The Relationship of Body Mass Index with Hemoglobin Levels in Adolescent Girls in Bina Siswa Dormitory SMAN 1 Cisarua, West Bandung Regency

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Background

The prevalence of anemia in the world is quite high, especially in developing countries, global estimates show that 29% of nonpregnant women worldwide suffer from anemia (Stevens 2013).

Iron deficiency anemia is considered to be the most common cause of anemia worldwide. Based on the results of the Basic Health Research (Riskesdas) in 2018, adolescent girls are one of the groups prone to suffering from anemia, it was reported that the incidence of anemia in adolescent girls nationally was 48.9 percent, this figure has increased compared to 2013 which was 37,1 percent.

The greatest proportion of anemia occurs in the 15-24 years age group, and 25 to 34 years. Iron Deficiency Anemia that occurs in this vulnerable group is caused by the increased need for iron, the amount of iron absorbed is very small, insufficient iron intake is due to the low bioavalability of iron-containing foods, the period of menstruation, and periods of rapid growth.

Objectives:

1. Describe the incidence of anemia in adolescent girls
2. Knowing the description of the body mass index of young girls
3. Knowing the relationship between body mass index and hemoglobin levels in adolescent girls

Methods

This study uses a cross sectional design conducted from June to October 2019 in Bina Siswa Dormitory at SMAN 1 Cisarua, West Bandung Residence. The research subjects consisted of 65 individuals selected by total sampling technique. Measurement of body mass index is done by anthropometric examination of body weight and height, then an examination of hemoglobin levels is carried out. Data analysis using Pearson correlation test at 95% confidence level.

Result

The results found that 30.9% of adolescents with anemia had an average hemoglobin level of 12.5 g / dl and a body mass index of 19.3.

Table 1. Incidence of anemia in adolescent girls in Bina Siswa Dormitory SMAN 1 Cisarua in 2019

No	(Incidence of anemia)	n	Persentase (%)
			30,8
		20	69,2
1	Anemia	45	100
2	No anemia	65	
	Total		

Table 2. Overview of the body mass index of female teenagers in Bina Siswa Dormitory SMAN 1 Cisarua in 2019

No	Category	n	Persentase (%)
			36,9
		24	61,5
	< 18,5	40	1,5
		1	100

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No	Category	n	Persentase (%)
1	< 18,5	24	36,9
2	18,5 – 24,9	40	61,5
3	25 – 29,9	1	1,5
	Total	65	100

Table 3. Correlation between BMI with Haemoglobin levels in Adolescent Girls in Bina Siswa Dormitory SMAN 1 Cisarua in 2019

	Haemoglobin Level	
Body mass index	r	0,303
	p	0,014
	n	65

Summary

The results of this study concluded that there was a significant relationship between hemoglobin levels and body mass index in adolescent girls with p = 0.011 (p <0.05)

Referensi

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