

## Description of the Nutritional Status of Pregnant Women With Anemia in Rumbio Village, Panyabungan Utara District, Mandailing Natal Regency, 2022

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### Article Info

#### Article history:

Received November 11, 2022  
Revised November 24, 2022  
Accepted December 17, 2022

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### ABSTRACT

Nutritional status is Anemia is a condition in which the number and size of red blood cells are below the normal limit value. Anemia is still a health problem in Indonesia. Anemia is a public health problem that affects low, middle and high income countries and has an adverse impact on health, social and economic development. this research aims to determine nutritional status in Rumbio Village. This research is a cross-sectional descriptive in nature, using primary data obtained from questionnaires and then distributed to pregnant women. The sample used in this study was a total sampling technique, which was obtained from the entire population, namely 20 respondents. From the results of the research conducted, it showed that the respondents' knowledge about the nutritional status of pregnant women regarding the incidence of anemia was based on the age of the majority 20-35 years of 10 respondents (50%), based on the majority of middle education as many as 17 respondents (85%), based on the occupation of the majority of farmers as 9 respondents (45%), based on BMI the majority had normal nutritional status as many as 17 respondents (85%) and based on LILA the majority also had normal status as many as 16 respondents (80%), based on HB the majority were normal as many as 17 respondents (85%) had less knowledge in the age group of 20-35 years there were 13 respondents (65%). Based on the results of the study on the Overview of Nutritional Status of Pregnant Women Against Anemia Incidence, the majority of anemia occurs in pregnant women with poor nutritional status, both based on BMI and LILA, each of 1 person (100%).

#### Keywords:

Nutritional status, Pregnancy, Anemia

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## 1. INTRODUCTION

Anemia is a condition in which the number and size of red blood cells are below normal limits . Anemia is still a health problem in Indonesia . Anemia that occurs in pregnant women can increase maternal and infant mortality and morbidity . Anemia is a risk factor for miscarriage and low birth weight [8].

Anemia can also affect low-income countries and have adverse effects on health , social and economic development (WHO, 2015). The World Health Organization (WHO) reports that the prevalence of pregnant women with iron deficiency is around 37 to 75%. as well as the more increase along with increase age pregnancy. Where 40% of maternal deaths in developing countries are related to anemia in pregnancy and most anemia in pregnancy is caused by iron deficiency and acute bleeding, not infrequently the two interact with each other [7].

In America, there are 12% of women of childbearing age (WUS) 15-49 years, and 11% of pregnant women of childbearing age experience anemia. Meanwhile, the percentage of pregnant women from poor families continues to increase with increasing gestational age (8% anemia in the first trimester, 12% anemia in the second trimester, and 29% anemia in the third trimester) (Fatmah, Department of Nutrition and Public Health, 2012).

Based on the results of the 2013 Riskesdas, the prevalence of anemia in Indonesia is 21.7% and in pregnant

women it is 40.1%. Based on anemia data for pregnant women in the city of Semarang there are 29,490 and Hb examination in 21,057 pregnant women, it is known that 3,861 or 18.34% of the total pregnant women (Semarang City Health Office, 2015).

Profile of the North Sumatra Provincial Health Office (2008), conducted an anemia survey which was carried out in 2005 in 4 districts/cities in North Sumatra, namely Medan City, Binjai, Deli Serdang and Langkat districts. The survey results showed that 40.50% of pregnant women still suffer from anemia .

Based on data from Mandailing Natal District in 2017 pregnant women who consumed Fe3 (90 tablets) during pregnancy were 8004 people or 78.10 % , and mothers who consumed Fe1 (30 tablets) were 8497 people or 82.91%. In December, there were 543 pregnant women who experienced anemia in Mandailing Natal District (Profile of the Mandailing Natal District Health Office, 2017).

Based on an initial survey conducted by researchers in Rumbio Village, North Panyabungan District, Mandailing Natal District, 2022, out of 5 pregnant women whose Hb levels were checked, there were 2 pregnant women whose hemoglobin level was 9 g / dl or can be said to be anemia. Out of these 5 pregnant women, 3 people had less nutritional status.

Based on the description of the background above, the researcher is interested in conducting research on "Description of the Nutritional Status of Pregnant Women with Anemia in Rumbio Village, North Panyabungan District Mandailing Natal District Year 20 22 ”.

## 2. METHOD

The type of research used is quantitative research with a descriptive research design consisting of independent and dependent variables and a cross- *sectional approach* which aims to determine the nutritional status of pregnant women with anemia in Rumbio Village, North Panyabungan District, Mandailing Natal Regency in 2022.

The population in this study were all pregnant women in Rumbio Village, North Panyabungan District, Mandailing Natal Regency in 2022, namely 20 people.

## 3. RESULTS AND DISCUSSION

### Results

Table 1

Frequency Distribution of Nutritional Status ( BMI ) of Pregnant Women with Anemia in Rumbio Village, North Panyabungan District, Mandailing Natal Regency, 2022 Year

No	Anemia Classification	Nutritional Status Based on BMI								Total	
		< 19.5 (Thin)		19.5-24.9 (Normal)		25-29,9 ( <i>overweight</i> )		>30 (obesity)			
		F	%	F	%	F	%	F	%	F	%
1.	Severe Anemia	1	100	-	-	-	-	-	-	1	100
2.	Mild Anemia	2	10 0	-	-	-	-	-	-	2	10 0
3.	Normal	-	-	13	7 6 , 5	4	23.5	-	-	17	100
	<b>Amount</b>	<b>3</b>	<b>15</b>	<b>13</b>	<b>65</b>	<b>4</b>	<b>20</b>	-	-	<b>20</b>	<b>100</b>

Table 2

Frequency Distribution of Nutritional Status (LILA) of Pregnant Women with Anemia in Rumbio Village, North Panyabungan District, Mandailing Natal Regency, 2022 Year

Anemia Classification	Nutritional Status Based on LILA								Total	
	<90 % (less)		90-110% (Normal)		11 0 -120 ( <i>overweight</i> )		>120 (obesity)			
	F	%	F	%	F	%	F	%	F	%
Severe Anemia	1	100 %	-	-	-	-	-	-	1	100
Mild Anemia	-	-	2	10 0	-	-	-	-	2	10 0
Normal	-	-	1 7	100	-	-	-	-	17	100
<b>Amount</b>	<b>1</b>	<b>5</b>	<b>19</b>	<b>95</b>	-	-	-	-	<b>20</b>	<b>100</b>

**Table 3**  
**Frequency Distribution of HB Levels in Pregnant Women in the Underweight Nutritional Status Group in Rumbio Village, North Panyabungan District, Mandailing Natal Regency, 2022 Year**

No	Hemoglobin levels	Underweight Nutritional Status	
		F	%
1.	<8 g/dl	1	33,3
2.	8-11 g/dl	2	66,6
<b>Amount</b>		<b>3</b>	<b>100</b>

### Discussion

Of the 20 respondents, 3 respondents were found to be undernourished based on BMI calculations. Researcher Ariani DE (2012) reported that BMI is often used to determine a person's nutritional status. Referring to WHO/FAO, BMI is used only for adults > 18 years and cannot be applied to infants, children, adolescents, pregnant women, athletes and conditions of edema, ascites and hepatomegaly. In contrast to research and opinion Supariasa (2014) says that The body mass index (BMI) is a simple tool for monitoring the nutritional status of adults, especially those related to underweight and overweight. This opinion is in accordance with Desnita A (2001) in Supariasa's writing, saying that BMI is the best parameter, easily visible changes in a short period of time due to changes in food consumption and health, can provide an overview of current nutritional status and if done periodically gives a good picture of growth, is an anthropometric measure that has been used generally and widely in Indonesia so it is not something new that requires extensive explanation. Measurement accuracy is not much influenced by measuring skills.

Gitau (2016) also reported that BMI used in addition to determining nutritional status can also be used as the main indicator that is able to describe hemoglobin levels. BMI less, are at risk for low hemoglobin levels. According to my assumptions, BMI can be used to determine the nutritional status of pregnant women by because BMI is a calculation of weight (kg) divided by height squared (meters). Weight changes easily, according to food consumption. Meanwhile, the possibility of increasing height is very small.

Determination of nutritional status based on calculating the percentage of LILA. In this study, the percentage of Lila < 90% was 1 respondent, and the majority of 16 respondents were 90% -110% and 3 respondents 110% - 120%. Determination of nutritional status according to the percentage of LILA with undernourishment of 1 respondent, the rest are normal nutrition and *overweight* (fat)

According to Desnita A, determination of nutritional status in WUS and pregnant women can also be done by measuring LILA, but LILA is not an ideal measurement method because changes in LILA take a long time. Another weakness of LILA cannot be used to monitor short-term nutritional status so that the LILA measurement cannot be used as a monitoring tool for nutritional status. In pregnant women LILA is used for SEZ measurements. According to the Ministry of Health, the use of LILA is usually to detect pregnant women with a risk of giving birth to LBW, that is, if LILA is < 23.5 cm. Researcher Ida P (2009) used the LILA measurement to determine the nutritional status of pregnant women. They grouped the measurements into undernourished and good. Meanwhile In this study, researchers used grouping based on the percentage of LILA, namely the results of the measured LILA divided by the LILA standard. Determination of nutritional status is grouped into 4, namely less, normal, *overweight*, and obesity.

From the research table, it was found that there were differences in nutritional status as measured by BMI and LILA where 3 respondents were undernourished based on BMI and 1 respondent was based on LILA. According to my assumptions, this could have happened because the accuracy of the LILA measurement was not in the right location, the incidence of malnutrition was still in the short term (new), changes due to the decrease in the use of protein reserves and long arm fat and the possibility of a hardworking mother who uses upper arm muscles. Meanwhile, anthropometry of body weight is easily assessed according to changes in body weight.

Overview of nutritional status with HB levels From the distribution table of anemia incidence of 20 respondents, the majority of normal hemoglobin levels were 17 respondents (85%), and Anemia was obtained by 3 respondents (15%) where mild anemia was 2 respondents (10%), severe anemia was 1 respondent (5%). Anemia occurs in undernutrition based on BMI determination There are 3 respondents, based on LILA measurements, 1 respondent was undernourished and 2 respondents were found to be on normal nutrition.

In accordance with research by Widiastuti E (2015) showed that of the total population of pregnant women studied who had poor nutritional status and anemia experienced mild anemia, there were 16 respondents (94.1%) and severe anemia, there was 1 respondent (5.9%) . After statistical tests, it was found that there was no relationship between nutritional status and the incidence of anemia. In contrast to the theory put forward by the Department of Nutrition and Public Health (2007) that anemia is strongly influenced by nutritional status. Likewise, Siti Amaliah (2013) reported from her research results that of all samples of pregnant women, the incidence of anemia was 57.9%.

According to the author's assumptions, the opinion above is not in accordance with the results of this study, because the difference in research results is due to the fact that mothers who experience severe and mild anemia are on average 20 to 35 years old. Also, if a pregnant woman experiences malnutrition, the mother will automatically experience anemia, which is caused by a lack of consumption of foods that are nutritious and contain iron, such as consuming Fe tablets, so that the mother will experience iron anemia.

According to Almatier (2010), the impact of malnutrition during pregnancy can cause low birth weight, retard fetal brain growth, babies born with anemia (anemia), babies are susceptible to infection and can cause abortion. The nutritional status of pregnant women can be improved by encouraging pregnant women to consume nutrients. In this study, respondents were found with mild anemia 2 and severe anemia 1. Anemia can cause problems with the health of the mother and fetus. The effect of maternal malnutrition is one of the causes of anemia. Supriya D Mahajan, S (2009) in his research found that maternal malnutrition and anemia are associated with the occurrence of fetal growth retardation in the uterus. and premature birth.

According to Bernard J, Brabin (2018) Anemia is also a factor associated with increased maternal mortality. According to Phuong H.Nguyen (2017) reported that in one area in Bangladesh, ¼ of women of reproductive age had poor nutritional status and low body weight (BMI < 18.5 kg/m<sup>2</sup>). 1/2 of all pregnant women in the area are anemic. The most common cause is iron deficiency.

According to the author's assumptions from the results of the study, this is in accordance with the above opinion because the dominant anemia occurs in mothers with thin nutritional status, severe anemia and mild anemia, namely as many as 3 respondents (15%).

#### 4. CONCLUSION

1. Associated variables with incident abortion that is, age mother, parity, interval between pregnancies, From the results of the Nutritional Status Overview study, the majority of anemia was found in pregnant women with poor nutritional status based on IMT where severe anemia was found, namely 1 respondent (5%), and mild anemia, many 2 respondents (10%).
2. Undernutrition status based on LILA found in severe anemia as many as 1 respondent (5%). The incidence of anemia in this area is below the national anemia prevalence of 40%.
3. Nutritional status is very supportive for the occurrence of anemia. Education is needed on an ongoing or continuous basis for pregnant women.

#### ACKNOWLEDGEMENTS

Author thanks to all my team and I hope the research can be useful.

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