

## The Correlation Between Age And Parity Of Pregnant Women In III Trimester And The Incidence Of Anemia In Pregnancy At The Nd Clinic. Retno, Kabanjahe District, Karo District, 2023

Imelda Sarwani Br. Silalahi<sup>1</sup>, Eva Ratna Dewi<sup>2</sup>, Lidya Natalia Br. Sinuhaji<sup>3</sup>, Adelina Sembiring<sup>4</sup>, Nursinta Manik<sup>5</sup>, Rahmah<sup>6</sup>

<sup>1-6</sup>Sekolah Tinggi Ilmu Kesehatan Mitra Husada Medan

### ABSTRACT

*Pregnancy anemia is where the hemoglobin level is less than 11 grams or less than 33% at any time during the first trimester of pregnancy. Keywords: Pregnant women's class, pregnancy, anxiety, primigravida. Research objectives: To determine the correlation between age and parity of pregnant women in the third trimester and the incidence of anemia in pregnancy at the Nd Clinic. Retno, Kabanjahe sub-district, Karo district in 2023. This research design uses a descriptive research design with a cross-sectional quantitative approach. This research was carried out in April-July 2023. The research population was all pregnant women who visited and were hospitalized at the Nd Clinic. Retno, Kabanjahe District, Karo Regency, namely 43 people. The sampling technique was purposive sampling. The sample in this study was 43 people. Bivariate analysis was carried out on two variables that were thought to be related. The statistical tests used in this research are the Chi Square test ( $\chi^2$ ) and the Fisher's Exact Test. This test is used because the data to be analyzed is categorical data. To see the significance of the statistical calculation results, a significance limit of  $\alpha=0.05$  is used so that if statistical analysis results are found with a p value  $<0.05$ , the correlation between the two variables is declared meaningful or significant. especially those who suffer from anemia, so that they know how their HB levels are progressing to normal. Future researchers need to carry out further research in order to develop knowledge, especially about anemia in pregnant women.*

**Keywords:** Pregnancy, age, parity, incidence of anemia



Received : Sept 29, 2023

Received in revised form : Oct 7, 2023

Accepted : Oct 15, 2023

## INTRODUCTION

The success of maternal health efforts can be seen from the Maternal Mortality Rate (MMR) indicator. MMR is the number of maternal deaths during pregnancy, childbirth and postpartum caused by pregnancy, childbirth and postpartum or its management per 100,000 live births. This indicator is not only able to assess maternal health programs, it is moreover able to assess the level of public health, because of its sensitivity to improving health services, both in terms of accessibility and quality.<sup>1</sup>

The decline in MMR in Indonesia occurred from 1991 to 2007, namely from 390 to 228, but the 2012 IDHS showed a significant increase in MMR, namely to 359 maternal deaths per 100,000 live births. The MMR again showed a decline to 305 maternal deaths per 100,000 live births based on the results of the Inter-Census Population Survey in 2015, but this figure did not reach the 5th MDGs (Millennium Development Goals) global target, namely reducing the MMR to 102 per 100,000 live births. and is still far from the 3rd SDGs (Sustainable Development Goals) target, namely reducing the maternal mortality rate to below 70 per 100,000 live births by 2030. (Indonesian Ministry of

Health: 2016). Pregnancy anemia is where the hemoglobin level is less than 11 grams or less than 33% at any time in the first trimester of pregnancy.<sup>2</sup>

Anemia in pregnancy is called "potential danger to mother and child", therefore serious attention from all health service parties is needed regarding pregnancy anemia because anemia during pregnancy can have a serious impact on the mother and fetus. According to WHO (2015), globally the prevalence of anemia in pregnant women throughout the world is 41.8% of pregnant mothers. The prevalence of anemia in pregnant women is estimated at 57.1% in Africa, 48.2% in Asia, 25.1% in Europe and 24.1% in America. Based on the results of Basic Health Research (Riskesdas) in 2018, the prevalence of anemia in pregnant women in Indonesia was 48.9%.<sup>3</sup>

Several factors can influence anemia in pregnant women, namely gestational age, parity, age of pregnant women, pregnancy interval, nutritional status, employment, socio-economic, education, attitude, support system, worms, bleeding, hyperemia, impaired Fe absorption, infection and disease, nutrient consumption, and the environment.<sup>4</sup>

Age is one of the risk factors that most often causes anemia in pregnant women. The

mother's reproductive age is related to the female reproductive organs. Pregnant when you are still young, biologically not yet optimal, tend to be emotionally unstable, mentally immature so you easily experience shocks which cause a lack of attention to meeting nutritional needs during pregnancy. Meanwhile, pregnancy at an older age is associated with setbacks and a decrease in the body's immune system as well as diseases that often occur at this age. As a result, this can cause complications during childbirth (difficulty giving birth, abnormalities in the position of the baby), and growth disorders due to insufficient nutrition to meet personal needs and for the baby's growth, which causes babies to be born with a lower weight and premature birth.<sup>3-4</sup>

Low parity is the safest parity in terms of maternal mortality and the health of the mother and baby. High parity has a high risk of developing anemia, this is because a large number of parities can affect the mother's health condition so that the mother is susceptible to anemia. (Riyani, et al: 2020). Of the 10 pregnant women who were interviewed, 7 mothers did not know the dangers of anemic pregnancy and based on the results of observations at the Nd Clinic. Retno, Kabanjahe District, Karo Regency

with the incidence of anemia in pregnancy. Based on this background, the author is interested in research with the title "The correlation between age and parity of pregnant women in the third trimester and the incidence of anemia in pregnancy at the Nd Clinic. Retno, Kabanjahe sub-district, Karo district in 2023

## MATERIAL AND METHOD

The research design uses a descriptive research design with a cross-sectional quantitative approach where data for each variable is studied at the same time.<sup>5-6</sup> This research was carried out at the Nd Clinic. Retno, Kabanjahe District, Karo Regency, 2023. This research was carried out in April-July 2023. The research population was all pregnant women who visited and were hospitalized at the Nd Clinic. Retno, Kabanjahe District, Karo Regency, namely 43 people. The sampling technique was purposive sampling. The sample in this study was 43 people. Bivariate analysis was carried out on two variables that were thought to be related (Notoatmodjo: 2012). The statistical tests used in this research are the Chi Square test ( $\chi^2$ ) and the Fisher's Exact Test. This test is used because the data to be analyzed is categorical data. To see the significance of the

statistical calculation results, a significance limit of  $\alpha=0.05$  is used so that if statistical analysis results are found with a p value

$<0.05$ , the correlation between the two variables is declared meaningful or significant.

## RESULT

The distribution and frequency of respondent characteristics based on age were categorized into the first at risk age, namely  $<20$  years and  $>35$  years and the second aged 20-35 years. The frequency distribution of respondents based on age can be seen in the following table:

**Table 1 Frequency Distribution of Respondents Based on Age in inpatient care at Nd Clinic. Retno, Kabanjahe District, Karo Regency.**

No.	Age	Frequent	Percentage
1.	$<20, >35$ years old	35	81,4
2.	20-30 years old	8	18,6
<b>Education</b>		<b>Total (n)</b>	<b>Percentage</b>
1.	Junior	2	4,7
2.	Senior	32	74,4
3.	University	9	20,9
<b>Work</b>		<b>Total (n)</b>	<b>Percentage</b>
1.	Housewife	19	44,2
2.	Self-employed	18	41,9
3.	Civil servant	6	14
<b>Parity</b>		<b>Total (n)</b>	<b>Percentage</b>
1.	2-5 children	26	60,5
2.	Primigravida	17	39,5
<b>Total</b>		<b>43</b>	<b>100,0</b>

Based on the table above, it can be seen that the majority of respondents aged in the risk category were 35 people (81.4%). Based on the table above, it can be seen that the proportion of respondents whose majority had a high school education was 32 people

(74.4%). Based on the table above, it can be seen that the proportion of respondents who work as domestic workers is 19 people (44.2%) which is more than those who work as civil servants, namely 6 people (14%). Based on the table above, it can be seen that

the proportion of parity respondents with 2-5 children is 26 people (60.5%) more than primigravidas.

To see the distribution of the incidence of anemia in pregnant women hospitalized at the Nd Clinic. Retno, Kabanjahe District, Karo Regency can be seen in Table 4.5. the following:

**Table 5. Frequency Distribution of Anemia Events in Pregnant Women in Hospitals at the Nd Clinic. Retno, Kabanjahe District, Karo Regency.**

No	Incidence of Anemia	f	%
1	Anemia	28	65,1
2	Not Anemia	15	34,9

Based on the table above, it can be seen that based on the incidence of anemia in pregnant women, it is known that more people suffer from anemia, namely 28 people (65.1%) compared to those who are not anemic, namely 15 people (34.9%). The Correlation between age and the incidence of

anemia in pregnant women hospitalized at the Nd Clinic. Retno, Kabanjahe District, Karo Regency. The results of the analysis of the correlation between age and the incidence of anemia in pregnant women can be seen in the following table:

**Table 6. Correlation between age and the incidence of anemia in pregnant women hospitalized at the Nd Clinic. Retno, Kabanjahe District, Karo Regency.**

Age	Incidence of anemia						p-Value
	Anemia		Not anemia		Total		
	n	%	n	%	n	%	
<20, >35 Years Old	26	74,3	9	25,7	35	100,0	0,014
20-30 Years Old	2	25	6	75	8	100,0	

Results of analysis of the correlation between parity and the incidence of anemia in pregnant women hospitalized at the Nd Clinic. Retno, Kabanjahe District, Karo Regency can be seen in the following table:

**Table 7. The correlation between parity and the incidence of anemia in pregnant women hospitalized at the Nd Clinic. Retno, Kabanjahe District, Karo Regency**

Parity	Incidence of anemia					p-Value	
	Anemia		Not anemia		Total		
	n	%	n	%	%		
2-5 children	21	80,8	5	19,2	26	100,0	0,010
Primigravida	7	41,2	10	58,8	17	100,0	

Results of bivariate analysis of the correlation between the age variable and the incidence of anemia in pregnant women hospitalized at the Nd Clinic. Retno, Kabanjahe District, Karo Regency, it can be seen that the proportion of anemia incidents in those aged at risk is 69.2% greater than the incidence of anemia in those aged not at risk (34.2%). From the results of the chi square statistical test, it is known that the p value is <0.05, so it can be concluded that there is a significant correlation between age and the incidence of anemia in pregnant women hospitalized at the Nd Clinic. Retno, Kabanjahe District, Karo Regency.

## DISCUSSION

Results of bivariate analysis of the correlation between the age variable and

the incidence of anemia in pregnant women hospitalized at the Nd Clinic. Retno, Kabanjahe District, Karo Regency, it can be seen that the proportion of anemia incidents in those aged at risk is 69.2% greater than the incidence of anemia in those aged not at risk (34.2%). From the results of the chi square statistical test, it is known that the p value is <0.05, so it can be concluded that there is a significant correlation between age and the incidence of anemia in pregnant women hospitalized at the Nd Clinic. Retno, Kabanjahe District, Karo Regency.

Referring to the test results, it can be explained that older mothers are at risk of increasing the incidence of anemia in pregnancy. So the mother's age factor needs to be considered during pregnancy, because age factors influence a person's physiology, including the pregnancy process. This is influenced by the fact that

the majority of pregnant women in this study were in the young and old age range, and many of the children born had > 2 children, which is the number of parities that are at risk of anemia in pregnant women.<sup>7</sup>

Maternal age can influence the emergence of anemia in pregnant women, namely the lower the age of the pregnant mother, the lower the hemoglobin level. This research is also in accordance with Sarimawar (2014), 5.8% of pregnant women aged 35 years and over suffer from severe anemia and 71.6% suffer from mild anemia, while 3.9% of pregnant women aged 20-35 years suffer from severe anemia. and 68.5% suffered from mild anemia. There is a significant correlation between maternal age and anemia status. The proportion of anemia in pregnant women in the age group < 20 years and > 30 years is higher (77.4%) than in the age group 20-30 years (63.2%). Riskesdas data (2018) shows that anemia generally occurs in women of childbearing age, namely 19-35 years old, at 22-23%, while for those aged 10-19 years the proportion of anemia is 30%.<sup>8-9</sup>

Results of bivariate analysis of the correlation between gestational age variables and the incidence of anemia in pregnant women hospitalized at the Nd

Clinic. Retno, Kabanjahe District, Karo Regency, it can be seen that the proportion of anemia incidence in pregnant women in the parity of 2-5 children is 80.8% greater than the incidence of anemia in primigravida pregnant women (41.2%). From the results of the chi square statistical test, it is known that the p value is <0.05, so it can be concluded that there is a significant correlation between parity and the incidence of anemia in pregnant women hospitalized at the Nd Clinic. Retno, Kabanjahe District, Karo Regency.

The nutritional needs of pregnant women continue to increase with increasing gestational age, one of which is iron. During pregnancy there is dilution (hemodilution) which continues to increase according to gestational age and the peak occurs at 32 to 34 weeks of gestation (Manuaba, 2017). According to Lila (2012), as gestational age increases, the need for iron also increases and if iron intake is not balanced with the increase in need, iron deficiency will occur.<sup>11-12</sup>

The need for various nutrients including iron in the first trimester increases minimally. After that, throughout the second and third trimesters, the need will continue to increase until the end of pregnancy.

Additional energy during the second trimester is needed for the expansion of maternal tissue, namely increasing blood volume, uterine and breast growth.<sup>1</sup>

## CONCLUSION

The results of research conducted with the title Correlation between age and parity and the incidence of anemia in pregnant women hospitalized at the Nd Clinic. Retno, Kabanjahe District, Karo Regency in 2023, it can be concluded that: There is a significant correlation between age and the incidence of anemia in pregnant women at the Nd Clinic. Retno, Kabanjahe District, Karo Regency, 2023 p-value 0.014. There is a significant correlation between parity and the incidence of anemia in pregnant women at the Nd Clinic. Retno, Kabanjahe District, Karo Regency, 2023 p-value 0.010. to provide education about anemia prevention, increase mothers' knowledge regarding anemia, its impact and how to prevent it so that the prevalence of anemia can be reduced. Nd Clinic. Retno, Kabanjahe District, Karo Regency in 2023, to regularly check their pregnancies and check their HB regularly, especially those who suffer from anemia, so that they know how their HB levels are

progressing to normal. Future researchers need to carry out further research in order to develop knowledge, especially about anemia in pregnant women

## ACKNOWLEDGMENT

The author would like to thank the 2023 Nd. Retno clinic Karo, for providing time and support to carry out this quantitative research. Especially the Mitra Husada Medan High School of Health Sciences and UPPM which have motivated me a lot to work

## REFERENCE

1. Dinas Kesehatan. (2020). Profil Kesehatan Kabupaten Bantul Tahun 2020. Bantul.
2. Fitriyanti, Indah. Faktor-Faktor yang Berhubungan dengan Kejadian Anemia pada Ibu Hamil Trimester III di Puskesmas Tegalrejo Tahun 2016. Skripsi. Fakultas Ilmu Kesehatan Universitas 'Aisyiyah Yogyakarta. 2017
3. Handayani, T. R. (2017) „Determinan Kejadian Anemia Defisiensi Zat Besi Pada ibu Hamil Di Puskesmas Nagaswidak Palembang Tahun 2017“, 5(2), pp. 345–356.
4. Hariati., Andi, Alim., Ali Imran, Thamrin. Kejadian Anemia pada Ibu Hamil. Studi Analitik di Puskesmas Pertiwi Kota Makasar Provinsi Sulawesi Selatan. Jurnal Ilmiah Kesehatan, Vol.1 No. 1, pp. 8-17.

5. Notoatmodjo, S. *metodelogi penelitian kesehatan* (Pertama). Jakarta: PT RINEKA CIPTA. 2017
6. Sugiyono. *Metode Penelitian Kuantitatif, Kualitatif, Dan R&D*. Bandung: Alfabeta. 2017
7. Widyaningrum, S., dan Kurniawati, S. L. (2018). Pengaruh Sikap Keuangan, Pengetahuan Keuangan Dan Pengalaman Keuangan Terhadap Perilaku Pengelolaan Keuangan Keluarga Di Sidoarjo. STIE Perbanas, 2019.
8. Padmi, D. R. K. N. Faktor-Faktor yang Mempengaruhi Kejadian Anemia pada Ibu Hamil di Puskesmas Tegaltrejo Tahun 2017.
9. Proverawati, a. Anemia dan Anemia Kehamilan. Penerbit Buku Nuha Medika. 2018
10. Riadi, Muchlisin. Pengertian, Kriteria, Tanda dan Pencegahan Anemia. Available from: <https://www.kajianpustaka.com/2017/11/pengertian-kriteriatanda-pencegahan-anemia.html>. 2017
11. RISKESDAS. (2018). *Hasil Utama Riskesdas Tahun 2018*. KEMENTERIAN KESEHATAN RI.
12. Umami, Riska. Hubungan Kepatuhan Mengonsumsi Tablet Fe dengan Kejadian Anemia pada Ibu Hamil Trimester III di Puskesmas Gedongtengen Yogyakarta. Skripsi. Fakultas Ilmu Kesehatan Universitas 'Aisyiyah Yogyakarta. 2019
13. Verrayanti, R. M. D. 2018. Hubungan Tingkat Pengetahuan Dan Perilaku Konsumsi Tablet Tambah Darah Dengan Kejadian Anemia Pada Ibu Hamil Trimester Iii Di Puskesmas Mantriweron Kota Yogyakarta Tahun 2017