

## The Correlation Of Mother's Knowledge And Work With The Incidence Of Anemia In Pregnancy At The Modesta Clinic, Sinaman Village, Barusjahe District, Karo District, 2023

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### ABSTRACT

*The global incidence of anemia in 2019 in women of childbearing age was 29.9% in women of childbearing age, equivalent to more than half a billion women aged 15-49 years. Meanwhile, 29.6% of non-pregnant women of childbearing age were pregnant, and 36.5% of pregnant women. The aim of this research is to determine the relationship between maternal knowledge and occupation and the incidence of anemia in pregnancy at the Modesta Clinic, Sinaman Village, Barusjahe District, Karo Regency 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 Modesta Clinic, Sinaman Village, Barusjahe District, Karo Regency. The population is 47 people. Purposive sampling technique is a technique that determines certain criteria for the sample. The results of statistical tests using the Chi Square test that were carried out showed a p value of 0.004 ( $p < 0.05$ ) which shows that there is a relationship between knowledge and the incidence of anemia in pregnancy at the Modesta Clinic, Sinaman Village, Barusjahe District, Karo Regency in 2023. Further research is needed. related to other factors related to anemia so that better treatment can be found. Midwives and health workers provide IEC and counseling about anemia in pregnancy.*

**Keywords:** Knowledge, work, pregnancy, incidence of anemia



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### INTRODUCTION

The Maternal Mortality Rate (MMR) in Indonesia is still high, namely 307/100,000 live births from the results of the Indonesian Demographic and Health Survey 2003 There are 2 causes of

maternal death, namely direct and indirect. The main causes of maternal death include postpartum hemorrhage, eclampsia, infectious diseases, and placenta previa, all of which originate from iron deficiency anemia. The global incidence of anemia in 2019 in women of

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childbearing age was 29.9% in women of childbearing age, equivalent to more than half a billion women aged 15-49 years. Meanwhile, 29.6% of non-pregnant women of childbearing age are pregnant, and 36.5% of pregnant women (WHO: 2021). The results of the 2018 Basic Health Research found that the incidence of anemia in pregnant women increased in 2013 by 37.1%, while in 2018 it rose to 48.9%. The incidence of anemia based on age 15-24 in pregnant women is 84.6%, while age 25-35 years is 33.7%, age 35-44 years is 33.6% and age 45-54 years is 24%.<sup>1</sup>

Pregnant women with anemia are at risk of causing preeclampsia, antepartum and postpartum bleeding, blood transfusions, and postpartum infections. Apart from that, anemia during pregnancy is also associated with stunted fetal growth, IUFD, preterm birth, impaired fetal brain growth and development, and LBW according to Desi 2022 citing the opinion of Wibowo (2021). According to Desi (2022) citing Nurbaya (2019) that in general anemia can be caused by several factors, but there are three main body mechanisms that trigger it, namely red blood cells being damaged in large numbers, lack of

blood or bleeding and lack of red blood cell production. . Anemia is caused by a lack of iron in the body, resulting in a decrease in iron in the formation of red blood cells and hemoglobin in the blood is lower than normal.<sup>2</sup>

Anemia is the main priority faced by the Indonesian Government. The main consequence of anemia in pregnant women in Indonesia is the loss of iron from the food eaten at any time which is needed to form hemoglobin. In Indonesia, it is predicted that every day there will be 41 cases of lack of understanding and awareness of the dangers of anemia during pregnancy, which tends to appear in every first to third trimester of pregnancy. (Yuliatin: 2018 in Ayu Gustiwarni 2019). Anemia is a condition where blood hemoglobin levels are low so that the oxygen binding process is disrupted, resulting in a decrease in the increase in oxygen throughout the body. Anemia will occur in pregnant women if their hemoglobin is less than 11 gr%. Because this iron loss results from insufficient iron intake, an increase in iron is needed during growth and excessive iron deficiency.<sup>2</sup>

Knowledge is one of the factors that stimulates or stimulates the

realization of health behavior. If pregnant women know and understand the consequences of anemia and how to prevent anemia, they will have good health behavior in the hope of avoiding the various consequences or risks of pregnancy anemia. Such health behavior influences the reduction in the incidence of anemia in pregnant women. Occupation is also an important factor in determining the incidence of maternal anemia. Mothers who frequently give birth are at risk of developing anemia due to reduced iron stores after giving birth to twins. Meanwhile, mothers who work are malnourished because they are busy working or forget to take blood-boosting medication.<sup>3</sup>

Of the 10 pregnant women who were interviewed, 6 mothers did not know the dangers of pregnancy with anemia and based on the results of observations at the Modesta Clinic, Sinaman Village, Barusjahe District, Karo Regency, the incidence of anemia in pregnant women is still quite high. Several efforts have been made by Modesta clinic officers in Sinaman Village, Barusjahe District, Karo Regency in health promotion activities to reduce the incidence of anemia, including

by carrying out activities that include outreach and counseling about the importance of nutrition for pregnant women, preventing anemia, carrying out early detection of pregnant/postpartum women suffering from anemia. by checking Hb, and administering multivitamin iron tablets. Based on this background, the author is interested in conducting research with the title "The Relationship between Maternal Knowledge and Occupation and the Incidence of Anemia in Pregnancy at the Modesta Clinic, Sinaman Village, Barusjahe District, Karo Regency in 2023".

## MATERIAL AND METHOD

The study used analytical research with a case control research design which is used to determine the causes of disease by investigating the correlation between risk factors and the incidence of disease. The test in this research uses the contingency coefficient test.<sup>3-4</sup> In this study, the population was all pregnant women in the Gaji Community Health Center area in January - December 2022, totaling 354 pregnant women. The sample in this study was 80 pregnant women with CED and pregnant women

without CED. The comparison of case and control samples was 1:1, the sample size for the case group was 40 CED pregnant women. Meanwhile, the control group was 40 pregnant women without CED.

## RESULT

This research was conducted at the Modesta Clinic, Sinaman Village, Barusjahe District, Karo Regency. Next, the data is selected and retrieved according to the inclusion criteria. There

were 47 research subjects. The research was conducted to determine the incidence of anemia at the Modesta Clinic, Sinaman Village, Barusjahe District, Karo Regency. The following are the characteristics of respondents based on knowledge and occupation. From the table below, it can be seen that the majority of respondents had poor knowledge, amounting to 38 (80.9%) respondents. And the majority of mothers work, namely 29 (61.7%) respondents. And the majority who suffer from anemia are 31 (66%).

Table 1. The characteristic of respondents

| No                          | Characteristic | Total | %    |
|-----------------------------|----------------|-------|------|
| <b>Knowledge</b>            |                |       |      |
| 1.                          | Good           | 9     | 19,1 |
| 2.                          | Not Good       | 38    | 80,9 |
|                             | Total          | 47    | 100  |
| <b>Pendidikan Responden</b> |                |       |      |
| 1.                          | Elementary     | 0     | 0    |
| 2.                          | Junior         | 2     | 4,3  |
| 3.                          | Senior         | 34    | 72,3 |
| 4.                          | University     | 11    | 23.4 |
|                             | Total          | 47    | 100  |
| <b>Work</b>                 |                |       |      |
| 1.                          | Work           | 29    | 61,7 |
| 2.                          | Not Work       | 18    | 38,3 |
|                             | Total          | 47    | 100  |
| <b>Anemia</b>               |                |       |      |
| 1.                          | Anemia         | 31    | 66   |
| 2.                          | Not anemia     | 16    | 34   |
|                             | Total          | 47    | 100  |

Bivariate analysis was used to determine the relationship between maternal knowledge and employment and the

incidence of anemia during pregnancy at the Modesta Clinic, Sinaman Village, Barusjahe District, Karo Regency in

2023. The results of bivariate analysis were carried out using the Chi Square test to determine the relationship between the independent variables and the dependent variable. The relationship between these variables includes the relationship

between maternal knowledge and the incidence of anemia in pregnancy at the Modesta Clinic, Sinaman Village, Barusjahe District, Karo Regency in 2023.

| No.   | Knowledge | Incidence of Anemia |      |            |      | p-Value |
|-------|-----------|---------------------|------|------------|------|---------|
|       |           | Anemia              |      | Not anemia |      |         |
|       |           | n                   | %    | n          | %    |         |
| 1.    | Good      | 2                   | 22,2 | 7          | 77,8 | 0,004   |
| 2.    | Not Good  | 29                  | 76,3 | 9          | 23,4 |         |
| Total |           | 31                  | 66   | 16         | 34   |         |

Table 2. Correlation between knowledge and the incidence of anemia in pregnancy

From table 2 above, the majority of respondents had poor knowledge of the incidence of anemia, 29 (76.3%) respondents and the minority had good knowledge of the incidence of anemia, 2 (22.2%) respondents. The results of statistical tests using the Chi Square test that were carried out showed a p value of 0.004 ( $p < 0.05$ ) which shows that there is a relationship between knowledge and the incidence of anemia in pregnancy at the Modesta Clinic, Sinaman Village,

Barusjahe District, Karo Regency in 2023.

The results of bivariate analysis were carried out using the Chi Square test to determine the relationship between the independent variables and the dependent variable. The Relationship between Maternal Occupation and the Incidence of Anemia in Pregnancy at the Modesta Clinic, Sinaman Village, Barusjahe District, Karo Regency in 2023.

Table 3 Correlation between work and the incidence of anemia in pregnancy

| Table 1. Incidence of anemia between work and not work and the incidence of anemia by gender |          |                     |      |            |      |                |
|--|----------|---------------------|------|------------|------|----------------|
| No.  | Work     | Incidence of anemia |      |            |      | <i>p-Value</i> |
|  |          | Anemia              |      | Not Anemia |      |                |
|  |          | n                   | %    | n          | %    |                |
| 1.   | Work     | 24                  | 82,8 | 5          | 17,2 | 0,003          |
| 2.   | Not Work | 7                   | 38,9 | 11         | 61,1 |                |
|  | Total    | 31                  | 66   | 16         | 34   |                |

From table 3 above, the majority of job respondents who work have an anemia incidence of 24 (%) respondents and the minority of people who work without anemia are 2 (%) respondents. The results of statistical tests using the Chi Square test that were carried out showed a p value of 0.003 ( $p < 0.05$ ) which shows that there is a relationship between work and the incidence of anemia in pregnancy at the Modesta Clinic, Sinaman Village, Barusjahe District, Karo Regency in 2023.

## DISCUSSION

The following are the characteristics of respondents based on knowledge and work. From the table below, it can be seen that the majority of respondents had poor knowledge, amounting to 38 (80.9%) respondents. And the majority of mothers work, namely 29 (61.7%) respondents. And the majority who suffer from anemia are 31 (66%). The majority of respondents had poor knowledge of the incidence of anemia, 29 (76.3%) respondents and the minority had good knowledge of the incidence of anemia, 2 (22.2%) respondents. The results of statistical

tests using the Chi Square test that were carried out showed a p value of 0.004 ( $p < 0.05$ ) which shows that there is a relationship between knowledge and the incidence of anemia in pregnancy at the Modesta Clinic, Sinaman Village, Barusjahe District, Karo Regency in 2023. From this research it can be concluded that the less knowledge a person has, the greater the risk of pregnant women experiencing anemia. According to Skinner (2015), changes in practice, which are also called open changes due to a certain stimulus, are preceded by closed changes, namely changes in knowledge, then changes in attitudes, then changes in practice. This also applies to practices or behavior towards preventing anemia during pregnancy and delivery.<sup>5</sup>

This was not in accordance with the results of research by Marimah (2018) with an explanatory research type where 65.7% of respondents with poor knowledge experienced anemia and 34.3% of respondents without anemia, while 28.1% of respondents with good knowledge experienced anemia. % and those who are not anemic is 71.9%. The results of this research are also in line with Morfah's research at the Tambun Community Health Center, South

Tambun District, Bekasi Regency (2016) with a cross sectional design showing that there is a significant relationship between the level of knowledge and the incidence of anemia in pregnant women with a value of  $p=0.001$ .<sup>6</sup>

The majority of job respondents who work have an anemia incidence of 24 (%) respondents and the minority of people who work without anemia are 2 (%) respondents. The results of statistical tests using the Chi Square test that were carried out showed a p value of 0.003 ( $p<0.05$ ) which shows that there is a relationship between work and the incidence of anemia in pregnancy at the Modesta Clinic, Sinaman Village, Barusjahe District, Karo Regency in 2023. Referring to the test results, it can be explained that the harder the mother's work will not increase the incidence of anemia in pregnancy. However, this does not mean that the mother's work factor does not need to be considered during pregnancy, but there are other variables that are more related to the incidence of anemia.<sup>8</sup>

Based on research, both working and non-working mothers are more likely to experience anemia. This can also be influenced by the mother's eating habits which are getting better. Mothers already

have good knowledge about nutritious foods consumed during pregnancy, and most mothers can differentiate between foods that can be eaten or which cannot be eaten (restricted foods) during pregnancy. Especially food sources that contain lots of sources of iron and protein.<sup>7</sup>

This was different from the opinion of Daulay (2017), that doing heavy work while pregnant is one of the causes of the reduced ability of the body to meet the nutritional needs of the mother and fetus she is carrying. Energy reserves are depleted to fulfill the activities of pregnant women. The energy that should be obtained from consuming food for the needs of the mother and baby is not available. Because pregnancy is considered normal, as a result a pregnant woman can experience anemia during pregnancy.<sup>8-9</sup>

Work is an activity or activity of a person to obtain income to meet his daily living needs, thus the work opportunity obtained is living capital for the present and future and work is essentially to obtain the dignity of life in the family (Ahmadi, 2018). Based on research results, mothers who do not work have a lot of time at home so they have more time to fulfill their nutrition, while

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mothers who work have less time to fulfill their nutrition because they are busy working so that working mothers can become malnourished during their pregnancy.<sup>12-13</sup>

## CONCLUSION

There was a significant correlation that has been carried out and the result is a p value of 0.004 ( $p < 0.05$ ) which shows that there is a relationship between knowledge and the incidence of anemia in pregnancy at the Modesta Clinic, Sinaman Village, Barusjahe District, Karo Regency in 2023. There is a significant relationship that has been carried out. The result of the p value is 0.003 ( $p < 0.05$ ) which shows that there is a relationship between work and the incidence of anemia in pregnancy at the Modesta Clinic, Sinaman Village, Barusjahe District, Karo Regency in 2023. There is a need to carry out further research regarding other factors related to anemia so that it can find better treatment. Midwives and health workers provide IEC and counseling about anemia in pregnancy.

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