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## Factors Related To Nutrition With Pregnant Women Anemia Incidence

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### **Abstrak**

*Anemia is a medical condition where the number of red blood cells or hemoglobin is less than normal. Normal hemoglobin levels are generally different in men and women. For men anemia is usually defined as a hemoglobin less than 12.0 gram/ 100 ml. According to world health organization (WHO), the prevalence of anemia in pregnant women in the world is 35-37 %. Based on the research results of basic health ( Riskesdas) the incidence of anemia in indonesia is still increasing, there are 48,9 % of pregnant women who have anemia. This study aims to determine the factors related to the nutrition of pregnant women with the incidence of anemia this type of cross-sectional design research is to determine the factors associated with the incidence of anemia with a sample of 40 respondents. The sampling technique uses total sampling, collecting data in the form of observation sheets and scales to assess the increase in body weight. Statistical tests using the chi-square test. The results of statistical test analysis show that the age of P-value =0,000, parity P-value=0,000, education level P-value=0,001, nutritional status P-value =0,000, the conclusion of this study is that all four variables have and association with anemia suggestions in this study are expected so that pregnant women can understand and understand the causes of anemia*

**Keywords : Anemia, Pregnant women, Factors of Occurrence**

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## **INTRODUCTION**

Anemia is a disease in which the red blood cells are below normal. Hemoglobin in men is below 13.5 g/100, and in women below 12.0 g/100 ml. This source depends on the reference laboratory used (Proverawati 2015).

Diseases that endanger pregnant women, one of which is anemia both during childbirth and during the puerperium. Many dangers that may occur if anemia has attacked during pregnancy include swelling, uterine atony, shock, prematurity, uterine inertia. The factors related to anemia include age, education, parity, pregnancy interval, nutritional status (Deprika, 2017)

The prevalence of anemia in pregnant women is influenced by the number of pregnancies that produce fetuses that can live outside the womb. In addition, not consuming Fe tablets is also associated with the occurrence of anemia in pregnant women. In general, malnutrition in pregnant women is affected by a lack of iron in food and chronic diseases such as tuberculosis. (Angraini, 2018).

Hemoglobin A pregnant woman is considered anemic if her laboratory values are  $<$ ; 10 grams and a history of fatigue, frequent dizziness, lightheadedness and vomiting, which is more severe in young pregnancies (Sulistyoningsih, 2015). Anemia during pregnancy has a negative impact on the mother and fetus. Because it can cause infection and bleeding. Deficiency of iron and folic acid is usually the cause of anemia in pregnant women to meet the needs of the body and the fetus.

According to the World Health Organization (WHO), the proportion of anemia is around 35-75% in pregnant women with iron deficiency and continues to increase based on gestational age. In developing countries anemia is associated with maternal mortality caused by iron deficiency and acute bleeding. Delivery outcomes amount to 12-28% in pregnant women suffering from anemia 30% extrauterine death and fetal death

Based on the results of the 2018 Basic Health Survey (Riskesdas), the attainment of the incidence of anemia in Indonesia continues to increase, namely 48.9%. Based on anemia studies conducted in four districts/cities in North Sumatra, namely Medan City, Deli Serdang, Binjai, and Langkat, efforts to reduce the prevalence of anemia include giving Fe tablets during pregnancy.

This increase did not reach the national target of 80%. Not all districts/cities allocate budgets for the purchase of Fe tablets, so that becomes one of the challenges that makes the achievement of Fe coverage less than optimal and the expenditure of Fe tablets from the provincial level in Central Sumatra and North Sumatra cannot meet the needs of Fe in all districts/cities (Dinas for Health Research and Development, 2016).

According to Husin (2016), mothers who give birth more than twice are at risk of developing anemia, which is 8-9 times. The results of Herry Suswanti Djarot and Siti Nurjanah's research showed that 69.2% of pregnant women with parity at the Bangayu Health Center, Genuk District, Semarang City suffered from anemia.

Based on an initial survey conducted by Delitua Health Center researchers in March-May on 7 pregnant women visited, it was found that 3 of them were less than 2 years old and 4 of them did not consume Fe tablets every day and no one knew about it.

Based on the incident background, the author is interested in conducting research with the title "Factors related to the nutrition of pregnant women with the incidence of anemia at the Delitua Health Center, Delitua District, Deli Serdang Regency in 2019"

## RESEARCH METHODS

This study used a cross sectional design, the sampling method used total sampling and the number of respondents was 40. The bivariate analysis used was Chi-Square and the tool used was observation data.

## RESULTS AND DISCUSSION

### Univariate Analysis Test Results

The general description of respondents based on general characteristics is shown in the table below

**Table 1 Frequency Distribution of Respondents by Age of Pregnant Women**

No	Age	Frequency	Percentage (%)
1	> 30	21	52,5
2	<30	19	47,5
Total		40	100.0

The distribution of respondents based on age mostly shows that respondents aged >30 years are 21 people (52.5%) and respondents aged <30 years are 19 people (47.5%)

**Table 2 Frequency Distribution of Respondents by Age of Pregnant Women**

No	Parity	Frequency	Percentage (%)
1	>3	20	50.0
2	<3	20	50.0
Total		40	100.0

Distribution of respondents based on parity, most of the respondents with parity > 3 were 20 people (50.0%) and parity respondents <3 were 20 people (50.0%)

**Table 3. Frequency Distribution of Respondents Based on Education of Pregnant Women**

No	Education	Frequency	Percentage(%)
1	Low	22	55.0
2	Tall	18	45.0
	Total	40	100.0

The distribution of respondents based on education was mostly 18 people with higher education (55.0%) and the number of respondents with low education was 22 people (45.0%).

**Table 4 Frequency Distribution of Respondents Based on the Nutritional Status of Pregnant Women**

No	Nutritional status	Frequency	Percentage (%)
1	Abnormal	21	52.5
2	Normal	19	47.5
	Total	40	100.0

Distribution of respondents based on nutritional status, most of the respondents with normal nutritional status were 19 people (52.5%) and the number of respondents with abnormal nutritional status was 21 people (47.5%).

**Table 5. Frequency Distribution of Respondents Based on Anemia in Pregnant Women**

No	Anemia	Frequency	Percentage (%)
1	Anemia	21	52.5
2	not anemic	19	47.5
	Total	40	100.0

The distribution of respondents based on anemia was 21 people (52.5%) and the number of respondents who were not anemic was 19 people (47.5%).

### Bivariate Test Results

Bivariate analysis is intended to see whether there is a significant relationship between the independent variable and the dependent variable.

Table 6. Factors Associated Between Age and Anemia Incidence

No	Age	Anemia events				Amount		p-value
		Anemia		not anemic		Amount		
		F	%	F	%	F	%	
1.	<30 years	17	81,0	4	19,0	21	100,0	0.000
2	>30 years	4	21,1	15	78,9	19	100,0	
Total		21	52,5	19	47,5	40	100	

Table 4.6 shows that of the 40 respondents, most of the mothers aged <30 years were 21 people who had anemia, 17 people (81.0%) and who did not have anemia, 4 people (21.1%), and some women who were aged >30 years are 19 people who have anemia 4 people (21.1%) and who do not have anemia 15 people (78.9%) with a p-value = 0.000

Table 7. Factors Associated Between Parity and Anemia Incidence

No	Parity	Anemia events				Amount		p-value
		Anemia		Not anemic		Amount		
		F	%	F	%	F	%	
1.	>3	17	85,0	3	15,0	20	100,0	0,000
2	<3	4	20,0	16	80,0	20	100,0	
Total		21	52,5	19	47,5	40	100,0	

Table 4.7 shows that of the 40 people, most of the mothers with parity >3 were 20 people who had anemia, 17 people (85.0%) and those who did not have h, with parity <3, as many as 20 people who had anemia, 4 people (20.0% ) and 16 people (80.0%) who did not have anemia with a p-value = 0.000

Table 8. Factors Associated Between Education and Anemia Incidence

No	Education	Anemia events				Amount		p-value
		Anemia		Not anemic		Amount		
		F	%	F	%	F	%	
1.	Low	17	77,3	5	22,7	22	100,0	0,001
2	Tall	4	22,2	14	77,8	18	100,0	
Total		21	52,5	19	47,5	40	100,0	

Table 8. shows that out of 40 people, most of the mothers with low education were 22 people who had anemia, 17 people (77.3%) and who did not have anemia, 5 people (22.7%) and some mothers with higher education, 18 people who 4 people (22.2%) had anemia and 14 people (47.5%) did not have anemia with a p-value = 0.001

**Table 9. Factors Associated Between Nutritional Status and Anemia Incidence**

No	Nutritional status	Anemia events				Amount		p-value
		Anemia		Not anemic		F	%	
		F	%	F	%			
1.	abnormal	21	100,0	0	0,0	21	100,0	0,000
2	Normal	0	0,0	19	100,0	19	100,0	
Total		21	52,5	47,5	100,0	40	100,0	

Table 9. shows that out of 40 people, most of the mothers with abnormal nutritional status were 21 people who had anemia, 21 people (100.0) and some mothers with normal nutritional status, 19 people who did not have anemia, 19 people (100.0%) with a p-value = 0.000

**Discussion**

**1. The relationship between age and the incidence of anemia**

Of the 40 respondents, the majority of mothers aged <30 years were 21 people who had anemia, 17 people (81.0%) and those who did not have anemia, 4 people (21.1%), and some mothers aged >30 years were 19 people who had anemia 4 people (21.1%) and who did not have anemia 15 people (78.9%) with a p-value = 0.000

Age is a risk factor for anemia, especially in pregnant women, which is related to the female reproductive system. Age is an indicator of maturity in any experience. Age has a significant effect on maternal adherence to Fe (iron) tablets. The younger the pregnant woman, the less willing the mother is to accept the pregnancy, which has an impact on the emergence of pregnancy disorders, for example anemia.

The results of this study are in line with Amirrudin's research (2015) which showed that there was a significant relationship between age and the prevalence of anemia in pregnant women

**2. The relationship between parity and the incidence of anemia**

Out of 40 people, most of the mothers with parity >3 were 20 people who had anemia, 17 people (85.0%) and those who did not have anemia were 3 people (15.0%) and some of the mothers who had parity <3 were 20 people who had anemia 4 people (20.0%) and who did not have anemia 16 people (80.0%) with a p-value = 0.000

Parity is one of the factors that can influence the occurrence of anemia in pregnant women.

Parity of 2-3 births is classified as low risk parity, while parity of 1 or high risk parity with high mortality >3 births is classified as. Prevention of high parity can be prevented with family planning. Salmarianty (2016) also studied the same thing where women who are pregnant or giving birth still experience anemia because it is caused by a lack of iron during pregnancy.

**3. The relationship between education and the incidence of anemia**

Based on research conducted at the Delitua Public Health Center, it was found that out of 40 people, most of the mothers with low education were 22 people who had anemia, 17 people (77.3%) and who did not have anemia, 5 people (22.7%) and some mothers who tertiary education as many as 18 people who had anemia 4 people (22.2%) and who did not have anemia 14 people (47.5%)

with a p-value = 0.001 Based on research conducted at the Delitua Public Health Center, it was obtained from respondents.

Education shows a causal relationship with the prevalence of anemia in pregnant women. Low education can cause anemia 2.4 times compared to higher education,

This agrees with Buana's research (2016) which found that pregnant women with a low education level were 3.523 times more likely to experience anemia than mothers with a higher education level.

#### **4. The relationship between nutritional status and the incidence of anemia**

Based on the results of research conducted at the Delitua Public Health Center, it was found that out of 40 people, the majority of mothers with abnormal nutritional status were 21 people who had anemia, 21 people (100.0) and some mothers with normal nutritional status, as many as 19 people who did not have anemia 19 people (100.0%) with a p-value = 0.000

The development of the fetus in the womb is influenced by the nutritional status of pregnant women, the mother's weight before and after pregnancy is very closely related to increased iron requirements. This is in accordance with Irianti's research (2015) that the need for iron is one of the nutrients that cannot be fulfilled if it is only obtained from food consumed during pregnancy.

### **CONCLUSION**

Based on the results of research that has been carried out by researchers, it can be concluded that the factors associated with the nutrition of pregnant women with the incidence of anemia.

1. There is a relationship between age and the incidence of anemia with a p-value of 0.000 <0.05
2. There is a relationship between parity and the incidence of anemia with a p-value = 0.000 <0.053
3. There is a relationship between education and the incidence of anemia with a p-value = 0.001 <0.05
4. There is a relationship between nutritional status and the incidence of anemia with a p-value = 0.000 <0.05

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