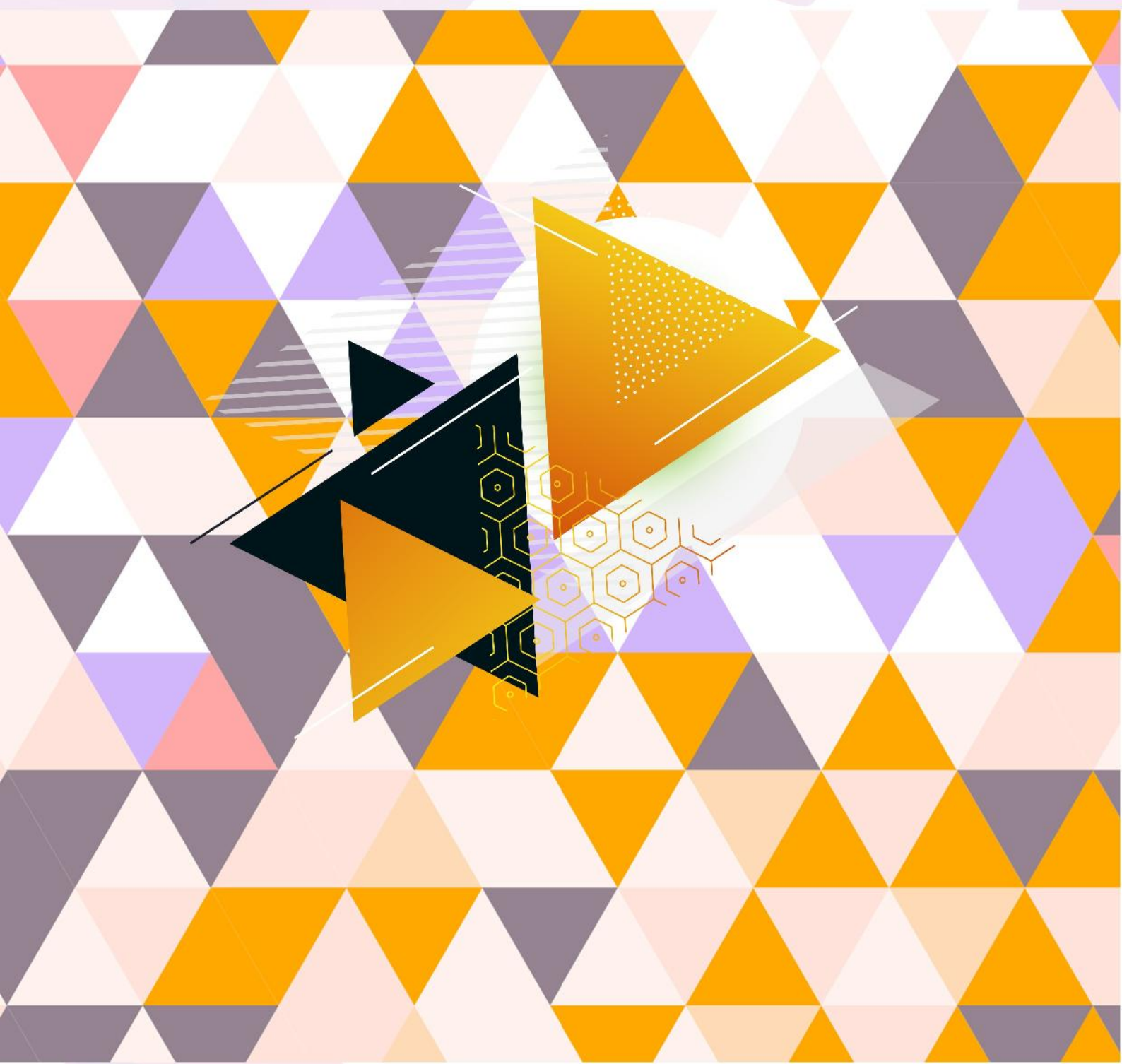


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The Factors Associated with the Incidence of Anemia in Pregnant Women in Pisangan Public Health Center Visitors in 2020

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ABSTRACT

Anemia is a global health problem and has a very serious impact on maternal and fetal morbidity and mortality. Indonesia data on anemia of pregnant women has increased to reach 48,9% in 2018. Puskesmas Pisangan is much lower in proportion in 2017 at 7,43% and in 2018 at 6,71%. The purpose of this study was to know the factors associated with the incidence of anemia in pregnant women in Pisangan Public Health Center Visitors in 2020. This study was quantitative analytic research by cross-sectional study design. Population of this study were all of pregnant women who visit to Public Health Center of Pisangan in January – December 2019 period with complete data according to the register of pregnant women and the result of Hb measure as many 265 pregnant women by a total sampling technique. Secondary data were analyzed using Chi-Square statistical test. There was association of statistically significant between gestation age factor (p value 0,016; 95% CI: 1,26-6,87) with the incidence of anemia in pregnant women in the Pisangan Public Health Center Visitor in 2020. There were no association statistically significant between mother's age (p value 0,709; 95% CI: 0,44-1,59), parity (p value 0,948; 95% CI: 0,47-2,77) and CED nutritional status (p value 0,127; 95% CI: 0,91-3,46). Factor associated with the incidence of anemia in pregnant women in the Pisangan Public Health Center Visitor was gestation age. There were no association between mother's age, parity and CED nutritional status factors. Although, CED nutritional status was not significant, the proportion showed that there was a possibility of tendency pregnant women with CED nutritional status can risk anemia. In handling the nutrition of pregnant womens requires the effort of all parties both midwives and society.

Keywords: Anemia, Pregnant Women, CED Nutritional Status

INTRODUCTION

Anemia is defined as a hemoglobin concentration in blood that is lower than normal according to the threshold value according to age and sex.¹ Pregnant women are one of the population most at risk of developing anemia. Anemia in pregnant women is generally relative anemia due to physiological changes in the body during pregnancy, namely hemodilution.²

Pregnancy anemia is stated when pregnant women have Hb levels <11 g/dL in the first and third trimesters, while in the second trimester the Hb levels <10.5

gr/dL. Anemia of pregnancy is called "Potential danger to mother and child" Therefore, anemia requires serious attention in health services.³

The proportion of pregnant women who experience iron deficiency anemia is around 35-75% in developing countries and 18% in developed countries. Maternal mortality rate reaching 40% in developing countries is closely related to anemia in pregnancy. *World Health Organization* (WHO) is targeting a 50% reduction in anemia in women of childbearing age by 2025.¹

In Indonesia, anemia is generally caused by iron deficiency, so it is known as iron nutritional anemia/AGB. Iron is

needed by pregnant women in the formation of blood cells. In pregnant women, hemodilution occurs where the increase in the volume of fluid is more than the blood cells so that the pregnant woman's Hb level is reduced. Lack of folic acid can also cause anemia, in addition to congenital abnormalities in babies and miscarriages.⁴

Based on the results of Riskesdas in 2013, the prevalence of anemia in pregnant women in Indonesia was 37.1%, increasing to 48.9% in 2018. This figure is classified as a serious public health problem (severe public health problem) whose prevalence limit is $\geq 40\%$. There are 84.6% pregnant women aged < 25 years experiencing anemia and 57.6% pregnant women aged ≥ 35 years experiencing anemia.⁵

Anemia in pregnant women can increase the risk of preterm birth, maternal and child mortality and infectious diseases. Iron deficiency anemia in the mother can also affect the growth and development of the fetus/baby during pregnancy and afterward.⁶ For the fetus, anemia in pregnant women can increase the risk of preterm labor/preterm delivery, intra-uterine growth retardation (IUGR) and intra-uterine fetal death (IUFD).⁴

Factors that influence the occurrence of pregnancy anemia include gestational age, parity, maternal age, CED nutritional status. The results of the study by Miarti et al. (2020) found that the age of mothers < 20 or > 35 years will have a 1.14 times chance of experiencing anemia compared to pregnant women aged between 20-35 years.⁷ The results of a study conducted by Tanziha et al (2016) show that pregnant women in urban areas who have KEK have a chance of anemia by 3.243 times compared to pregnant women who do not have CED.⁸

Pregnant women in the second and third trimesters were 3.32 times more likely to develop anemia than women who were pregnant in the first trimester.

Likewise, pregnant women who had parity ≥ 3 had a 1.95 times chance of developing anemia than pregnant women who had parity < 3 .⁹ Based on the results of multivariate analysis by Amallia et al. (2017), it was found that parity was the most dominant variable affecting the incidence of anemia in pregnant women with a probability of 4.021 times.¹⁰ To prevent anemia in pregnant women, you can provide blood supplement tablets (TTD) of at least 90 tablets during pregnancy. Banten is the province with the lowest coverage of iron supplementation for pregnant women, namely 32.11%.⁶

Based on the results of research conducted by Nofita, Siallagan and Yulianti at 4 Public Health Centers in South Tangerang, namely the Ciputat Timur Subdistrict Health Center, Pisangan Community Health Center, Rengas Health Center, Pondok Ranji Health Center in 2018, the prevalence of anemia in pregnant women was 20.9%. Meanwhile, the MCH Report Data at Pisangan Health Center in 2017, anemia for pregnant women was 7.43% and in 2018 it was 6.71%. Compared to the national figure in 2018 of 48.9%, the data on maternal anemia at Puskesmas Pisangan is very low, far from the local average data for 4 Puskesmas, and also very low far from the average national data.

Based on the data above, this study aims to conduct an in-depth analysis of the factors associated with anemia in pregnant women based on secondary data from visitors to the Pisangan Health Center in 2019.

METHODS

This research is a quantitative analytic study using a cross-sectional study design. The research was conducted at the Pisangan Health Center from April to May

2020. Data collection used secondary data in 2019 obtained from the registration of pregnant women who visited the Pisangan Health Center and laboratory results of measuring the Hb of pregnant women. Complete recorded data were used as samples and taken by a total sampling of 265 pregnant women.

The data collection tool uses the master table data collection format made by the researcher based on the research objectives which consists of columns to facilitate the classification of the variables to be studied. Measurement of Hb at Pisangan Health Center uses the POCT tool *Quick-Check* Hb.

The data analysis of this research was carried out using *software* statistics with two stages, namely univariate analysis to describe each research variable and bivariate analysis to obtain the relationship of the independent/dependent variable (incidence of anemia in pregnant women) with dependent/independent variables (maternal age, gestational age, parity, CED nutritional status) with using the Chi Square test statistical analysis.

RESULTS AND DISCUSSION

Based on table 1, it can be seen that of the 265 pregnant women, 29.4% had anemia, while 70.6% did not have anemia. The results of the analysis on the age of pregnant women, namely the age between 20-35 years were found at most as much as 77.4%. The variable of gestational age was found mostly in the second and third trimesters as much as 81.5%. The parity variable was mostly found in mothers of less than 3 children, 90.6%. And pregnant women with nutritional status not CED were found mostly at 83.0%.

Table 1. Characteristics of Pregnant Women in Pisangan Health Center Visitors

Variable	n	%
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Anemia		
Yes	78	29.4
Not	187	70.6
Age		
<20 and> 35 years	60	22.6
20-35 years	205	77.4
Gestational age		
Trimester II & III	216	81.5
Trimester I	49	18.5
Parity		
≥3 children	25	9.4
<3 children	240	90.6
CED Nutrition Status		
CED	45	17.0
Not CED	220	83.0

Based on table 2, it can be seen that the results of the Chi-Square statistical analysis with the Continuity Correction test showed that there was no significant relationship between maternal age and the incidence of anemia in pregnant women at Pisangan Health Center visitors $p = 0.709$ ($p > 0.05$).

The results of this study are in line with that conducted by Miarti (2020) with a value of $p = 0.487$ ($p > 0.05$) indicating that the factor of maternal age and the incidence of anemia in pregnant women is not statistically significant.⁸ The incidence of anemia in pregnant women has no effect on the too old and too young age groups. This insignificant result could also be caused because even though the age of the mother is at risk, the pregnant woman routinely checks her pregnancy so that the pregnancy can be controlled as early as possible.

This study contradicts the research of Astriana (2017) and Ramadhannanti (2018) that there is a relationship between

maternal age and the incidence of anemia in pregnant women.^{12,13} Where pregnant women aged less than 20 years and more than 35 years are more prone to anemia. This is due to physical and psychological factors that can lead to pregnancy complications. Pregnant women under 20 years of age have a chance of developing anemia due to the biological development of reproductive health that is not optimal. Meanwhile, mothers who are over 35 years of age are susceptible to decreased immune system, so that pregnant women are susceptible to various infections and eventually catching diseases.

This is supported by the results of research conducted by Amalia, et al. (2017) which states that pregnant women at a risky age have a 2.4 times chance of developing anemia compared to those who are not at risk, because pregnant women at a risky age will have an impact on maternal health and fetal growth. statistically proven p value=0.032, which means there is a relationship between the age of pregnant women and the incidence of anemia.¹⁰ Maternal age 20-35 years is the ideal age in pregnancy because this age has healthy reproduction and is less risky for pregnancy

On the variable gestational age, the results of the Chi-Square statistical analysis with the Continuity Correction test showed that there was a significant relationship between gestational age and the incidence of anemia in pregnant women at Pisangan Health Center visitors $p = 0.016$ ($p < 0.05$). From the results of these statistics, there is a tendency that second and third trimester pregnant women who experience anemia (32.9%) have a 3 times greater chance of experiencing anemia compared to first trimester pregnant women.

This study is in line with the research of Putri and Yuanita (2020) with a p value of 0.021 ($p < 0.05$), which states that gestational age is statistically

significant with the incidence of anemia in pregnant women.¹⁵

This is in accordance with the statement of Lin, et al (2018) that pregnant women in the second trimester experience physiological changes because the increase in red blood cells is less with the increase in plasma so that they experience blood thinning. Meanwhile, mothers in the third trimester experienced a slowdown in the increase in blood plasma volume and inadequate iron supplementation.¹⁶

Based on a theoretical review, hemoglobin examination in pregnant women is carried out in the first and third trimester. Examination and monitoring of hemoglobin is carried out at least twice, in the first trimester to detect anemia early in pregnancy, while the third trimester is a critical condition for the increased nutritional needs of pregnant women.¹⁴ If the intake of iron in the blood is lacking, the hemoglobin level will decrease and result in impaired fetal growth. The need for iron in pregnant women increases in the second and third trimesters of gestation. Hidayati (2018) states that the increase in iron needs of pregnant women is not sufficient only for food consumption, even though foods that have been fortified with iron are also unable to meet this need. Therefore, iron fulfillment during pregnancy also depends on pre-pregnancy iron stores and iron supplements during pregnancy

Pregnancy anemia is associated with an increase in gestational age which causes the mother's condition to become weaker and the iron in the blood is divided for fetal growth in the uterus so that the iron-binding capacity of the mother's blood is reduced.¹⁰

Based on the results of the study, it shows that the factor of gestational age is one of the factors that influence the occurrence of anemia in pregnant women. This means that pregnant women who enter the third trimester of pregnancy really need nutritional intake, especially

iron, folic acid and vitamins, to meet the needs of fetal blood cells in the uterus. Thus, if the mother's needs for nutrients rich in iron, folic acid and vitamins are not fulfilled during the third trimester of pregnancy, it can cause anemia in pregnancy.

For the parity variable, the results of statistical analysis *Chi-Square* with the Continuity Correction test, it showed that there was no significant relationship between parity and the incidence of anemia in pregnant women in Pisangan Health Center visitors $p=0.948$ ($p > 0.05$).

The results of this study are in line with research conducted by Takdir (2017) with a p value of 0.963; Sjahriani and Faridah (2019) p value = 0.472, which means the value ($p > 0.05$) states that the parity factor is not statistically significant with the incidence of anemia in pregnant women.^{11,18} This could be because parity is not the main factor causing anemia in pregnancy, but there are other factors that can mask iron deficiency during pregnancy.

This study contradicts research conducted by Desfaufa (2016); Sanur (2017) and Wahyu (2016) which states that parity is statistically significant with the incidence of anemia in pregnant women with a p value less than 0.05 ($p < 0.05$).^{19,20,21}

According to Astriana's (2017) statement parity is an important factor in the incidence of iron anemia in pregnant women. Women who often get pregnant and give birth will increasingly experience anemia, this is due to the loss of iron which is quite a lot because women during pregnancy use the iron reserves in their body.¹²

Based on the results of the study, it shows that pregnant women have the same chance of getting anemia, both parity is at risk and parity is not at risk. This is because in this study, many respondents were found to have parity < 3 , including pregnant women who were pregnant with

their first child, so there was no significant difference between anemic pregnant women and those who were not anemic. Although statistically there was no significant relationship between parity and the incidence of anemia in pregnancy, risky parity is one of the many risk factors for pregnancy anemia, namely gestational age, iron consumption pattern, gestational distance, knowledge.²²

Statistical analysis results *Chi-Square* with the Continuity Correction test, it showed that there was no significant relationship between the CED nutritional status and the incidence of anemia in pregnant women at Pisangan Health Center visitors $p = 0.127$ ($p > 0.05$). Seen from the proportion, it shows that there is a tendency for pregnant women with CED nutritional status to experience anemia (40.0%).

This is in line with the research conducted by Abrori et al. (2015) that the CED nutritional status was not statistically significant, with the incidence of anemia in pregnant women, a p value of 0.116 ($p > 0.05$) was obtained.²³ This is usually because pregnant women have paid attention to nutritious foods that must be consumed during pregnancy so that the nutritional needs of pregnant women can be met. According to Manuaba (2009), mothers during their pregnancy should pay attention to the food they eat.²⁴

This study contradicts the research conducted by Miarti (2020) which states that the CED nutritional status is statistically significant with the incidence of anemia in pregnant women with p value of less than 0.05 ($p < 0.05$).⁷ This is supported by the fact that CED is associated with anemia which is closely related to a lack of protein intake. CED in pregnant women is associated with a chronic lack of protein intake that can occur in the long term. Thus the lack of protein intake will have an impact on the disruption of iron absorption which results in iron deficiency.²⁵

Nutrition is very influential on a person's nutritional state. Pregnant women experience CED due to lack of nutritional intake that contains balanced nutrition. Pregnant women should maintain and increase the supply of nutrients needed by the mother and fetus during pregnancy and increase energy intake. If pregnant women do not consume enough nutrients that contain iron, folic acid, vitamins and protein during pregnancy, the mother is likely to experience nutritional disorders or chronic energy deficiency which results in anemia. As Allah says in QS An-Nahl verse 114:

"so eat of what is lawful and good food which Allah hath provided for you; and thank ye the bounty of your Lord if it is Him ye serve."

From this verse, it can be seen that it is advisable to consume nutritious foods to maintain health in the body, especially for pregnant women in fulfilling their nutritional needs and for the fetus, such as consumption of foods rich in protein and iron so that there is no chronic energy deficiency which results in anemia.

Based on the results of the study showed that there was no relationship between the CED nutritional status and the incidence of anemia in pregnant women in Pisangan Health Center visitors. Even though the CED nutritional status is not significant, the proportion shows that there is a possibility that CED pregnant women tend to experience anemia. This is supported by the statement put forward by Wulandari (2017) that pregnant women who are CED usually tend to pay less attention to food consumption and absorption patterns in a balanced manner in their pregnancy.²⁶ Pregnant women are encouraged to consume a balanced nutritional diet, especially those containing vitamin C to help absorb iron in the body.²⁷

Table 2. The Relationship between Characteristics of Pregnant Women and

the Incidence of Anemia Pregnant Women at Pisangan Health Center Visitors

Variable	P value	OR	CI (95%)
Age			
<20 & > 35 years	0.709	0.839	0.44-1.59
20-35 years			
Gestational age			
Trimester II & III	0.016	2,938	1.26-6.87
Trimester I			
Parity			
≥3 children	0.948	1,143	0.47-2.77
<3 children			
CED nutritional status			
CED	0,127	1,778	0,91-3,46
Not CED			

CONCLUSION

Based on the results of the research and discussion, it can be concluded that from 265 samples studied, 78 (29.4%) pregnant women had anemia and 187 (70.6%) pregnant women who did not have anemia in Pisangan Health Center visitors. The proportion of factors of pregnant women who experience anemia are mostly pregnant women aged between 20-35 years (77.4%), second and third trimesters of pregnancy (81.5%), parity less than 3 (90.6%) and nutritional status

of mothers who are not CED (83.0%). The results of the Chi-Square statistical test showed that there was a significant relationship between gestational age factors (p value 0.016; 95% CI: 1.26-6.87) and the incidence of anemia in pregnant women at Pisangan Health Center visitors in 2020. Meanwhile, the mother's age factor (p value 0.709; 95% CI: 0.44-1.59), parity (p value 0.948; 95% CI: 0.47-2.77), and nutritional status of CED (p value 0.127; 95% CI: 0, 91-3.46) there is no significant relationship. Although the nutritional status of CED is not significant, the proportion indicates that there is a possibility that CED pregnant women tend to experience anemia.

Puskesmas Pisangan must distribute PMT biscuits for pregnant women, especially for anemic pregnant women who have CED as an effort to overcome the incidence of CED in pregnant women so that they can meet their calorie and protein nutritional needs.

In order for other researchers to be able to examine the CED nutritional status more deeply related to the incidence of anemia in pregnant women with different types of study designs so that the results of the study are more comprehensive.

PREFERENCES

1. WHO. *Global Nutrition Anaemia Policy Brief*. Geneva: Department of Nutrition for Health and Development World Health Organization. 2015.
2. Huang LL, et al. The Influence of Iron-deficiency Anemia during the Pregnancy on Preterm Birth and Birth Weight in South China. *Journal of Food and Nutrition Research*. 2015; 3 (9):570-574.
3. Astuti, R.Y. dan Ertiana, D. *Anemia dalam Kehamilan*. Jember: Pustaka Abadi. 2018.
4. Hardinsyah dan Supariasa. *Ilmu Gizi Teori & Aplikasi*. Jakarta: EGC. 2016.
5. Kementerian Kesehatan Republik Indonesia. *Hasil Utama Riset Kesehatan Dasar 2018*. Jakarta: Badan Penelitian dan Pengembangan Kesehatan Kemenkes RI. 2018.
6. Kemenkes RI. *Profil Kesehatan Indonesia tahun 2018*. Jakarta: Kementerian Kesehatan RI. 2019.
7. Miarti, dkk. Analisis Faktor yang Berhubungan dengan Kejadian Anemia pada Ibu Hamil di Puskesmas Dana dan Puskesmas Pasir Putih Kabupaten Muna. *Midwifery Journal*. 2020; Vol. 5, No. 1, hlm. 13-18.
8. Tanziha, dkk. Faktor Risiko Anemia Ibu Hamil di Indonesia. *Jurnal Gizi Pangan*. 2016; Vol. 11, No. 2, hlm. 143-146.
9. Alene, KA dan Abdulahi, MD. Prevalence of Anemia and Associated Factors among Pregnant Women in an Urban Area of Eastern Ethiopia. *Hindawi Publishing Corporation*. 2014; Hlm, 1-7.
10. Amallia, dkk. Faktor Risiko Kejadian Anemia pada Ibu Hamil di RS Bari Palembang. *Jurnal Kesehatan*. 2017; Vol. 8, No. 3, hlm. 389-393.
11. Takdir, N. *Analisis Faktor Risiko Anemia pada Ibu Hamil Trimester Ketiga*. Skripsi. Makassar: Fakultas Kedokteran Universitas Hasanuddin. 2017.
12. Astriana, W. Kejadian Anemia pada Ibu Hamil Ditinjau dari Paritas dan Usia. *Jurnal Ilmu Kesehatan*. 2017; Vol. 2, No. 2, hlm. 126-128.
13. Ramadhannanti, D. *Faktor-faktor yang Mempengaruhi Kejadian Anemia pada Ibu Hamil di Puskesmas Tegalrejo tahun 2017*.

- Skripsi. Yogyakarta: Poltekkes Yogyakarta. 2018.
14. Manuaba, dkk. *Pengantar Kuliah Obstetri*. Jakarta: EGC. 2007.
 15. Yuanita, V. Faktor-faktor yang Berhubungan dengan Kejadian Anemia pada Ibu Hamil di Puskesmas Bukit Sangkal Palembang tahun 2019. *Jurnal Kesehatan dan Pembangunan*. 2020; Vol. 10, No. 19, hlm. 118-125.
 16. Lin, L., et al. Prevalence, Risk Factors and Associated Adverse Pregnancy Outcomes of Anaemia in Chinese Pregnant Women: A Multicentre Retrospective Study. *BMC Pregnancy and Childbirth*. 2018; Vol. 18 (111).
 17. Hidayati, I dan Andyarini, E.N. Hubungan Jumlah Paritas dan Umur Kehamilan dengan Kejadian Anemia Ibu Hamil. *Journal of Health Science and Prevention*. 2018; Vol. 2, No. 1, hlm. 45.
 18. Sjahrani, T dan Faridah, V. Faktor-faktor yang Berhubungan dengan Kejadian Anemia pada Ibu Hamil. *Jurnal Kebidanan*. 2019; Vol. 5, No. 2. Hlm. 106-115.
 19. Desfaufa, E. Umur dan Paritas Ibu Berhubungan dengan Anemia pada Ibu Hamil di Klinik Bersalin Sumariani Kecamatan Medan Johor tahun 2016. *Jurnal Ilmiah PANNMED*. 2016; Vol. 11, No. 3, hlm. 154-157.
 20. Sanur, M. A. Hubungan Paritas dengan Kejadian Anemia pada Ibu Hamil Trimester III di Puskesmas Pleret Bantul tahun 2016. *Jurnal Fakultas Ilmu Kesehatan Universitas Aisyiyah Yogyakarta*. 2017.
 21. Wahyu, W. T. Hubungan Paritas dengan Kejadian Anemia pada Ibu Hamil di Puskesmas Godean II Sleman Yogyakarta 2015. *Jurnal Fakultas Ilmu Kesehatan Universitas Aisyiyah Yogyakarta*. 2016.
 22. Prahesti, R. *Analisis Faktor-faktor yang Berhubungan dengan Kejadian Anemia pada Ibu Hamil di Puskesmas Prambanan, Sleman, Yogyakarta*. Tesis. Surakarta: Pascasarjana Universitas Sebelas Maret. 2016.
 23. Abrori, dkk. Faktor Anemia Ibu Hamil di Puskesmas Putussibau Selatan. *Jurnal Vokasi Kesehatan*. 2015; Vol. 1, No. 4, hlm. 102-104.
 24. Manuaba. *Memahami Kesehatan Reproduksi Wanita*. Jakarta: EGC. 2009.
 25. Herawati, C dan Astuti, S. Faktor-faktor yang Berhubungan dengan Anemia Gizi pada Ibu Hamil di Puskesmas Jalaksana Kuningan. *Jurnal Kesehatan Kartika*. 2010; Hlm. 56.
 26. Wulandari, C. Pengaruh Kekurangan Energi Kronis (KEK) dengan Kejadian Anemia pada Ibu Hamil di Desa Tumpak Palem Kecamatan Sawo Kabupaten Ponorogo. *Jurnal Delima Harapan*. 2017; Vol. 8, No. 7, hlm. 50-53.
 27. Yosephin, B., dkk. *Buku Pegangan Petugas KUA: Sebagai Konselor 1000 HPK dalam Mengedukasi Calon Pengantin menuju Bengkulu Bebas Stunting*. Yogyakarta: Deepublish. 2019.