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Relationship between nutritional status and the incidence of anemia in adolescent women

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A B S T R A C T

Anemia is the ability of red blood cells to carry oxygen to other tissues is low (Onyeabo et al., 2017). The prevalence of adolescents in Lampung Province is 10.9% which is below the national prevalence (13.6%). The number of adolescents at SMPN 28 Bandar Lampung who had more Anemia was 64 students with HB <12 gr%, while SMPN 26 had fewer Anemia students with 26 students with HB <12 gr%. The purpose of this study was to determine the relationship between nutritional status and the incidence of anemia in adolescents in Public Junior High School 28 Bandar Lampung in 2021. This type of research is quantitative with a cross sectional approach. Research subjects were young women at SMPN 28 Bandar Lampung, with a sample of 93 respondents. The object of research is nutritional status and the incidence of anemia. The research was carried out at SMPN 28 Bandar Lampung. Data collection was carried out using observation sheets. Data analysis was carried out univariately and bivariately (gamma test). The results of the study revealed that 71 respondents with normal nutritional status (76.3%), Respondents with no incidence of anemia were 53 (57.0%). There is a relationship between nutritional status and the incidence of anemia in adolescents at SMP Negeri 28 Bandar Lampung in 2021 (p-value = 0.000). It is suggested that health workers can provide counseling about balanced nutrition or PUGS through schools and how to choose healthy food and health knowledge regarding adolescent reproductive health needs to be given as early as possible

Kata kunci:

Kejadian Anemia
Status Gizi
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A B S T R A K

Anemia adalah kemampuan sel darah merah untuk untuk membawa oksigen kejaringan lain rendah (Onyeabo *at al*., 2017). Prevalensi remaja di Provinsi Lampung terjadi 10.9% berada dibawah prevalensi nasional (13.6%). Jumlah remaja SMPN 28 Bandar Lampung yang Anemia lebih banyak sejumlah 64 siswa HB <12 gr %, sedangkan SMPN 26 jumlah remaja yang Anemia lebih sedikit sejumlah 26 siswa HB <12 gr % Tujuan penelitian ini adalah diketahui hubungan status gizi dengan kejadian anemia pada remaja di Sekolah Menengah Pertama Negeri 28 Bandar Lampung Tahun 2021. Jenis penelitian kuantitatif dengan pendekatan cross sectional. Subjek Penelitian remaja putri di SMPN 28 Bandar Lampung, dengan sampel sebanyak 93 responden. Objek penelitian status gizi dan kejadian anemia. Penelitian telah dilaksanakan di SMPN 28 Bandar Lampung. Pengumpulan data dilakukan menggunakan lembar observasi. Analisis data dilakukan univariat dan bivariat (uji gamma). Hasil penelitian diketahui reponden dengan status gizi normal sebanyak 71 (76,3%), responden dengan tidak kejadian anemia sebanyak 53 (57,0%). Ada hubungan status gizi dengan kejadian anemia pada remaja di Sekolah Menengah Pertama Negeri 28 Bandar Lampung Tahun 2021 (p-value = 0,000). Saran tenaga kesehatan dapat memberikan penyuluhan tentang gizi seimbang atau PUGS melalui

sekolah dan cara memilih makanan yang sehat dan pengetahuan kesehatan mengenai kesehatan reproduksi remaja perlu diberikan sedini mungkin

INTRODUCTION

Anemia is a medical problem that can be found throughout the world and in several other developing countries in the world. Iron deficiency anemia occurs at all stages of the life cycle, often occurs in pregnant women and young children, adolescents, especially girls, are prone to iron deficiency. Adolescents (age 10-19 years) are at high risk of experiencing iron deficiency and anemia due to accelerated increases in iron requirements, poor iron intake, high rates of helminth infections and social norms of early marriage and teenage pregnancy (WHO, 2019). Adolescents are susceptible to iron deficiency due to rapid growth (Camaschella, 2019).

Anemia is the ability of red blood cells to carry oxygen to other tissues is low (Onyeabo et al., 2017). The prevalence of anemia in the world reaches (29-43%) in women ranging from (15%) to (18%), there are (29%) of non-pregnant women, and (25.4%) and (29%) of pregnant women, teenage girls (12-19 years) there are (15.6%) (WHO, 2020). In Indonesia, the highest prevalence of anemia is in pregnant women, namely (48.9%), followed by toddler age (38.5%), young women (32%) (Riskesdas, 2018). The prevalence of adolescents in Lampung Province is 10.9% which is below the national prevalence (13.6%). There are 5 districts with a prevalence rate above the provincial prevalence rate, namely South Lampung, East Lampung, Central Lampung, Metro City, North Lampung. There are 3 districts/cities that have a higher prevalence than the national prevalence namely East Lampung (23%), North Lampung (21.8%) and Metro City (15%) (Riskesdas, 2018).

Clinical signs and symptoms of anemia are pallor, weakness, epithelial cell changes such as dry mouth, cheilosis (cracks in the corners of the mouth), cheilitis, atrophic glossitis, hair loss (Camschella, 2015). The impact of anemia on adolescents causes various kinds of health problems, including the following: decreased immunity, decreased concentration, decreased academic achievement, unfit and decreased productivity, anemia in adolescent girls can increase the risk of death during childbirth, premature birth, and babies who tend to have low body weight (Kemenkes RI, 2021).

Young women tend to go on a strict diet to get an ideal body and reduce food consumption so that it can cause a deficiency of the substances the body needs including iron (Masthalina et al, 2015). Adolescents who begin to pay attention to appearance will be affected by nutritional status (nutrition status), which is the state of the body as an expression of a state of balance between food consumption and absorption of nutrients and the use of these nutrients Nutritional status is divided into poor nutritional status, undernutrition, good nutrition and excess nutrition. If the nutritional status is not good, it is feared that the iron status is also not good, so that it can cause anemia. So the need for calories, protein, and microprotein in the adolescent age group needs to be considered (Supariasa, 2012).

RESEARCH METHODS

The population in this study were all young girls in class VII of SMP Negeri 28 Bandar Lampung in 2021, totaling 93 people. This study uses quantitative research with a cross sectional approach so that research subjects can represent the population, so the sampling method used is total sampling.

The information collected is primary information. Primary information is obtained by distributing questionnaires to respondents to get answers to the variables studied. The researchers themselves tried the distribution of the questionnaire. The measuring tool used in this research is a questionnaire and the measurement method is an interview. The data analysis carried out in this research was using univariate analysis and then analyzed using bivariate analysis.

RESEARCH RESULTS AND DISCUSSION

Table 1
Frequency distribution of nutritional status in adolescents at SMPN 28 Bandar Lampung in 2021

No	Nutritional status	frequency	
		N	%
1	Not enough	22	23.7
2	Normal	71	76.3
	Total	**93**	**100**

Based on table 1, it is known that there are 22 respondents with poor nutritional status (23.7%), and respondents with normal nutritional status as many as 71 (76.3%).

Table 2
Distribution of the frequency of anemia among adolescents at SMPN 28 Bandar Lampung

No		frequency	
		N	%
1	Anemia	40	43
2	Not anemic	53	57
	Total	**93**	**100**

Based on table 4.2, it is known that there were 40 (43.0%) respondents with anemia, and 53 (57.0%) respondents with no anemia.

Table 3
Relationship between nutritional status and the incidence of anemia in adolescents at SMPN 28 Bandar Lampung in 2021

Nutritional status	Hyperemesis Gravidarum				Total		Correlation coefficient (r)	P-Value
	At risk		No Risk					
	N	%	N	%	N	%		
More or less	17	77.3%	5	22.7%	22	59.0%	0.753	0.000
Normal	23	32.4%	48	67.6%	71	41.0%		
Total	40	100%	53	100%	93	100%		

Based on table 3, it is known that of the 22 respondents with less/more nutritional status, 17 (77.3%) experienced anemia, and 5 (22.7%) respondents did not experience anemia. Of the 71 respondents with normal nutritional status, 23 (32.4%) experienced anemia, and 48 (67.6%) respondents did not experience anemia.

From the statistical test results, the value of the gamma coefficient is 0.753. This means that there is a positive relationship between nutritional status and the incidence of anemia and the relationship is very strong, namely 75.3%. The significance value is 0.000. Because the significance value is less than the significance level used 5% (0.000 <0.05), reject the initial hypothesis and conclude that there is a relationship between nutritional status and the incidence of anemia in adolescents at SMPN 28 Bandar Lampung in 2021 at a significance level of 5%.

Adolescents who begin to pay attention to their appearance will affect nutritional status. Nutritional status is a state of the body as an expression of a state of balance between food consumption and absorption of nutrients and the use of these nutrients (Supariasa, 2012). In addition, young women tend to go on a strict diet to get an ideal body and reduce food consumption so that it can cause a deficiency of substances the body needs including iron (Masthalina et al, 2015). According to the researcher, his nutritional status is normal for Hb and he has anemia, because the teenager is menstruating. At the time of examination, teenagers were menstruating and teenagers with insufficient iron intake, so teenagers consumed a strict diet because today's teenagers are afraid of getting fat.

CONCLUSIONS AND RECOMMENDATIONS

a. Conclusion
   1. Is knownrespondents with poor nutritional status were 22 (23.7%), and respondents with normal nutritional status were 71 (76.3%).
   2. It is known that there were 40 (43.0%) respondents with anemia, and 53 (57.0%) respondents with no anemia.
   3. There is a relationship between nutritional status and the incidence of anemia in adolescents at SMP Negeri 28 Bandar Lampung in 2021 (p-value = 0.000).

b. Suggestion
   1. For young women to improve and care more about adequate nutritional status in order to avoid various health problems, one of which is Anemia.
   2. The results of this study can addknowledge about anemia and how to prevent and treat anemia. As well as adding insight to teenagers how to increase hemoglobin levels by eating nutritious foods.
   3. Prepare young women so that when they become pregnant they are well nourished, so the cycle of malnutrition between generations can be broken.

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