

Relationship between Body Image and Dietary Status with Anemia in Adolescent girl in Dusun III Bakaran Batu Village Batang Kuis District Deli Serdang Regency

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ABSTRACT

Anemia is a body condition in which the level of hemoglobin (Hb) in the blood is lower than normal. Hemoglobin is one of the components in red blood cells/erythrocytes that functions to bind oxygen and deliver it to all body tissue cells. Adolescent girls are susceptible to malnutrition during the second peak period of growth and development, lack of nutrient intake due to wrong eating patterns, the influence of the social environment (wanting to be slim). Adolescent girls who are malnourished cannot achieve optimal nutritional status (thin, short and disproportionate bone growth). Lack of iron and other nutrients that are important for growth and development (zinc), often getting sick. The purpose of this study was to determine anemia in adolescent girls in hamlet III, Bakaran Batu village, Batang Kuis sub-district, this type of research was descriptive analytic which aims to describe the relationship between body image, diet status and anemia in adolescent girls in hamlet III. This research was conducted from January to July, the research population was 65 respondents and the population was sampled using total sampling with research instruments, namely questionnaires and digital HB checks. Management of data by editing, coding, tabulating and data entry the results of the majority of the research are anemia as many as 52 respondents (80.0%), the majority of respondents with negative body image 51 respondents (78.5%), the results of the study of the relationship between body image and anemia obtained (OR) = 40,000. 95% CI = 7,723-207,178 and P value 0.000 <0.05, the relationship between diet status and anemia was obtained (OR) = 36.750. 95% CI = 7.008-192.726 and P value 0.000 <0.05. Teenagers to further increase knowledge about anemia, body image and healthy diet by consuming balanced nutrition and respecting body image so that they can become productive and healthy teenagers.

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1. Introduction

Adolescence is a period of growth of children towards the process of adult human maturity. In this period there are very unique and continuous physical, biological, and psychological changes. Physical changes that occur will affect their health and nutritional status. An imbalance between nutrient intake and their needs will cause nutritional problems, both in the form of overnutrition and undernutrition (Briawan, 2019 p. 4).

In the human life cycle, adolescence is the second critical period for rapid physical growth after infancy. For example, nearly 25% of adult height is acquired during adolescence. In most adolescent behavior, poor food quality is the main cause of nutritional problems. Excessive physical activity and infectious diseases, may also be the cause of low nutritional status in adolescents (ACC/SCN, 2000).

Adolescence is a critical stage of life, so that period is categorized as a vulnerable group, and has a high health risk. However, adolescents often receive less attention in health care programs. In fact, many cases of health as adults are determined by healthy living habits from a young age. Optimal nutritional status in adolescence can prevent diet-related diseases in adulthood. Malnutrition during adolescence, such as being too thin or short due to chronic lack of energy, often goes unnoticed by them and their families (World Bank, 2003).

Especially for young women, the problem of anemia will continue after adolescence, because they will experience menstruation, followed by the process of pregnancy and breastfeeding. A review of 29 studies by Haas and Brownlie (2001), anemia sufferers are closely related to physical ability. According to the study of Halterman et al. (2001), anemia sufferers in school children cause lower math scores than those who are not anemic.

Other factors such as intake of vitamins and minerals are also related to the process of formation and maintenance of red blood cells. Because many factors are associated with iron deficiency anemia, large number of assessment methods and indicators are needed. Adolescent girls are susceptible to malnutrition during the second peak period of growth and development, lack of nutrient intake due to wrong eating patterns, the influence of the social environment (wanting to be slim). Adolescent girls who are malnourished cannot achieve optimal nutritional status (thin, short and disproportionate bone growth). Lack of iron and other nutrients that are important for growth and development (zinc), often getting sick (Hasdianah et al, 2019 p 121).

Based on the results of research by Amalia, Indriasari and Jafar in 2010 "The Correlation of Body Image with Diet Behavior and HB Levels in Adolescent Girls at SMAN 10 Makassar City". One of the reasons why young women are prone to anemia is because young women usually want to look slim, thus limiting food intake. Teenagers often feel uncomfortable with the rapid changes in their bodies. Psychological impulses such as body image can influence adolescents in determining their eating patterns which can affect the nutritional adequacy of adolescents. The results showed that there was a significant relationship between body image and Hb levels in adolescent girls at SMAN 10 Makassar. From the analysis obtained $p = 0.020$. Based on the chi square test, the p value is smaller than 0.05 ($0.018 < 0.05$).

Based on the results of Zubir research in 2018 "The Relationship of Eating Patterns with the Incidence of Anemia in Young Women at the Asyifa School Health Vocational School Banda Aceh". The results showed that there was a relationship between diet and anemia in adolescent girls at Assyifa School Health Vocational School Banda Aceh, the p value = 0.004.

According to the results of Prima and Sari's 2005 research "The Relationship Between Body Dissatisfaction and Dietary Behavior Tendencies in Young Girls". The results of the study showed that there was a positive relationship between dissatisfaction with body shape and dietary behavior tendencies in adolescent girls ($r=0.456$ and $p<0.01$).

The results of the interview survey and examination of hemoglobin in adolescent girls conducted in Hamlet III Bakaran Batu Village, Batang Kuis District, Deli Serdang Regency, there were 10 young women. 6 teenage girls said they were dizzy, weak and tired and from the results of the examination using a digital HB, their Hb was below normal. So 6 teenage girls are anemic. Because 4 young women did not experience dizziness, weakness and fatigue and the results of the examination using a digital HB were normal. So 4 young women do not experience anemia (Attachment of adolescent data on Hemoglobin levels). The results of interviews with 6 teenagers that there are still many young women who eat foods that are low in nutritional intake, both vegetables and meat, cause young women to experience anemia.

Based on the description above, the researcher is interested in conducting research in Hamlet III Bakaran Batu Village, Batang Kuis District in 2022, Researchers will conduct research on "The Relationship of Body Image and Diet Status with Anemia in Young Women in Hamlet III Bakaran Batu Village, Batang Kuis District, Deli Regency Serdang Year 2022".

2. Method

In this study, the study used an analytical descriptive design using a cross sectional approach. This type of research emphasizes the measurement or observation of independent and dependent variable data only once, at a time, namely when the examination or assessment is carried out once with no follow-up.

The population in this study were all young women from Dusun III, Bakaran Batu Village, Batang Kuis District, Deli Serdang Regency from the age of 10-19 years, totaling 65 people in September 2021, March 2022. The sampling technique in this study used a non-probability technique, namely a saturated sample. or often called total sampling. Saturated sample is a sampling technique by taking all members of the population as respondents or samples. So the sample in this study was all the young women of Hamlet III, Bakaran Batu Village, Batang Kuis District, Deli Serdang Regency, amounting to 65 people.

In carrying out the research, the authors collected data through primary data by conducting interviews and research instruments in the form of a questionnaire that had to be filled out by the respondents themselves and hemoglobin examination using a digital hemoglobin check tool for young women.

Data analysis was carried out by means of Univariate Analysis aimed at explaining or describing the characteristics of each research variable. And Bivariate Analysis if the Univariate analysis has been carried out, the results will know the characteristics or distribution of each variable, and Bivariate analysis can be continued on two variables that are suspected to be related or correlated if a value < 0.05 means there is a significant relationship, if the value of a > 0.05 means that there is no relationship between one variable and another.

3. Results and Discussion

Table 1
Univariate Analysis
Distribution of Anemia

Anemia	Amount (n)	Presentation (%)
Anemia	52	80.0
NoAnemia	13	20.0
Total	65	100

That of 65 young women the majority experienced anemia as many as 52 respondents (80.0%) and the minority did not experience anemia as many as 13 respondents (20.0%). Anemia is a body condition in which the level of hemoglobin (Hb) in the blood is lower than normal (WHO, 2011). Hemoglobin is one of the components in red blood cells/erythrocytes that functions to bind oxygen and deliver it to all body tissue cells. Oxygen is needed by body tissues to perform their functions. Lack of oxygen in brain and muscle tissue will cause symptoms, including lack of concentration and lack of fitness in carrying out activities. Hemoglobin is formed from a combination of protein and iron and forms red blood cells/erythrocytes (Directorate of Community Nutrition, 2016 p. 11). Many young women in Dusun III, Bakaran Batu Village, experience anemia in the categories of mild anemia and moderate anemia, because young women really want an ideal body shape or positive body image so they do a lot of dieting by consuming junk food that is low in iron compared to nutritious food. This is at risk of causing anemia in adolescent girls.

Table 2
Univariate Analysis
Distribution of Body Image

Body Image	Amount (n)	Presentation (%)
Positive	14	21.5
Negative	51	78.5
Total	65	100

Body Image is a person's subjective concept of his physical appearance (Potter 2012, p. 1334).

Adolescent girls who have a positive body image have greater anemia than adolescents who do not experience anemia. In general, adolescents who have an ideal body will maintain an ideal body by all means such as strict diets, irregular eating patterns and avoiding certain foods so that it can cause blood imbalances in the body and after an examination it is proven to have anemia (Fatimah et al, 2016). .. 2).

Table 3
Univariate Analysis
Distribution of Dietary status

Dietary Status	Amount (n)	Presentation (%)
Healthy	12	18.5
Not Healthty	53	81.5
Total	65	100

Diet is an effort that aims to lose weight that can be done in various ways but still focuses on regulating eating patterns (Sutriandewi, 2003). Poor eating behavior, which is characterized by eating disorders and unhealthy diet quality, can increase the risk of anemia in adolescent girl

Table 4
Bivariate Analysis
Body image relationship with anemia in adolescent girls

Body Image	Anemia in adolescent girls				Total		OR (95%CI)	P Value
	Anemia		Not Anemia					
	N	%	N	%	N	%		
Positive	4	28,6	10	71,4	14	100,0	40,000	0,000
Negative	48	94,1	3	5,9	51	100,0	(7,723-207,178)	
Total	52	80,0	13	20,0	65	100,0		

From the results of the statistical test, the value of Odd ratio (OR) = 40,000. 95% CI = 7,723-207,178 and P value 0.000 <0.05, which means that there is a significant relationship between Body Image and Anemia in adolescent girls. A person with a positive body image has a satisfied perception of his body shape so he feels comfortable with his body condition, while someone with a negative body image is not satisfied with his body condition so he lacks confidence.

According to Kim, 2006 from the results of research by Yulianti 2015. The wrong diet will be at risk of causing health problems, besides the wrong diet will make it difficult for people to maintain their weight in the long term. A diet with a healthy weight loss method can be interpreted in a healthy direction, such as adjusting your diet, consuming foods that are low in calories and low in fat, consuming vegetables, fruits and exercising regularly. A healthy diet can make a person have an ideal body without causing harmful side effects to the body. Meanwhile, unhealthy weight loss methods reflect an attempt to control weight in an unhealthy way. This type of diet can be interpreted as behavior that can endanger health due to using drugs to suppress appetite, skipping meals on purpose and fasting outside of worship. Someone who goes on a diet because it's just for appearance, they usually take unhealthy ways to lose weight.

Appearance is an important factor for teenagers, so they try to increase their attention to their body shape by doing something to make their physical appearance look better. Adolescent girls are more prone to experiencing dissatisfaction with their body image, thus causing a negative body image (Grogon, 2008 ... 1). According to the results of the study, adolescent girls who have a satisfied body image experience greater anemia than adolescents who do not experience anemia. Adolescents who have an ideal body will maintain their bodies by all means such as strict diets, irregular eating patterns and avoiding certain foods, causing blood imbalance in the body and causing anemia. Meanwhile, young women who have a positive body image are slightly affected by anemia, because young women are satisfied with their body condition and many young women who have a negative body image experience anemia due to lack of rest patterns and consuming less foods that are high in iron.

Table 5
Bivariate Analysis
Dietary Status relationship Anemia in Adolescent girls

Dietary Status	Anemia in Adolescent girls				Total	OR (95%CI)	P Value
	Anemia		Not Anemia				
	N	%	N	%			
Healthy	3	25,0	9	75,0	12	100,0	0,000
Not Healthy	49	92,5	4	7,5	53	100,0	
Total	52	80	13	20,0	65	100,0	

From the results of statistical tests, the OddRatio (OR) = 36.750 is obtained. 95% CI = 7.008-192.726 and P value 0.000 <0.05, which means that there is a significant relationship between dietary status and anemia in adolescent girls. During adolescence, there is concern for weight and body shape. This encourages teens to go on a diet. Teenagers who go on a diet to control their weight there are using healthy and unhealthy ways. Teenage girls apply diets to lose weight in various ways that they think are more effective, sometimes the diet that are carried out endanger the health of their bodies.

According to Kim, 2006 from the results of research by Yulianti 2015. The wrong diet will be at risk of causing health problems, besides the wrong diet will make it difficult for people to maintain their weight in the long term. A diet with a healthy weight loss method can be interpreted in a healthy direction, such as adjusting your diet, consuming foods that are low in calories and low in fat, consuming vegetables, fruits and exercising regularly. A healthy diet can make a person have an ideal body without causing harmful side effects to the body. Meanwhile, unhealthy weight loss methods reflect efforts to control weight in an unhealthy way. This type of diet can be interpreted as behavior that can endanger health due to using drugs to suppress appetite, skipping meals on purpose and fasting outside of worship. Someone who goes on a diet because it's just for appearance, they usually take unhealthy ways to lose weight.

According to the results of the study, poor eating behavior, which is characterized by eating disorders and low diet quality, can increase the risk of anemia in adolescent girls. This is due to inadequate intake of iron that comes from food. Adolescent girls eat less often so that their iron needs are not met. Low iron intake directly causes disturbances such as a rapid decrease in hemoglobin levels. Poor dietary status, which is characterized by eating disorders and unhealthy diet quality, can increase the risk of anemia in adolescent girls.

4. Conclusion

That of the 65 respondents the majority of respondents were anemic as many as 52 respondents (80.0%) and the minority were not anemic as many as 13 respondents (20.0%). Body Image With Anemia the majority of respondents who have a negative body image are 51 respondents (78.5%) and the minority of respondents who have a positive body image are 14 respondents (21.5%). Statistical test results obtained the value of Odd ratio (OR) = 40,000. 95% CI = 7,723-207,178 and P value 0.000 <0.05, which means that there is a significant relationship between Body Image and Anemia in adolescent girls. Diet Status With Anemia the majority used a healthy diet status as many as 12 respondents (18.5%) and an unhealthy minority used as many as 53 respondents (81.5%). statistical test results obtained the value of OddRatio (OR) = 36.750. 95% CI = 7.008-192.726 and P value 0.000 <0.05, which means that there is a significant relationship between dietary status and anemia in adolescent girls.

References

- Aminullah Efriyanti Ayu, (2016). Hubungan Body Image Dengan Perilaku Diet Dan Kadar Hemoglobin Pada Remaja Putri Di SMK N 1 Sewon Bantul Yogyakarta <http://digilib.unisayogya.ac.id/1977/1/NASKAH%20PUBLIKASI%20AYU%20EFRIYANTI%20PDF.pdf> diakses 12 Februari 2021.
- Bintang Natalia Francisca, Dieny Fithra Fillah, Panunggal Binar (2019). Hubungan Gangguan Makan Dan Kualitas Diet Dengan Status Anemia Pada Remaja Putri Di Modelling School

- <https://ejournal3.undip.ac.id/index.php/jnc/article/view/25806/0> diakses 21 Februari 2021
- Briawan Dodik, (2019). Anemia Masalah Gizi Pada Remaja Wanita, Yogyakarta. Legality
- Fatimah Siti, Nurunnayah Siti, Astiti Dewi (2017). Hubungan Persepsi Tubuh (Body Image) Terhadap Status Anemia Pada Remaja Putri Di SMA Sederajat Kabupaten Bantul <http://elibrary.almaata.ac.id/860/1/Naskah%20Publikasi%20Siti%20fatimah.pdf> diakses 25 Februari 2021.
- Hasdianah, Siyoto Sandu, Peristyowati Yuly, (2019). Gizi Pemanfaatan Gizi, Diet, dan Obesitas, Yogyakarta. Nuha Medika
- Hidayat Alimul Aziz A, (2010). Metode Penelitian Kebidanan dan Teknik Analisa Data, Jakarta. Salemba Medika.
- Kementrian Kesehatan Republik Indonesia, (2016). Pencegahan Dan Penanggulangan Anemia Pada Remaja Putri Dan Wanita Usia Subur (WUS), Jakarta.
- Kusmayanti Aini Nur, Rosiyani Felicia, LM Freitag Harry, Sudargo Toto (2016). Pola Makan Dan Obesitas, Yogyakarta. Gadjah Mada University Press.
- Lintang Anastasia, Ismanto Yudi, Onibala Franly, (2015). Hubungan Citra Tubuh Dengan Perilaku Diet Pada Remaja Putri Di SMA Negeri 9 Manado <https://media.neliti.com/media/publications/113779-ID-none.pdf> diakses 9 Maret 2021.
- M Amalia Marini, Indriasari Rahayu, Jafar Nurhaedar, (2004). Hubungan Body Image Dengan Perilaku Diet Dan Kadar HB Pada Remaja Putri Di SMA N 10 Kota Makassar <https://core.ac.uk/download/pdf/25495815.pdf> diakses 15 Maret 2021.
- Notoadmodjo Soekidjo (2010). Metodeologi Penelitian Kesehatan, Jakarta. Rineka Cipta
- Potter A. Patricia & Perry Griffin Anne (2012). Fundamental Keperawatan, Jakarta.
- Proverawati Atikah & Maisaroh Siti (2019). Menarche (Menstruasi Pertama Penuh Makna) Yogyakarta. Medical Book.
- Sari Puspita Endah & Prima Ellen (2006). Hubungan Antara Body Dissatisfaction Dengan Kecenderungan Perilaku Diet Pada Remaja Putri <https://media.neliti.com/media/publications/126615-ID-hubungan-antara-body-dissatisfaction-de.pdf> diakses 16 Maret 2021.
- Wayana (2010). Gizi Reproduksi, Yogyakarta. Pustaka Rihama.
- Yulianti Krisna, Ruhayana, Suratini, Depkes RI (2011). Hubungan Diet Dengan Kejadian Anemia Defisiensi Besi Pada Siswi SMA N 1 Prambanan Klaten <http://digilib.unisayogya.ac.id/218/1/NASPub%20KRISNA.pdf> diakses 17 Maret 2021