RELATIONSHIP OF KNOWLEDGE, PARITY, AND MATERNAL AGE WITH ANEMIA IN THIRD TRIMESTER PREGNANT WOMEN

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ABSTRAK : HUBUNGAN PENGETAHUAN, PARITAS, DAN USIA IBU DENGAN ANEMIA PADA IBU HAMIL TRIMESTER III

Latar belakang: anemia pada masa kehamilan merupakan kondisi dimana tubuh tidak memiliki cukup sel darah merah yang sehat. Sel darah merah memberikan oksigen ke jaringan tubuh.

Tujuan: untuk mengetahui hubungan pengetahuan, paritas dan usia ibu dengan kejadian anemia pada ibu hamil trimester III di desa Marga Bhakti tahun 2021.

Metode: penelitian ini menggunakan desain penelitian survey analitik kuantitatif dengan pendekatan cross sectional. Populasi dalam penelitian ini adalah seluruh ibu hamil trimester III yang memeriksakan kehamilannya di Desa Marga Bhakti. Sampel penelitian ini sebanyak 61 responden yang diambil secara sistematis dengan membagi jumlah sampel yang diinginkan dengan menggunakan metode random sampling. Kemudian, data yang terkumpul dianalisis dengan menggunakan analisis univariat dan bivariat.

Hasil: Dari 61 responden, 54,1% responden mengalami anemia. 65,6% responden memiliki pengetahuan kurang tentang anemia dan 34,4% responden memiliki pengetahuan baik tentang anemia. Responden yang memiliki paritas tinggi sebanyak 62,3% dan yang memiliki paritas rendah sebanyak 37,7%. Responden dengan usia berisiko tinggi sebanyak 60,7% dan responden dengan usia tidak berisiko sebanyak 39,3%.

Simpulan: Berdasarkan hasil uji Chi-Square pada variabel pengetahuan diperoleh p-value 0,000 (< α = 0,05) artinya ada hubungan bermakna antara pengetahuan dengan anemia; pada variabel paritas diperoleh nilai p sebesar 0,000 (< α = 0,05) artinya ada hubungan yang bermakna antara paritas dengan kejadian anemia; pada variabel usia ibu diperoleh p-value sebesar 0,000 (< α = 0,05) artinya ada hubungan yang signifikan antara usia ibu dengan anemia.

Saran : Diharapkan aparat desa Marga Bhakti lebih aktif dalam memberikan penyuluhan kepada masyarakat terkait anemia pada ibu hamil trimester III.

Kata Kunci : Anemia, Pengetahuan, Paritas, Usia Ibu

ABSTRACT

Background: anemia during pregnancy is a condition in which the body does not have enough healthy red blood cells. Red blood cells provide oxygen to body tissues.

Objective: to determine the relationship of knowledge, parity and maternal age with anemia in third trimester pregnant women in Marga Bhakti village in 2021.

Methods: this study used a quantitative analytic survey research design with a cross sectional approach. The population in this study were all third trimester pregnant women who had their pregnancies checked at Marga Bhakti Village. The sample of this study were 61 respondents who were taken systematically by dividing the desired number of samples using the random sampling method. Then, the collected data were analyzed using univariate and bivariate analysis.

Results: Of the 61 respondents, 54.1% respondents experienced anemia. 65.6% respondents had poor knowledge about anemia and 34.4% respondents had good knowledge about anemia. Respondents who have high parity were 62.3% and those who have low parity were 37.7%. Respondents with high-risk age were 60.7% and those whose age are not at risk were 39.3%.

Conclusion: Based the results of the Chi-square test on the knowledge variable, the p-value obtained was 0.000 (< α = 0.05) meaning that there was a significant relationship between knowledge and anemia; on the parity variable, the p-value obtained was 0.000 (< α = 0.05) meaning that there is a significant relationship between parity and the incidence of anemia; on the maternal age variable, the p-value obtained was 0.000 (< α = 0.05) meaning that there is a significant relationship between maternal age and anemia.

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Suggestion: It is hoped that Marga Bhakti village officials are more active in providing counseling to the community related to anemia in third trimester pregnant women.

Keywords: Anemia, Knowledge, Parity, Maternal Age

INTRODUCTION

Maternal Mortality Rate (MMR) or Maternal Mortality Ratio is an indicator in describing the welfare of society in a country. Maternal death according to the definition of the World Health Organization (WHO) is death during pregnancy or within 42 days after the termination of pregnancy, from all causes related to or aggravated by the pregnancy or its management, but not caused by accident or injury (WHO, 2016).

In 2015, the maternal mortality ratio (MMR) was defined as the number of maternal deaths per 100,000 live births. According to the World Health Organization (WHO) the maternal mortality rate is around 216 per 100,000 live births per day in the world. This means that around 830 women die every day due to pregnancy and childbirth complications.

Riset Kesehatan Dasar (Riskesdas) state that in 2013, maternal mortality related to pregnancy, childbirth and post natal bleeding was 359 per 100,000 live births (Riskesdas, 2013). Data from the World Health Organization (WHO) (2016) shows that the causes of maternal death in 2013 included 30. 3% due to bleeding, 27.1% due to hypertension during pregnancy, 7.3% due to infection, 0.0% prolonged labor, 0.0% abortion, and a significant number of contributors of 40.8% other causes. The "other causes" here are indirect causes of maternal death, such as cancer, kidney disease, heart disease, tuberculosis or other diseases suffered by the mothers. Based on these data, bleeding is a direct cause of maternal death. Bleeding can be caused by anemia during pregnancy. Hence, anemia during pregnancy is an indirect cause of maternal death.

Anemia is a condition where the hemoglobin (Hb) level is below normal so that it cannot meet the physiological needs needed by the body. Anemia is practically defined as Hematocrit (Hb) levels, Hemoglobin (Hb) concentrations, or red blood cell counts below normal. (Prawirohardjo, 2013).

Iron play a vital role in fetal growth. During pregnancy, iron intake must be increased considering that during pregnancy, the volume of blood in the mother's body increases. Thus, more iron intake is needed to be able to continually meet the needs of the mother and supply food and oxygen to the fetus through the placenta. The iron intake that is given to the fetus through the placenta will be used by the fetus for growth and development, including for brain development, as well as storing it in the liver as a reserve until the baby is 6 months old. (Kemenkes RI, 2014).

In addition, iron helps accelerate the healing process of wounds, especially wounds caused by the delivery process. Iron deficiency since before pregnancy, if not treated properly, can result in anemia during pregnancy. Anemia is one of the risk factors for maternal death, the incidence of low birth weight babies (LBW), infection of the fetus and mother, miscarriage, and premature birth (Kemenkes RI, 2014).

Knowledge is one of the factors that stimulate the realization of health behaviors. If pregnant women know and understand the consequences of anemia and how to prevent anemia, they will have good health behaviors in the hope that they can avoid the various consequences or risks of anemia during pregnancy. Such health behaviors affect the decrease in the incidence of anemia in pregnant women.

A study carried out by Purbadewi (2009) showing out of 27 respondents who had anemia, 8 respondents (29.6%) had a level of knowledge about anemia in the good category and 19 respondents (70.4%) had a level of knowledge about anemia in the poor category. Of the 15 respondents who did not have anemia, 13 respondents (86.7%) had knowledge about anemia in the good category and 2 respondents (13.3%) had knowledge about anemia in the poor category. The study also showed that the p-value obtained was 0.000 <0.05 ($p < \alpha$) meaning that there was a relationship between the level of knowledge about anemia and the incidence of anemia in pregnant women at the Moyudan Public Health Center, Sleman, Yogyakarta.

Many factors cause various complications during pregnancy. One of which is maternal age during pregnancy (Ninawati, 2011). Maternal age factor is a risk factor for anemia in pregnant women. Maternal age is related to the female reproductive organs. Healthy and safe reproductive age is 20-35 years old (Fitri, 2013). If the mother's age is too young such as less than 20 years, the mother is afraid of changes in her body posture or is afraid of getting fat. Mothers tend to eat less so that nutritional intake including iron intake is less which can result in anemia. Meanwhile, at the age of over 35 years, the

mother's health condition begins to decline; uterine function begins to decline and increases medical complications during pregnancy and delivery (Ninawati, 2011).

In addition, a study conducted by Jasmi (2014) showing that of the 145 pregnant women with high-risk age, 57 pregnant women (83.8%) had a high risk of experiencing anemia, and 20 pregnant women (32.9%) with low-risk age experienced anemia. The results of statistical tests using chi square obtained the p-value of 0.000 (p <0.05) meaning that there was a relationship between maternal age and the incidence of anemia in pregnant women, with the OR value of 15.818, which means that pregnant women with high-risk age were15 times more likely to experience anemia than pregnant women at low-risk age.

Parity is an important factor of iron anemia in pregnant women. According to Manuaba (2010), parity 1-3 is the safest parity in terms of maternal mortality. High parity, more than 3, has a higher maternal mortality rate than those at low parity (Saifuddin, 2009).

A study conducted by Ririn Riyani (2019) showed that respondents with risk parity and having anemia were55.2%, and respondents risk parity and not having anemia were 44.8%. Then, respondents with no risk parity and having anemia were 14.3%, and respondents with no risk parity and having no anemia were 85.7%. The results of statistical tests using the non-parametric Chi-square test showed a p-value obtained was 0.003 (p <0.05). this means that the Null hypothesis was rejected, meaning that there was a relationship between the variables studied, so it could be concluded that there was a relationship between maternal parity and the incidence of anemia in pregnant women.

The data from OKU District Health Office show that the number of pregnant women in 2018 was 8,706 people and those who experienced KEK were 701 people, the number of pregnant women in 2019 was 8,823 people and those who experienced KEK were 742 people, the number of pregnant women in 2020 was 7939 people and those experienced KEK were 759 people, and the number of pregnant women in 2021 from January - May was 2550 and 279 people experienced SEZ (Dinkes OKU, 2020)

METHODS RESEARCH

This study used a quantitative analytic survey research in which the independent variables including knowledge, parity and maternal age and the dependent variable including the occurrence of anemia in third trimester pregnant women were collected at the same time (Notoadmodjo, 2010). A cross sectional approach was used in this study aiming to determine the relationship of the independent variables namely knowledge, parity and maternal age with the dependent variable namely the occurrence of anemia in third trimester pregnant women. The population is the entire research object or object studied (Notoatmodjo, 2012). The population in this study were 158 third trimester pregnant women who checked their pregnancies in Marga Bhakti Village, Sinar Peninjauan District, Ogan Komering Ulu Regency. The research sample is the object being studied and is considered to represent the entire population or part of the population to be studied (Notoatmodjo, 2012). The sample used in this study was 61 third-trimester pregnant women who visited Marga Bhakti Village, Ogan Komering Ulu in 2021. The sample in this study was taken non-randomly using the accidental sampling method. .

RESULTS AND DISCUSSION

Relationship between Mothers' Knowledge and Anemia in Third Trimester Pregnant Women

The table above shows that of the 40 respondents who had poor knowledge, 30 respondents (75.0%) had anemia and 10 respondents (25.0%) did not have anemia. Based on the results of the chi-square statistical test, the p-value obtained was 0.000 (< α = 0.05) meaning that there is a significant relationship between the level of mothers' knowledge and anemia in third trimester pregnant women in Marga Bhakti Village in 2021. Thus, the hypothesis stating that there is a relationship between the level of mothers' knowledge and the incidence of anemia in third trimester pregnant women has been proven statistically. The Odds Ratio (OR) value was 18,000, meaning that respondents with poor knowledge are 18,000 times more likely to experience anemia compared to respondents with good knowledge.

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Tabel 1

Knowledge	Anemia in Third Trimester Pregnant Women				Total		*p-value*	*OR*
	Yes		No					
	n	%	n	%	N	%		
Poor	30	75,0	10	25,0	40	100	0,000	18.000
Good	3	14,3	18	85,7	21	100		

The results of this study are in line with a study carried out by Purbadewi (2009) showing that out of 27 respondents who had anemia, 8 respondents (29.6%) had a good level of knowledge about anemia and 19 respondents (70.4%) had a poor level of knowledge about anemia. Then, her study also showed that of the 15 respondents who did not experience anemia, 13 respondents (86.7%) had knowledge about anemia in the good category and 2 respondents (13.3%) had knowledge about anemia in the poor category. The results of the analysis using chi-square in the study showed that the calculated chi-square value (X^2 $_{obtained}$) was 12.548. Based on the df (degree of freedom) value of 1 and a significance level of 5%, the X^2 $_{table}$ was 3.841, meaning that X^2 $_{obtained}$ > X^2 $_{table}$ (12.548 > 3.841). In addition, the study also showed the p-value obtained of 0.000 <0.05 (p <α), meaning that there was a relationship between the level of knowledge about anemia and the incidence of anemia in pregnant women at Moyudan Public Health Center Sleman, Yogyakarta.

The results of the present study are also in line with a study conducted by Rabitha Rachmaniar (2012) showing that pregnant women who had good knowledge about anemia were 20 people (20.6%), of which 7 people (7.2%) had anemia and 13 people (13.4%) did not experience anemia, pregnant women who had sufficient knowledge of anemia were 37 people (38.1%), of which 14 people (14.4%) had anemia and 23 people (23.7%) did not have anemia, and pregnant women who had poor knowledge about anemia were 40 people (41.2%), of which 27 people (27.8%) had anemia and 13 people (13.4%) did not have anemia. In other words, pregnant women who have less knowledge about anemia will increase the risk of anemia in pregnancy, compared to those who have good and sufficient knowledge about anemia. In addition, the study also showed the results of testing the hypothesis using the Chi – square test (cross tabulation) of X^2 obtained= 8.880 with a significance value (p) = 0.012 (p <0.05), meaning that there was a relationship between knowledge about anemia in pregnant women in the second and third trimesters and the risk of anemia in pregnancy at Sukorame Public Health Center, Kediri.

In other words, pregnant women with poor knowledge of anemia experience more anemia than pregnant women with good knowledge of anemia. It is because knowledge is one of the factors that stimulate the realization of health behaviors. If pregnant women know and understand the consequences of anemia and how to prevent anemia, they will have good health behaviors in the hope that they can avoid the various consequences or risks of anemia during pregnancy. Such health behaviors affect the decrease in the incidence of anemia in pregnant women.

Relationship between Parity and Anemia in Third Trimester Pregnant Women

The table above shows that of the 38 respondents who had high-risk parity, 29 respondents (76.3%) experienced anemia, and 9 respondents (23.7%) did not have anemia. Based on the results of the chi-square statistical test, the p-value obtained was 0.000 (<α = 0.05), meaning that there is a significant relationship between parity and anemia in third trimester pregnant women in Marga Bhakti Village in 2021. Thus, the hypothesis stating that there is a relationship between parity and the incidence of anemia in third trimester pregnant women has been proven statistically. The Odds Ratio (OR) value was 15,306 meaning that respondents with high-risk parity are 15.306 times more likely to experience anemia compared to respondents with low-risk parity.

Tabel 2

Parity	Anemia in Third Trimester Pregnant Women				Total		*p-value*	*OR*
	Yes		No					
	n	%	n	%	N	%		
High	29	76,3	9	23,7	38	100	0,000	15,306
Low	4	17,4	19	82,6	23	100		

The results of this present study are in line with a study carried out by Jasmi (2014) showing that out of 145 pregnant women who had parity at high risk, 47 pregnant women (87%) had anemia. Meanwhile, 30 pregnant women (32.9%) with low-risk parity had low risk of having anemia. The results of statistical tests in the study using chi square obtained a value p value = 0.000 (p <0.05), meaning that there was a relationship between parity and the incidence of anemia in pregnant women, with the OR value of 13.652 meaning that pregnant women with high-risk parity were 13 times more likely to experience anemia compared to pregnant women with low-risk parity.

The results of this study are also in line with a study conducted by Muthia Sari Mardha (2018) showing that of the 35 pregnant women (100%), 5 pregnant women (14.3%) were in primigravida parity of which 2 pregnant women were not anemic (5.7%) and 3 pregnant women (8.6%) had mild anemia. Then, out of 26 pregnant women (74.3%) with multigravida parity, 7 pregnant women were not anemic (20.0%), 17 pregnant women had mild anemia (48.6%) and 2 pregnant women had moderate anemia (5.7%). The study also showed that of the 4 pregnant women with grande multigravida parity, 1 pregnant women had mild anemia (2.9%) and 3 pregnant women had moderate anemia (8.6%). Based on the results of the chi-square test in the study with a confidence level of 95% with α = 0.05, the p-value obtained was 0.007 (p =0.007 < α (0.05), meaning that there was a relationship between pregnant women with parity and anemia at Hj. Dermawati Nasution Tembung maternity hospital

In other words, pregnant women with high-risk parity have more tendency to experience anemia compared to pregnant women with low-risk parity. This is because higher parity exacerbates the risk of bleeding. A woman with high parity has a large number of children which means that the high level of sharing of available food and other family resources can interfere with pregnant woman's food intake.

Relationship between Maternal Age and Anemia in Third Trimester Pregnant Women

The table above shows that of the 37 respondents who had risky age, 32 respondents (86.5%) experienced anemia and 5 respondents (13.5%) did not have anemia. Based on the results of the chi-square statistical test, the p-value obtained was 0.000 (p-value < α = 0.05), meaning that there is a significant relationship between maternal age and anemia in third trimester pregnant women in Marga Bhakti Village in 2021. Thus, the hypothesis stating that there is a relationship between maternal and the occurrence of anemia in third trimester pregnant women has been statistically proven. The Odds Ratio (OR) value was 147,200, meaning that respondents who are at risky age are 147,200 times more likely to experience anemia than respondents who are not at risky age.

Tabel 3

Maternal Age	Anemia in Third Trimester Pregnant Women				Total		*p-value*	*OR*
	Yes		No					
	n	%	n	%	N	%		
At risk	32	86,5	5	13,5	37	100	0,000	147.200
Not at risk	1	4,2	23	95,8	24	100		

The results of this study are in line with a study conducted by Jasmi (2014) showing that of the 145 pregnant women with high-risk age, 57 pregnant women (83.8%) had a high risk of experiencing anemia, and 20 pregnant women (32.9%) with low-risk age experienced anemia. The results of

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statistical tests using chi square obtained the p-value of 0.000 (p <0.05) meaning that there was a relationship between maternal age and the incidence of anemia in pregnant women, with the OR value of 15.818, which means that pregnant women with high-risk age were15 times more likely to experience anemia than pregnant women at low-risk age.

In addition, a study carried out by Muthia Sari (2018) showed that out of 35 pregnant women at the Hj. Dermawati Nasution Maternity Hospital, seven pregnant women (20%) were in the age group under 20 years old; one person (2.9%) did not have anemia and six people (20%) had mild anemia. Then, the age group of 20-35 years old consisted of 13 people (37.1%); eight people (22.9%) were not anemic and five people (14.3%) had mild anemia. The age group above 35 years old consisted of 14 people (40%) in which nine people (28.6%) had mild anemia and 5 people (14.3) had severe anemia. The results of Chi-square test with 95% confidence level with α = 0.05 obtained the p-value of 0.001 (p < α = 0.05, meaning that there was a relationship between the age of pregnant women and anemia at the Hj. Dermawati Nasution Tembung Maternity Hospital

In other words, pregnant women with high-risk age are more likely to experience anemia than pregnant women with low-risk age. This is because pregnant women who are over 35 years old tend to experience anemia due to the effect of decreased iron reserves in the body. In the first pregnancy, women aged over 35 years will also have a risk of complications of childbirth and the decline in the functions of the reproductive organs. A woman who gets pregnant in the age range of 20-35 years will be healthier because she is still in her reproductive age

CONCLUSIONS

There was a significant relationship between maternal age partially and anemia in third trimester pregnant women in Marga Bhakti Village in 2021.

SUGGESTIONS

The results of this study are expected to provide recommendations and information for stakeholders at Marga Bhakti Village to be more active in providing training for health workers, especially for obstetricians and health workers who are directly related to the incidence of anemia to carry out every health action in accordance with SOP (Standard Operating Procedures) aiming to reduce morbidity and death rates for the welfare of society.

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