hb) levels <11 gr% in the first and third trimesters while in the second trimester hemoglobin levels <10.5 gr%. Pregnancy anemia is called "potential danger to mother and child" (potential to endanger the mother and child), therefore anemia needs serious attention from all parties involved in health care (Manuaba, 2010). The cause of anemia in pregnant women is iron deficiency in the body. Iron deficiency anemia is anemia caused by lack of iron, folic acid and vitamin B12 due to inadequate intake or low availability of iron. (Brown LS, 2015).

Pregnant women are very susceptible to iron deficiency anemia because in pregnancy the need for oxygen is higher so that it triggers an increase in erythropoietin production. So that, plasma volume and red blood cells increas. However, an increase in plasma volume

occurs in a greater proportion when compared to an increase in erythrocytes resulting in a decrease in the concentration of hemoglobin (Hemoglobin) due to hemodilution. The effect of anemia in pregnancy can be fatal if it is not immediately overcome which can cause miscarriage, parturition pramture, uterine inertia, prolonged labor, uterine atonyand cause bleeding and shock. While the influence of anemia on the results of conception among them can cause miscarriage, fetal death in the womb, fetal death at birth, high perinatal mortality, prematurity and congenital defects (Cunninggham et al., 2013).

Anemia in pregnancy is called "potential danger to mother and child". The impact of anemia on pregnancy can occur abortion, premature delivery, fetal growth and development obstacles in the womb, easy to occur infection, antepartum hemorrhage, premature rupture of membranes (KPD), when labor can cause His disorder, the first time can last a long time, and occur parturition is displaced, and in the puerperal period uterine subinvolution results in postpartum hemorrhage, eases puerperium infection, and AS1 secretion is reduced (Aryanti et al, 2013).

In many developing countries there are still many countries, especially those living in rural areas who think that it is better to have a large family than a small family. This resulted in many women being forced to marry and give birth at a young age and not stop giving birth before reaching the age of 40 years. According to Unicef parity or the number of children born to mothers is closely related to birth spacing. The higher the parity, the shorter the birth distance. This can make a mother not enough time to restore her body condition. High parity can cause maternal health conditions to decline and often experience less blood so that it adversely affects subsequent pregnancies (Wiknjosastro, 2015).

The World Health Organization (World Health Organization) in 2015 reported that the prevalence of pregnant women with iron deficiency of about 35-75% increased with the increase in gestational age and it was estimated that 30-40% caused anemia due to iron deficiency.3,4. This disorder is characterized by decreased serum iron (SI), increased total iron binding capacity (TIBC), decreased transferrin saturation, decreased serum ferritin, negative bone marrow iron painting and a response to treatment with iron preparations (Florencia, 2016).

Based on the 2013 *Riskesdas* data, the proportion of women of childbearing age at risk of SEZ aged 15-19 years who were 38.5% pregnant and who were not pregnant 46.6%. At the age of 20-24 years, 30.1% were pregnant and 30.6% were not pregnant. In addition, at the age of 25-29 years, 20.9% were pregnant and 19.3% were not pregnant. And at the age of 30-34 years, 21.4% were pregnant and 13.6% were not pregnant. This shows the proportion of WUS (Fertile Women) SEZ risk has increased in the period of 7 years. Sixteen provinces with KEK risk prevalence above national, namely Central Kalimantan, East Java, Banten, South Kalimantan, Aceh, DI Yogyakarta, West Nusa Tenggara, South Sulawesi, Central Sulawesi, North Maluku, Southeast Sulawesi, West Sulawesi, West Papua, Maluku , Papua and East Nusa Tenggara (Aceh Health Profile, 2014).

Based on data from the Aceh Health Service in 2016, the number of pregnant women was 117,923. The number of pregnant women who have anemia and get blood booster vitamins is 93,783 tablets of FE (Aceh Health Office, 2016). Based on data from the Aceh Health Service in 2017, the number of pregnant women is 128,525. The number of pregnant women who experience complications during pregnancy is 25,705. The number of pregnant women who have anemia and get blood boosting vitamins is 108,183 FE1 tablets and 98,876 pregnant women who get FE3 tablets (Aceh Health Department, 2017).

Based on data from the West Aceh Health Department in 2016, the number of pregnant women was 4537. The number of pregnant women who experienced complications during pregnancy was 1,076. The number of pregnant women who have anemia and get blood booster vitamins is as many as 4,050 FE1 tablets and 3,759 pregnant women who get FE3

tablets (West Aceh Health Department, 2016). Based on data from the West Aceh Health Department in 2017, the number of pregnant women is 4,547. The number of pregnant women experiencing pregnancy problems is 1,511. The number of pregnant women who have anemia and get blood-boosting vitamins is 4,136 FE1 tablets and 3,978 pregnant women who get FE3 tablets (West Aceh Health Department, 2017).

Based on data from the 2016 Suak Ribee Health Center, the number of pregnant women is 396. The number of pregnant women who have complications during pregnancy is 39. The number of pregnant women who have anemia and get blood-boosting vitamins is 396 tablets FE1 and 354 pregnant women who get tablets FE3 (Suak Ribee Health Center, 2016). In 2017, the number of pregnant women was 406, of which 161 were trimester I pregnant women, 120 were pregnant trimester II II and 125 pregnant womentrimester III. The number of pregnant women who experience complications during pregnancy is 37. The number of pregnant women who have anemia and get blood-boosting vitamins is 286 (70.4%) pregnant (Suak Ribee Health Center, 2017). In 2018, the number of pregnant women was 429, of which 219 were trimester I pregnant women, 98 were trimester II pregnant women and 73 were trimester III pregnant women. The number of pregnant women who experience complications during pregnancy is 43. The number of pregnant women who have anemia and get blood-boosting vitamins is 308 (71.7%) pregnant women (Suak Ribee Health Center, 2018).

Based on a preliminary study conducted in the work area of the Suak Ribee Health Center in Johan Pahlawan District, West Aceh Regency of 6 pregnant women who visited the Suak Ribee Health Center, the results of interviews with 2 people stated that mothers do not always consume iron (Fe) regularly because they forget and afraid to consume too much iron (Fe) so the mother has anemia. Furthermore, one other mother said that mothers often experience pain in the midriff and experience DM during pregnancy so often consume drugs during pregnancy.Furthermore 1 person stated that the mother did not know about the causes of anemia during pregnancy so the mother did not know how to prevent anemia. Then 2 mothers stated that mothers did not often check their contents to the public health center and only checked the content at 2 months of gestation because no family wanted to take the mother to the public health center so that the mother never received vitamins or iron (Fe) so that she was anemic when pregnant.

Danger of anemia in pregnant women during labor: interruption of pushing force, Stage I can last for a long time and parturition occurs, Stage II lasts long so it can be tiring and often requires obstetric surgery, Stage III can be followed by retention of the placenta, and postpartum hemorrhage due to uterine atony, Stage II lasts long so it can be tiring and often requires obstetric surgery, Kala III can be followed by placental retention, and postpartum hemorrhage due to uterine atony, Stage IV can occur secondary postpartum hemorrhage and uterine atony. In the puerperium: Uterine subinvolution occurs which results in postpartum hemorrhage, eases puerperium infection, decreased ASI expenditure, sudden cosmetic decompensation after delivery, puerperal anemia, mammary infection is easy (Saifudin, 2014).

The danger of anemia in the fetus, placental and fetal growth is disrupted due to a decrease in hemoglobin which is caused because during pregnancy 50% blood volume rises from 4 to 6 L, plasma volume increases slightly which causes a decrease in hemoglobin concentration and hematocrit value. This reduction will be smaller in pregnant women who consume iron. The increase in blood volume serves to meet the perfusion needs of the placenta and to provide reserves during blood loss during childbirth. During uterine, placental and fetal pregnancy requires adequate blood flow to meet nutritional needs (Smith et al., 2015).

The impact of anemia for premature birth babies and low birth weight babies, which is 38.85%, is the cause of infant death. While other causes that occur quite a lot are the occurrence of lack of oxygen in the uterus (hypokaintaintrauterus) and respiratory failure spontaneously and regularly at birth or sometime after birth (asphyxia born), which is 27.97%. This shows that 66.82% of perinatal deaths are influenced by the condition of the mother during childbirth. If seen from the causes of illness, the most obstetric cases in 2005 were due to complications of pregnancy, childbirth and other childbirths of 56.09% (Ministry of Health Republic of Indonesia, 2013).

Research Methods

Types of Research and Design

This research is analytic with cross-sectional approach, where the independent and dependent variables are examined at the same time as the study is conducted (Notoatmodjo, 2010), which aims to determine the factors that influence the incidence of anemia in pregnant women in the working area of Suak Ribee Public Health Center Johan Pahlawan, West Aceh Regency.

Location of Research and Time of Research

This research has been carried out in the Work Area of the Suak Ribee Health Center in Johan Pahlawan District, West Aceh Regency. When the research was conducted on October 31 - November 19, 2018.

Population and Sample

Population

In this study, population were all pregnant women in the Work Area of the Suak Ribee Sub-District of Johan Pahlawan, West Aceh District in 2018, amounting to 116 pregnant women, gestational age trimester II and III.

Sample

According to Notoatmodjo (2010), the method of sampling in this study was purposive sampling, namely taking respondents intentionally, which means that the researchers determined their own samples taken based on certain considerations with the Slovins formula. So the total number taken is as many as 54 pregnant women. Sampling is done by random clustering, which is taking samples by visiting pregnant women both at home or those researchers meet in the field when the study is conducted.

Results and Discussion

Result

Respondents Characeteristic

Respondents Age

Table 1. Frequency of Distribution by Age Respondents Pregnant women

Respondents Age	Frequency	Percentage (%)
21-25 years old	6	11,1
26-30 years old	10	18,5
31-35 years old	4	7,4
36-40 years old	14	25,9
41-45 years old	10	18,5

>45 years old	10	18,5
Total	54	100

source: primary data 2019

Education

Table 2. Frequency of Distribution Based on Education of Respondents Pregnant women

Education	**Frequency**	**Percentage (%)**
Primary School	29	53,7
Junior High School	8	14,8
High School	17	31,5
Total	54	100

Source: primary data 2019

Pregnancy Trimester

Table 3. Frequency of Distribution Based on Pregnancy Trimester Respondents Pregnant women

Education	**Frequency**	**Percentage (%)**
Trimester II	23	42,6
Trimester III	31	57,4
Total	54	100

Source:primary data 2019

Univariate Analysis

Iron Assumptions

Table 4. Frequency of Distribution Based on Iron Assumptions

Iron Assumptions	**Frequency**	Percentage**(%)**
Yes	26	48,1
None	28	51,9
Total	54	100

Source: primary data 2018

Family Support

Table 5. Frequency of Distribution Based on Support of Respondents' Family as Pregnant Women

Family Support	**Frequency**	**Percentage (%)**
Good	23	42,6
Not Good	31	57,4
Total	54	100

Source : primary data 2018

Anemia in Pregnant Women

Tabel 6. Frequency of Distribution Based on Anemia in Pregnant Women

Anemia in Pregnant Women	Frequency	Percentage (%)
Yes	30	55,6
None	24	44,4
Total	54	100

Source : primary data 2018

Bivariate Analysis

Effects of Iron with Anemia in PregnantWomen

Table 7. Effect of Iron with Anemia in Pregnant Women

Iron	Anemia in Pregnant Women				Total		P. Value	PR
	Yes		None					
	f	%	f	%	F	%		CI
Yes	7	26,9	19	73,1	26	100	0.000	3,0
None	23	82,1	5	17,9	28	100		(1,5
								5,8

Source :primary data 2018

Influence Of Family Support with Anemia On Pregnant Women

Tabel 8. Influence of Family Support with Anemia

Family Support	Anemia in Preganant Women				Total		P. Value	PR
	Yes		None					
	f	%	f	%	F	%		CI 95%
Good	4	17,4	19	82,6	23	100	0.000	4,823
Not Good	26	83,9	5	16,1	31	100		(1,583-5,882)

Discussion

Influence of iron with the incidence of anemia in pregnant women

The chi square test's result which was showed the *p* value smaller than 0,05 are described the influence between incidence of anemia in pregnant women with consuming iron. From the results of PR 3.051, it can be concluded that responding to iron has a strong chance of 3.051 times with the incidence of anemia in pregnant women in the work area of the Suak Ribee Public Health Center in Johan Pahlawan Subdistrict, West Aceh Regency.

Based on observations in the field the researchers found that respondents who get iron and consume iron pills given fewer officers who experience anemia during pregnancy because the mother is alwaysconsume iron pills regularly in accordance with the instructions of the doctor or health worker, this makes the mother avoid anemia, in addition, the mother also rests regularly and consumes nutritious food according to the instructions of the health worker. While mothers who consume nutrients and experience anemia because although women consume nutrients regularly, but mothers lack of rest and rarely consume vegetables and fruits so that makes mothers experience anemia during pregnancy.

Mothers who do not consume iron and experience anemia due to routine mothers who work outside the home and lack of rest and do not consume iron make the condition of mothers quickly experience anemia where mothers in pregnancy are susceptible to fatigue and anemia. Then mothers who do not consume iron and do not experience anemia because mothers during pregnancy always consume nutritious foods such as vegetables, fruits, milk

and other nutritious foods andgood for pregnant women. In addition, mothers also always maintain regular breaks. This makes the mother's condition always awake and avoid anemia during pregnancy.

A mother who is already pregnant with iron deficiency cannot provide enough iron to her baby for the first few months. Although the baby gets milk from his mother, but milk is not a food ingredient that contains a lot of iron because iron is needed to prevent a child suffering from anemia (Siregar, 2010).

The results of this study are supported by research Horia (2018) results of anemia in pregnant women is largely because pregnant women do not consume blood tablets regularly. Third trimester pregnant women in Musi Banyuasin Regency who consume TTD in the morning after eating more have iron nutrition anemia 82.9% and p value <0.05 (0.034) which means there is a relationship between the time of TTD consumption to the incidence of maternal iron anemia. third trimester pregnant. The right time to consume Fe tablets is night.

Gilang (2016) The results showed that most pregnant women were not compliant in consuming Fe tablets which was 56.6%. Chi Square test results showed that neither knowledge nor attitude had any effect on the compliance of pregnant women in consuming Fe tablets as a cause of anemia with p value> 0.05. Public Health Center as the nearest health service place to the community needs to provide information on the importance of consuming Fe tablets for pregnant women through health promotion activities through Integrated Healthcare Center, ANC, pregnant mother classes and health promotion activities that have been routinely carried out.

Effects of Family Support on the Occurrence of Anemia in Pregnant Women

From the chi square test results obtained value of Pvalue = 0,000 and this is smaller than α = 0.05 (Pvalue = 0,000 <α = 0.05) so that it is explained there is an influence between family support and the incidence of anemia in pregnant women in the work area of the Suak Public Health Center Ribee in Johan Pahlawan sub-district, West Aceh Regency. From the results of PR 4,823 it can be concluded that the respondent's family support has a strong opportunity that is equal to 4,823 times with the Anemia Occurrence in Pregnant Women in the Work Area of Suak Ribee Public Health Center in Johan Pahlawan District, West Aceh Regency.

Based on observations in the field the researchers found that respondents who received good family support and less anemia because families always pay attention to mothers during pregnancy where families such as parents-in-law and mother of respondents maintain the mother's diet during pregnancy, besides that mothers are also reminded to always check the contents regularly to the health center. While mothers who have good family support and anemia because they have DM and women must consume drugs, other than that, women do not consume iron in ethanol even though the family has warned.

Furthermore, the mother has poor family support and the mother has anemia because her family does not always give full attention to the mother during pregnancy, this is due to the mother no longer living with the family so that the family cannot monitor the mother during pregnancy within 24 hours. the family only asks for news through his cellphone and reminds the mother to maintain health, while the mother does not maintain her diet, and does not consume iron regularly.

A family is two or more individuals who join because of blood relations, marriage or adoption who live in one household, interacting with each other in their role to create and maintain their culture (Effendy, 2012). The family is also defined as a bond or fellowship of life on basis of marriage between adults of different types who live together or a woman who is live alone without children (Suprajitno , 2004). According to the Indonesian Ministry of Health in 1988, quoted by Effendy (2012), the family is the smallest unit of society consisting

of the head of the family and several people who gather and live in a place under one roof in a state of interdependence.

Erna Research. 2013. From the Chi Square test results obtained p value 0.046 (p value <know. This is very influential μ 0.05) statistically means there is an influence between maternal behavior in adhering to the family's advice on consuming nutritious foods toanemia in women during pregnancy at the Jatilawang Health Center in Banyumas Regency.

Mujib Research (2012) There is a significant influence between the level of knowledge of the incidence of anemia in pregnant women in Pamekasan Public Health Center with a level of sig 0, 006 (≤0.05), there is a significant influence between the factors of maternal attitudes towards the incidence of anemia in pregnant women at the Pamekasan Public Health Center patients with sig 0, 016 (≤0.05), there is a significant influence between family support factors on the incidence of anemia in pregnant women at the Pamekasan Public Health Center patients with sig level of 0.007 (≥0.05).

Conclusion

1. There is an influence between inadequate assumption of iron (Fe) with the incidence of anemia in pregnant women (P value = 0,000 <α=0.05).
2. There is an influence between family support and the incidence of anemia in pregnant women (P value = 0,000 <α=0.05).

Suggestion

1. It is expected that pregnant women should consume iron according to the advice of health workers, and be more careful in consuming drugs if the mother has an illness by asking the schedule of drug consumption to the officer and its effect on anemia, besides that the mother must also find out about the causes of anemia in pregnant women so that mothers can avoid these things, and finally make family recommendations that give good attention to the mother during pregnancy.
2. To the Suak Ribee Public Health Center in order to provide information to pregnant women to maintain health and eating patterns during pregnancy and explain the factors that cause anemia during pregnancy in mothers and how to avoid anemia during pregnancy.
3. To the West Aceh District Health Department to be able to promote occupational health, especially regarding health to pregnant women and its prevention so that the mother's condition during pregnancy remains stable and good.

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