FACTORS AFFECTING ANEMIA IN PREGNANT WOMEN WITH SECOND AND THIRD TRIMESTER OF PREGNANCY AT TIRON COMMUNITY HEALTH CENTER, KEDIRI DISTRICT, EAST JAVA

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ABSTRACT

Background: Anemia is a pathologic condition produced by a decrease in red blood cell mass or a decrease in the amount of hemoglobin. The initial survey carried out in the Tiron Puskesmas work area in the June-July 2019 period was still a high incidence of anemia in the Tiron Puskesmas Kediri Regency work area (60%). This study aimed to analyze factors affecting anemia in pregnant women with the second and third trimester of pregnancy at tiron community health center, Kediri district, East Java.
Subjects and Method: A cross-sectional study was carried out at Tiron community health center, Kediri, East Java, from June to July 2020. A sample of 49 2nd and 3rd trimesters of pregnant women was selected by purposive sampling. The dependent variable was anemia. The independent variables were age, iron tablet intake, ANC visit. The data were collected by questionnaire and analyzed by multiple logistic regression.
Results: Anemia in pregnant women decreased with older age (OR= 0.08; 95% CI = 0.01 to 1.20; p = 0.068). Anemia in pregnant women increased with irregular iron tablet intake (OR= 18.45; 95% CI = 2.77 to 123.10; p = 0.003) and irregular ANC visit (OR = 1.85; 95% CI = 1.05 to 38.18; p = 1.87).
Conclusion: Anemia in pregnant women decreases with older age. Anemia in pregnant women increases with irregular iron tablet intake and irregular ANC visit.

Keywords: anemia, hemoglobin levels, pregnant women

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BACKGROUND

Anemia is a condition in which the hemoglobin concentration is below normal limits. Pregnant women are a group at risk of experiencing anemia (Lestrina et al., 2015). Anemia is an indicator for poor nutrition and poor health. Pregnant women who experience anemia have the potential to increase the Maternal Mortality Rate (MMR) (East Java Province Health Office, 2017).

According to the 2018 RISKESDAS, an increase in the incidence of anemia in pregnant women in Indonesia from 2013 of 37.1% and increased in 2018 to 48.9%, and anemia in pregnant women was the highest, namely 84.6% experienced by pregnant women aged 15-24. years (Riskesdas 2018, 2018). The initial survey conducted in the Tiron Health Center work area in the June-July 2019 period of 20 pregnant women, 12 (60%) pregnant women experienced anemia and 8 (40%) ordinary, and this shows that there is still a high incidence of anemia in Tiron Health Center work area Kediri Regency.

Government efforts in preventing and overcoming anemia by providing Fe tablets prioritized to pregnant women, but the prevalence of anemia in pregnant women is still high (East Java Province Health Office, 2017). The effects of

https://doi.org/10.26911/the7thicph-FP.04.02

pregnancy weakness are different from minor complaints. It can interfere with the progress of the pregnancy (fetus removal, puberty or delayed work), obstructed work measures (idle, weakness, tedious work, weak death), and confusion during the puerperium (Sub-health). Uterine involution, prevent pollution and stress, avoid low milk production, fetal problems (premature termination), immaturity, microscopy, LBW and perinatal mortality). Anemia in pregnant women also increases the risk of maternal death. The direct causes of death for pregnant women are bleeding, eclampsia, prolonged labor, complications of abortion, and infection, but the risk of death increases if the mother suffers from anemia (Ari, 2015).

In this context, researchers interested in researching any factors affecting the incidence of anemia among pregnant women in trimester 2 and 3 in the working area health centers Kediri Tiron?.

SUBJECTS AND METHODS

1. Study Design

A cross-sectional study was carried out at Tiron community health center, Kediri, East Java, from June to July 2020.

2. Population and Sample

The population in this study were pregnant women in the 2nd and 3rd trimesters. This study sample was 49 pregnant women in the 2nd and 3rd trimesters with the sampling technique using *purposive sampling*.

3. Study Variables

The dependent variable was anemia. The independent variables were age, iron tablet intake, ANC visit.

5. Study Instrument

An instrument in this study using a questionnaire.

6. Data Analysis

This study uses primary data, and the survey results are analyzed using *the Logistic Regression Test*.

RESULTS

1. Sample Characteristic

Based on the Table. 1 shows that 73% are not at risk, 43% have secondary education, 47% have a housewife job, 53% consume iron irregularly, 67% parity are multigravida and 71% do regular ANC.

2. The result of multivariate analysis

Based on the table. 2 indicates anemia in pregnant women decreased with older age (OR = 0.08; 95% CI = 0.01 to 1.20; p = 0.068). Anemia in pregnant women increased with irregular iron tablet intake (OR = 18.45; 95% CI = 2.77 to 123.10; p = 0.003) and irregular ANC visits (OR = 1.85; 95% CI = 1.05 to 38.18; p = 1.87).

DISCUSSION

The results showed that the factors that influenced anemia in pregnant women in the second and third trimesters were Fe consumption with a p-value of 0.003 and an OR of 18.450. This shows that Fe consumption affects 18.450 of experiencing anemia in pregnant women. The second influencing factor is Antenatal Care's regularity with a p-value of 0.044 and OR of 6.342. This shows that Antenatal Care has an effect of 6.342 experiencing anemia in pregnant women.

This is in line with research conducted in Banyumas, which states a relationship between Fe consumption compliance with the incidence of anemia in pregnant women, which shows a p-value of 0.005 (Anasari and Tri, 2012). Anemia in pregnancy is a condition of mothers with hemoglobin levels below 11 g% in the first and third trimester

https://doi.org/10.26911/the7thicph-FP.04.02

or <10.5 g% levels in the second trimester (Prawirohardjo, 2012). Physiologically, the cause of anemia in pregnant women is hemodilution (pregnancy hydremia), which can cause physiological anemia in pregnant women. The body goes through significant changes during pregnancy.

The amount of blood increases by about 20-30%, so that it requires an increased supply of iron and vitamins to make hemoglobin (Rismalinda, 2015). According to Nutritional Adequacy Figures in 2013, the need for Fe in pregnant women increased in the 2nd trimester, increased by 9 mg and in the 3rd trimester, increased by 13 mg (Kemenkes RI, 2013). So fe is very important for pregnant women and must be consumed every day. Iron in ferrous form is easily absorbed. In Indonesia, commonly used is ferrous sulfate and this substance is 20% easily absorbed (Fatimah et al., 2011; Harvey et al., 2007).

Table 1.Factors Affecting Anemia in Pregnant Women

Variable	Category	Incidence of Anemia				Total	%	p value
		Not Anemia	%	Anemia	%			
Age	Not at Risk	21	43	15	31	36	73	0.025
	Risk	12	24	1	2	13	27	
Education	Basic	7	14	5	10	12	24	0.506
	Intermediate	16	33	5	10	21	43	
	High	10	20	6	12	16	33	
Job	IRT	13	27	10	20	23	47	0.209
	Private	17	35	6	12	23	47	
	Self-employed	3	6	0	0	3	6	
Fe Consumtion	Irregular	24	49	2	4	26	53	<0.001
	Regular	9	18	14	29	23	47	
Parity	Primigravida	13	27	3	6	16	33	0.148
	Multigravida	20	41	13	27	33	67	
ANC	Regular	5	10	9	18	14	29	0.003
	Irregular	33	67	16	33	49	100	

Table 2 Factors Affecting Anemia in Pregnant Women

Variable	B	SE	Wald	P Value	OR	CI 95%	
						Lower	Upper
Age	-2.49	1.36	3.33	0.068	0.08	0.01	1.20
Consumption Fe	2.92	.97	9.06	0.003	18.45	2.77	123.10
ANC	1.85	.95	4.07	0.044	6.34	1.05	38.18

The second influencing factor is Antenatal Care's regularity with a p-value of 0.044 and Exp B 6,342, which shows that Antenatal Care affects 6,342 to experience anemia in pregnant women.

This is in line with research conducted in Nigeria, which states that Antenatal Care is essential to prevent or cure anemia because ANC is early detection to prevent anemia (Ikeanyi and Ibrahim, 2015). WHO recommends starting ANC as early as the first trimester of pregnancy for optimal benefits from prenatal care (Villar and Bergsjo, 2002).

https://doi.org/10.26911/the7thicph-FP.04.02

Fe is indeed essential for pregnant women because there are many cases of anemia due to iron deficiency. Therefore the need to consume fe especially during pregnancy is also necessary for regularity in carrying out Antenatal Care because if pregnant women regularly perform antenatal care So as early as possible if any signs of problems in pregnancy can be detected so that if antenatal care is carried out periodically and consumption of Fe is carried out regularly every day, anemia will be avoided.

There is a relationship between consumption of Fe and regularity of ANC with anemia in pregnant women in trimester 2 and 3. It is expected that regular ANC can detect anemia, and pregnant women are more compliant in consuming Fe.

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