

FACTORS ASSOCIATED WITH ANEMIA IN FEMALE ADOLESCENTS

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ABSTRAK FAKTOR-FAKTOR YANG BERHUBUNGAN DENGAN ANEMIA PADA REMAJA PUTRI

Latar belakang: anemia adalah suatu keadaan yang ditandai dengan penurunan kadar eritrosit per satuan volume darah atau kadar hemoglobin yang tidak mencukupi kebutuhan fisiologis tubuh.

Tujuan: untuk mengetahui hubungan status gizi, siklus menstruasi, dan pengetahuan dengan anemia pada remaja putri di desa Karya Mukti tahun 2021.

Metode: penelitian ini menggunakan survei analitik kuantitatif dengan pendekatan cross-sectional. Populasi dalam penelitian ini adalah seluruh remaja putri di desa Karya Mukti. Sampel penelitian ini adalah 77 remaja putri yang diperoleh secara sistematis dengan menggunakan metode accidental sampling. Data kemudian dianalisis dengan menggunakan analisis data univariat dan bivariat

Hasil: dari 77 responden didapatkan 35,1% responden mengalami anemia. 31,2% responden berstatus gizi normal, dan 68,8% responden berstatus gizi tidak normal. Mengenai siklus menstruasi, 37,7% responden memiliki siklus menstruasi yang normal, dan 62,3% responden memiliki siklus menstruasi yang tidak normal. Kemudian dari segi pengetahuan, 57,1% responden memiliki pengetahuan baik, dan 42,9% responden memiliki pengetahuan kurang baik. Kemudian, hasil uji chi-square pada variabel status gizi diperoleh nilai p sebesar 0,002 ($\alpha = 0,05$) yang berarti ada hubungan yang bermakna antara status gizi dengan anemia. Hasil uji chi-square pada variabel siklus menstruasi diperoleh p-value sebesar 0,001 ($\alpha = 0,05$) artinya ada hubungan yang bermakna antara siklus menstruasi dengan anemia. Hasil uji chi-square pada variabel pengetahuan diperoleh p-value 0,000 ($\alpha = 0,05$) artinya ada hubungan yang bermakna antara pengetahuan dengan anemia.

Kesimpulan: ada hubungan antara status gizi, siklus menstruasi, dan pengetahuan dengan anemia pada remaja putri.

Saran: diharapkan aparat desa Karya Mukti aktif memberikan penyuluhan terkait anemia kepada remaja putri

Kata Kunci: Anemia, status gizi, siklus menstruasi, pengetahuan

ABSTRACT

Background: anemia is a condition characterized by decreased levels of erythrocytes per unit volume of blood or hemoglobin levels that are insufficient for the body's physiological needs.

Objective: to determine the relationship between nutritional status, menstrual cycles, and knowledge with anemia in female adolescents in Karya Mukti village in 2021.

Methods: this study used a quantitative analytic survey with a cross-sectional approach. The population in this study was all female adolescents in Karya Mukti village. The sample of this study was 77 female adolescents who were obtained systematically using a accidental sampling method. The data were then analyzed using univariate and bivariate data analysis

Results: of the 77 respondents, 35.1% of the respondents had anemia. 31.2% of the respondents had normal nutritional status, and 68.8% of the respondents had abnormal nutritional status. Regarding the menstrual cycles, 37.7% of the respondents had normal menstrual cycles, and 62.3% of the respondents had abnormal menstrual cycles. Then in terms of knowledge, 57.1% of the respondents had good knowledge, and 42.9% of the respondents had poor knowledge. Then, the results of the chi-square test on the nutritional status variable gained a p-value of 0.002 ($\alpha = 0.05$) which means that there was a significant relationship between nutritional status and anemia. The results of the chi-square test on the menstrual cycle variable obtained a p-value of 0.001 ($\alpha = 0.05$) meaning that there was a significant relationship between the menstrual cycle and anemia. The results of the chi-square test on the knowledge variable obtained a p-value of 0.000 ($\alpha = 0.05$) meaning that there was a significant relationship between knowledge and anemia.

Conclusion: there was a relationship between nutritional status, menstrual cycles, and knowledge with anemia in female adolescents.

Suggestions: it is hoped that the officials of Karya Mukti village actively provide counseling related to anemia to female adolescents

Keywords: Anemia, nutritional status, menstrual cycles, knowledge

INTRODUCTION

Anemia is a major nutritional problem occurred throughout the world. The World Health Organization (WHO) defines anemia as a condition in which the hemoglobin level in the blood is lower than normal (Ghosyen Publishing, 2020). Adolescence is a transition from childhood to adulthood accompanied by several changes. In the process of those changes, adolescents face various problems related to physical changes, nutritional adequacy, psychosocial development, emotions, and intelligence that affect their health. Therefore, adolescence is a period that requires more nutrition for growth and development (IDAI, 2014).

The prevalence of anemia in Indonesia based on the 2013 Riskesdas reached 37.1% and increased to 48.9% in the 15-18 year age group in 2018 (Riskesdas, 2018). According to the data from the South Sumatra Provincial Health Office, the number of young women aged 15-18 years who had anemia in 2014 was 571 people, and in 2015 were 1.060 people. Meanwhile, based on the data from the Palembang City Health Office, the number of young women aged 15-18 years who had anemia in 2013 was 343 people and in 2014 were 118 people.

Based on the data from the Ogan Komering Ulu District Health Office, the number of young women aged 10-14 years who had anemia in 2020 was 78 people. Whilst, the number of young women aged 15-18 years who had anemia in 2020 was 131 people (Profil Dinas Kesehatan Oku).

Factors related to anemia in adolescents include nutritional status, cycles and length of menstruation, knowledge, diet patterns, socio-economic and so on (Depkes, 2008). A study conducted by Lili Suryani (2017) showed that of the 89 respondents who were not anemic, 77 respondents (93.9%) had good knowledge. Whilst, 68 respondents who had poor knowledge were anemic. Then, based on the results of the chi-square test, the p-value gained was 0.000 ($p\text{-value} \leq 0.05$) which means that H_a was accepted and H_o was rejected, meaning that there was a relationship between knowledge and anemia in female adolescents at SMK N 6 Palu.

Based on the preliminary survey conducted in 2018 in the work area of Karya Mukti Village, of the 311 female adolescents, 82 people had anemia. Then, in 2019 of the 333 people, 70 people had

anemia. In 2020 of the 331 people, 57 people had anemia. In addition, in 2021 from January – May, of the 335 people, 40 people had anemia (Profil Puskesmas Karya Mukti)

RESEARCH METHODS

This study was a quantitative analytic survey research. The independent variables included nutritional status, menstrual cycle, and knowledge. Then, the dependent variable was the incidence of anemia in female adolescents. This study was carried out in August 2021 in the work area of Karya Mukti village. The population in this study was 335 female adolescents in Karya Mukti village in 2021. An accidental sampling method was used in this study. The sample in this study was 77 female adolescents in Karya Mukti village. Univariate and bivariate data analysis using chi-square were used to analyze the data obtained.

RESEARCH RESULTS

Univariate analysis

Table 1
Frequency Distribution and Percentage of Respondents based on Anemia in Female Adolescents in Karya Mukti Village in 2021

Anemia in Female Adolescents	Frequency (N)	Percentage (%)
Yes	27	35,1
No	50	64,9

Table 1 above shows that of the 77 respondents, 27 respondents (35.1%) had anemia, and 50 respondents (64.9%) did not have anemia.

Table 2
Frequency Distribution and Percentage of Respondents Based on Nutritional Status in Karya Mukti Village in 2021

Nutritional Status	Frequency (N)	Percentage (%)
Normal	24	31,2
Abnormal	53	68,8

Table 2 above shows that of the 77 respondents, 24 respondents (31.2%) were with

normal nutritional status, and 53 respondents (68.8%) were with abnormal nutritional status.

Table 3
Frequency Distribution and Percentage of Respondents based on Menstrual Cycles in Karya Mukti village in 2021

Menstrual Cycles	Frequency (N)	Percentage (%)
Normal	29	37,7
Abnormal	48	62,3

Table 3 above shows that of the 77 respondents, 29 respondents had normal menstrual cycles (37.7%), and 48 respondents (62.3%) had abnormal menstrual cycles.

Bivariate Analysis

Table 5
The Relationship between Nutritional Status and Anemia in Female Adolescents in Karya Mukti village

Nutritional Status	Anemia in Female Adolescents				Total		p-value	OR
	Yes		No		N	%		
	n	%	n	%				
Normal	2	8,3	22	91,7	24	100	0,002	0,102
Abnormal	25	47,2	28	52,8	53	100		

Table 5 above shows that of the 24 female adolescents with normal nutritional status, 2 people (8.3%) had anemia, and 22 (91.7%) had no anemia.

Meanwhile, out of 53 female adolescents whose nutritional status was not normal, 25 people (47.2%) had anemia and 28 (52.8%) had no anemia.

Table 6
The Relationship between Menstrual Cycles and Anemia in Female Adolescents in Karya Mukti Village

Menstrual Cycles	Anemia in Female Adolescents				Total		p-value	OR
	Yes		No		N	%		
	n	%	n	%				
Normal	3	10,3	26	89,7	29	100	0,001	0,115
Abnormal	24	50,0	24	50,0	48	100		

Table 6 above shows that of the 29 female adolescents whose menstrual cycles were normal, 3 people (10.3%) had anemia, and 26 people (89.7%) had no anemia. Meanwhile, of the 48 young women whose menstrual cycles were not normal, 24 people (50.0%) had anemia and 24 people (50.0%) had no anemia.

From table 7 above, of the 44 female adolescents who had good knowledge, 5 people (11.4%) had anemia and 39 people (88.6%) had no anemia. Meanwhile, of the 33 female adolescents who had poor knowledge, 22 people (66.7%) had anemia and 11 people (33.3%) had no anemia.

Table 4
Frequency Distribution and Percentage of Respondents Based on Knowledge in Karya Mukti Village in 2021

Knowledge	Frequency (N)	Percentage (%)
Good	44	57,1
Poor	33	42,9

Table 4 above shows that of the 77 respondents, 44 respondents (57.1%) had good knowledge, and 33 respondents (42.9%) had poor knowledge.

Table 7
The Relationship between Knowledge and Anemia in Female Adolescents in Karya Mukti Village

Knowledge	Anemia in Female Adolescents				Total		p-value	OR
	Yes		No		N	%		
	n	%	n	%				
Good	5	11,4	39	88,6	44	100	0,000	0,064
Poor	22	66,7	11	33,3	33	100		

DISCUSSION

The results of this study showed that of the 77 respondents, 27 respondents (35.1%) had anemia and 50 respondents (64.9%) had no anemia. This is in line with the results of a study carried out by Fhany Elshara (2014) showing that of 123 samples, 63 respondents had normal nutritional status, 52 people with thin nutritional status, and 8 people with obese nutritional status. The respondents in the study had normal nutritional status with an average BMI of 19.96 kg/m² but many also had a thin nutritional status with the lowest BMI of 16.01 kg/m². The results of the chi-square statistical test in the study showed that the p-value was 0.008 ($p < 0.05$) which means that there was a significant relationship between nutritional status and the incidence of anemia in female adolescents at SMAN 2 Sawahlunto.

On the other hand, a study conducted by Dea Indartuti (2014) showed that 1 person (25%) had thin nutritional status and had anemia, and 3 people (50%) had obese nutritional status and had anemia. In addition, the results of the chi-square test showed the value of $p > 0.05$ which means that there was no significant relationship between nutritional status and the incidence of anemia in female adolescents.

The results of the present study indicate that female adolescents with normal nutritional status are less anemic than those who are with abnormal nutritional status. This is because food consumption affects a person's nutritional status. Good nutritional status or optimal nutritional status occurs when the body gets enough nutrients that are used efficiently. Malnutrition occurs when the body experiences a deficiency of one or more essential nutrients. Nutritional disorders are caused by primary and secondary factors. The primary factor is related to the wrong person's diet in terms of quantity and quality caused by inadequate supply of food, poor distribution of food, poverty, ignorance, wrong eating habits, and so on. Secondary factors include all factors that cause nutrients not to reach the body's cells after food is consumed such as depending on digestion, bad teeth, structural abnormalities of the digestive tract, and enzyme deficiency.

Regarding the menstrual cycles, the results of this study indicate that female adolescents who have normal menstrual cycles are less anemic than those whose menstrual cycles are not normal. This is because the longer menstruation lasts, the longer the blood is secreted from the body.

Then, in terms of knowledge, the results of this study showed that female adolescents who had good knowledge were less anemic than those who had poor knowledge. The level of knowledge can be influenced by several factors including age, education, experience, social, culture, environment, intelligence, and information from parents, books, and mass media. In addition, knowledge can also be influenced by someone's behavior starting from knowing something and then knowing the benefits that lead to a positive attitude.

CONCLUSION

There was a partially significant relationship between nutritional status, menstrual cycle, and knowledge with anemia in female adolescents.

SUGGESTION

The results of this study are hoped to provide suggestions for the Head of Karya Mukti village to be more active in providing training for obstetricians and health workers, especially those who are directly related to the incidence of anemia to carry out every health treatment based on SOP (Standard Operating Procedures) which aims to reduce morbidity and mortality rates.

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