

Description of the Incidence of Anemia in Young Women at SMPN 2 Depok, Yogyakarta

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Abstract

Anemia is an important problem experienced by many teenagers. Anemia is a lack of red blood cells in the body. Young women are more susceptible to anemia, this is related to their own condition of experiencing menstruation (menstruation) and the result of an unhealthy diet. Therefore, further research is needed to describe anemia in adolescent girls. The aim of this study is to describe the incidence of anemia in adolescent girls at SMPN 2 Depok, Yogyakarta. The method used in this research is descriptive study. The sample in this study used total sampling. The sample was 57 8th grade teenage girls at SMPN 2 Depok, Yogyakarta. data analysis using descriptive analysis. As much as 56.14% of the 51 teenage girls who took part in the activity had anemia or anemia (32 teenage girls). This shows that the incidence of anemia among adolescent girls at SMPN 2 Depok is still high. One of the causes of anemia in adolescent girls is the lack of prevention of anemia in adolescent girls, such as taking blood supplement tablets and consuming foods with balanced nutrition. The incidence of anemia in adolescent girls is still high, so efforts are needed to prevent anemia by schools collaborating with nearby health facilities.

Keywords: Anemia, Female Students, Hemoglobin, Teenagers

1. Introduction

The common problem of anemia in adolescent girls is a serious health challenge in various regions, including in Yogyakarta. Anemia, as a medical condition characterized by low levels of hemoglobin in the blood, haunts most young women due to certain factors such as unbalanced nutrition, lack of iron intake and inadequate diet.¹ The prevalence of anemia in adolescent girls is of particular concern in efforts to prevent and treat it. Previous studies show that anemia rates in this group tend to be high, indicating the urgency to understand the incidence of anemia in adolescent girls.²

The prevalence of anemia in adolescent girls is quite high in Indonesia. According to the World Health Organization (WHO), the incidence of anemia in adolescent girls in the world is 29%. The majority of cases of anemia

are in developing countries, as many as 124 developing countries have cases of anemia in adolescent girls reaching 41.5%.³ Data From the results of Riskesdas in 2018, it was recorded that 26.8% of children aged 5-14 years suffered from anemia and 32% aged 15-24 years.⁴

The impact of anemia on adolescent girls includes significant health consequences, such as decreased endurance, fatigue, and reduced concentration in studies.⁵ Therefore, an in-depth understanding of the impact of anemia on adolescent girls is very important to open the eyes of the public, especially educators, about the urgency of treating and preventing anemia in adolescents.⁶ Appropriate preventive and intervention efforts can help overcome the negative impacts that may arise due to the incidence of anemia in adolescent girls.⁷

Efforts to overcome anemia in adolescent girls require a holistic and coordinated approach through scientifically based public health programs. Interventions involving nutritional education, increasing access to nutritious food sources, and changing eating behavior are concrete steps that can be taken to improve the health status of adolescent girls.⁸ This research can make a positive contribution to improving the health conditions of the community, especially adolescent girls in Yogyakarta.

Therefore, the author is interested in describing the incidence of anemia in adolescent girls at SMPN 2 Depok, Yogyakarta. The urgency of this research lies in its contribution to an in-depth understanding of the incidence of anemia in adolescent girls in Yogyakarta, so that it can provide a strong basis for designing effective and sustainable intervention programs.

2. Methods

2.1. Study Design

This research uses a descriptive research design to provide a comprehensive picture of the incidence of anemia in adolescent girls at SMPN 2 Depok, Yogyakarta. This design allows researchers to describe the characteristics and factors associated with anemia without intervening. A descriptive approach facilitates an in-depth understanding of the prevalence of anemia, its causal factors and impact.

2.2. Sample Selection

Sampling was carried out by considering inclusion and exclusion criteria. The inclusion criteria involved 8th grade teenage girls at SMPN 2 Depok, Special Region of Yogyakarta. Exclusion criteria included individuals with a history of chronic diseases that could affect hemoglobin status. The location of the research was at SMPN 2 Depok, Yogyakarta. Sampling uses the total sample. The total

sample was 57 8th grade teenage girls at SMPN 2 Depok, Yogyakarta.

2.3. Data collection

Data will be collected through hemoglobin examination using standard laboratory methods. Each participant will undergo a blood test to measure their hemoglobin levels. Blood sampling will be carried out by trained and competent health personnel to minimize risks and provide accurate results. The interpretation result is that if the hemoglobin value is less than 12 then it is declared anemia, if it is more than or equal to 12 then it is not anemia.

2.4. Ethical Considerations

This research adheres to the principles of research ethics, including autonomy, fairness, beneficence and maleficence, and confidentiality. Participation in this research is voluntary, and each individual is given sufficient and clear information regarding the purpose of the research and their rights as participants. The principle of beneficence is upheld by providing benefits to participants and society through an in-depth understanding of anemia in adolescent girls. A confidentiality policy is implemented to protect the identity of participants and maintain the confidentiality of the data obtained.

2.5. Data analysis

The collected data was analyzed descriptively, by calculating the frequency of adolescents who were anemic and who were not anemic. The analysis results are presented in table form to facilitate easy interpretation.

3. Results

The results of this research show that all respondents were women (57 people). All students are in grade 8 at Junior High School 2 Depok, Special Region of Yogyakarta. Based

on the results of hemoglobin measurements, 56.14% of the 51 teenage girls who took part in the activity had anemia or anemia (32 teenage girls) (table 1).

Table 1. Anemia examination results

No	Inspection Indicator	Frequency	Percentage
1	Normal	25	43.86%
2	Anemia	32	56.14%

4. Discussion

This research produced findings showing the high incidence of anemia in adolescent girls at SMPN 2 Depok, Yogyakarta. Several factors that can cause anemia are an unbalanced diet, lack of iron intake, and a lack of understanding of the importance of balanced nutrition among teenagers.⁹ Adolescent girls tend to experience growth spurts and menstruation, increasing the body's need for iron.^{10,11} Therefore, low awareness and knowledge regarding the importance of adequate nutritional intake is the main factor causing the high incidence of anemia.

Several factors can be identified as causes of the high incidence of anemia in adolescent girls. These aspects involve limited access to nutritious food, low socioeconomic conditions, and a lack of understanding of the importance of healthy eating patterns.^{12,13} Apart from that, cultural factors and social norms also influence the eating patterns of young women, which can worsen the condition of anemia.^{10,14}

This research highlights that the incidence of anemia can be caused by the low level of consumption of blood supplement tablets among young women. Lack of understanding regarding the benefits of blood supplement tablets as an effort to prevent anemia can be the cause of low use of these tablets.^{15,16} In 2018, there were 76.2% of young women who received blood supplement tablets in the last 12 months.

However, only 2.13% of them took TTD as recommended (a total of ≥ 52 pills in one year).¹⁵ Therefore, educational measures need to be increased to increase understanding of young women regarding the benefits of blood supplement tablets as part of preventing anemia.^{17,18}

The impact of anemia on teenagers can have serious consequences on their health and quality of life. One significant impact is related to physical growth and development.¹⁹ Lack of iron and other nutrients that often accompanies anemia can hinder the growth and development process of adolescents, affecting the potential for achieving optimal height and development of body organs.⁴ Apart from that, anemia can also have a negative impact on teenagers' academic performance²⁰ The concentration and memory problems that often occur due to this condition can result in a significant decline in their academic achievement. Not only that, fatigue and weakness that appear as effects of anemia can harm teenagers in their daily activities, reducing their energy levels and productivity.²¹ Lastly, anemia can also contribute to impaired mood and emotional well-being in adolescents, resulting in mood swings and lowered overall levels of psychological well-being.^{17,22} Therefore, an in-depth understanding of the impact of anemia on adolescents is essential in efforts to maintain the health and well-being of this young generation.

The need to prevent anemia is a necessity, and efforts need to be directed at various levels of society²³. Education regarding healthy eating patterns, promotion of iron intake through food, and regular distribution of blood supplement tablets in schools are effective steps to reduce the incidence of anemia in adolescent girls.²⁴ A collaborative approach between parents and schools is considered very important in this prevention effort.²⁵ Parents need to pay

special attention to their children's diet, ensure adequate iron intake, and provide education about the importance of balanced nutrition²². Meanwhile, schools can play an active role by integrating health and nutrition programs into the curriculum, providing easy access to nutritious food sources, and involving parents in efforts to prevent anemia in adolescent girls.²⁶

5. Conclusion

Based on the research results, it was found that more than half of the teenage girls at SMPN 2 Depok, Yogyakarta experienced anemia (56.14% or as many as 32 young women). This shows that anemia is still a problem that often occurs among young girls at SMPN 2 Depok, Yogyakarta. Efforts such as giving blood supplement tablets are needed to treat anemia in adolescent girls. The implication of this research is that there is data for health workers and schools to overcome the problem of anemia in adolescent girls at SMPN 2 Depok, Yogyakarta. Schools also need to implement policies to overcome the problem of anemia in adolescent girls. Recommendations for further research are that research is needed on the factors that influence anemia in adolescent girls in Yogyakarta.

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