

Knowledge and Behavior Relationships about Nutrition to Events Anemia in a Teenage Princess in Bulanjahe Village, District Barusjahe Karo Regency in 2019

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ABSTRACT

Nutrition, also known as nutrition, is the study of food and its relationship to health. This study aims to determine the relationship between knowledge and behavior about nutrition on the incidence of anemia in adolescent girls. The independent variable is knowledge and behavior about nutrition and the dependent variable is the incidence of anemia in adolescent girls in Bulanjahe Village, Barusjahe District, Karo Regency in 2019. This type of research is a pre-experiment with the design of "The One Shot Case Study". The population in this study were 30 young women who were in Bulanjahe Village, Barusjahe District, Karo Regency. The sample in this study were 30 by means of total sampling. The data collected were primary and secondary data, then the data were processed using SPSS steps and Chi-Square statistical test $\alpha = 0.05$. The results showed that most of the respondents who had sufficient knowledge were 18 people (60%), 18 people (60%) had an active behavior, the majority had anemia, 12 people (40%) based on the chi-square statistical test, the value of $p = 0.000$ was obtained. This means that the p value is smaller than the p value (0.05) and thus H_0 is rejected and H_a is accepted, namely knowledge and behavior about nutrition in adolescent girls has a significant relationship with the incidence of anemia. It is recommended to young women in Bulanjahe Village, Barusjahe District, Karo Regency in 2019 to meet the nutritional needs of the body and seek information about anemia.

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1. Introduction

Nutrition or also called nutrition is the study of food and its relationship with health (Ambarwati, 2012).

Adolescent nutritional needs are relatively large, because they are still experiencing growth. In addition, adolescents generally perform higher physical activity than other ages, so that more nutrients are needed (Kusumawati et al, 2014).

Many teenagers think too much about their diet because they are worried about their appearance. Also many teenage girls do not understand that the increase in fat tissue during puberty is necessary for normal growth and development (Ambarwati, 2012).

In general, young women and women suffer from anemia more easily than men or young men. Women and young women need 2 times more iron than men or young men because they have menstruation and bleed a lot during childbirth and iron is needed to produce blood (Proverawati et al, 2014).

Young women should consume more iron from foods such as animal side dishes, green vegetables and other food ingredients that contain lots of iron, young women also need to be educated about consuming good sources of iron to prevent anemia (Banudi, 2013).

Anemia is better known as anemia, which is caused by a deficiency of iron in an amount that is not sufficient for daily needs (Ambarwati, 2012).

Anemia is a health problem throughout the world, especially in developing countries, where an estimated 30% of the world's population suffers from anemia. Anemia occurs in many communities, especially in adolescents and pregnant women. Anemia in adolescent girls is still quite high. The prevalence of anemia in the world ranges from 40-88. %. The total population of adolescents (10-19 years) in Indonesia is 26.2%, consisting of 50.9% men and 49.1% women (World Health Organization, 2014).

According to the Indonesian Health Demographic Survey (IDHS) (2015), the prevalence of anemia is 75.9% among young women, 53.6% of pregnant women. Another criterion for anemia is if the hemoglobin (Hb) in the blood is less than 13 g% for men and less than 12 g% for women. While anemia for children aged 6 months - 5 years, the Hb content in the blood is less than 11 g%. Children aged 6-14 years of Hb content is less than 12 g%. Meanwhile, in North Sumatra, there

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were 9,377 blood test participants in three cities, Medan, Pematang Siantar, and Kisaran, 33% of whom had anemia occurred in young women due to lack of knowledge about nutrition.

2. Theoretical Review

2.1 Knowledge

Knowledge is the result of "knowing" from humans and this occurs after people sense a certain object. Sensing occurs through the five human senses, namely the sense of sight, listener, smell, taste and touch. Most of human knowledge is obtained through the eyes and ears. Knowledge or cognitive is a very important domain for the formation of one's actions. (Notoatmodjo, 2012).

2.2 Behavior

Behavior is an individual response to a stimulus or action that can be observed and has a specific frequency, duration and purpose, whether consciously or not. Behavior is a collection of various factors that interact most. It is often not realized that these interactions are so complex that sometimes we don't have time to think about why someone practices a certain behavior. Because it is very important to be able to examine the reasons behind individual behavior, before he is able to change the behavior (Wawan, et al, 2015)

2.3 Youth

Adolescence is a period in an individual's life where psychological exploration takes place to find self-identity. During the transition from childhood to adolescence, individuals begin to develop abstract characteristics and self-concept becomes more different. Teens begin to look at themselves with

2.4 Nutrition

Nutrition comes from Arabic, namely "Ghidza". Nutrition is a process of using food that is normally consumed by an organism through the process of digestion, absorption, transportation, storage, metabolism and the excretion of substances that are not used to maintain life, growth and normal function of organs, and produce energy (Kusumawati)., 2014).

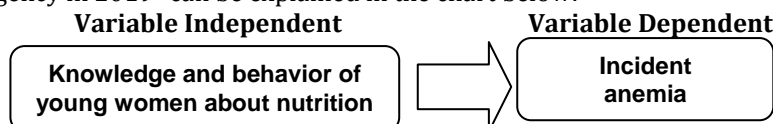
2.5 Anemia

Anemia is a condition in which erythrocyte mass and circulating hemoglobin mass cannot fulfill their function to provide oxygen to body tissues (Bakta, 2013).

Anemia is defined as a condition in which hemoglobin (Hb) levels in the blood are lower than normal values (Proverawati et al., 2014).

2.6 Conceptual framework

The conceptual framework of the research entitled "The Relationship between Young Women Knowledge and The Incidence of Anemia in Young Women in Bulanjahe Village, Barusjahe District, Karo Regency in 2019" can be explained in the chart below:

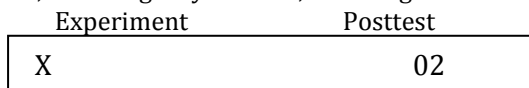


Independent variable (free) is the knowledge of young women about nutrition, while the dependent variable (dependent) is the incidence of anemia.

3. Research methods

3.1 Types of research

The type of research used is a pre-experiment with the design of "The One Shot Case Study" to obtain information on nutrition knowledge of young women in Bulanjahe Village, Barusjahe District, Karo Regency in 2019, the design can be described as follows:



3.2 Location and Time of Research

This research was conducted in Bulanjahe Village, Barusjahe District, Karo Regency in 2019. The research time needed to complete this research in April to August 2019.

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3.3 Population and sample

The population in this study were all young women who were in Bulanjahe Village, Barusjahe District, Karo Regency in 2016. And based on the initial survey that had been carried out there were 50 young women in Bulanjahe Village, Barusjahe District, Karo Regency in 2019.

The sample in this study is a total sampling technique, namely some young women, amounting to 30 people

3.4 Data analysis

a) Univariate analysis

Explain or describe the distribution of respondents and describe the independent and dependent variables so that the variation of each variable is known.

b) Bivariate Analysis

Seeing the relationship between two independent variables and the dependent variable. Data testing was performed using the chi-square statistical test ($\alpha = 0.005$) if the value of X^2 count > X^2 table, this shows that the alternative hypothesis (H_a) is accepted, meaning that there is a significant relationship. Meanwhile, if X^2 count < X^2 table. This shows that the null hypothesis (H_0) is accepted, meaning that there is no significant relationship.

The chi-square formula used is as follows:

$$X^2 = \left[\frac{\sum (fo - fe)^2}{fe} \right]$$

information :

X^2 : kolerasichi-square

f_0 : expected frequency

f_e : frequency obtained / diamati

4. Results and Discussion

4.1 Research result

a) Univariate Data Analysis

Univariate analysis was used to see the frequency distribution and percentage of the research variable "The Relationship between Knowledge and Behavior About Nutrition in Young Women Against The Incidence of Anemia in Bulanjahe Village, Barusjahe District, Karo Regency in 2019".

1) Distribution of Respondents Based on Characteristics

After conducting research on 30 respondents in Bulanjahe Village, Barusjahe District, Karo Regency in 2019, the authors obtained results that describe the characteristics of the respondents, namely age and education, which can be seen in the following table:

Table 1

Distribution of Characteristics of Young Women in Bulanjahe Village, Barusjahe District, Karo Regency in 2019

Category	Characteristics	Number of people	Percentage (%)
13-16 years old		17	56.67
	17-21 Years	13	43.33
Total		30	100
Basic Education (SMP)		5	16.7
	Intermediate (SMA)	18	60
	Upper (College)	7	23.3
Total		30	100

From Table 1 above shows the characteristics of the majority of respondents are at the age of 13-16 years as many as 18 respondents (60%), and the minority in elementary education (SMP) as many as 5 respondents (16.7%).

2) Distribution of Respoden Based on Knowledge

The knowledge of young women about nutrition in Bulanjahe Village, Barusjahe District in 2019, can be seen in the table as follows:

Table 2

The frequency distribution of respondents is based on the knowledge of young women about nutrition in Bulanjahe Village, Barusjahe District in 2019

Knowledge	Number of people	Percentage (%)
Good	6	20

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Knowledge	Number of people)	Percentage (%)
Enough	18	60
Less	6	20
Total	30	100

Based on Table 2, it can be seen that of the 30 respondents the majority have sufficient knowledge of 18 respondents (60%) about Gizidi in Bulanjahe Village, Barusjahe District in 2019.

3) Distribution of Respondents Based on Behavior

The behavior of young women about nutrition in Bulanjahe Village, Barusjahe District, Karo Regency in 2019, can be seen in the table as follows:

Table 3

Distribution of Young Women Behavior About Nutrition in Bulanjahe Village, Barusjahe District, Karo Regency in 2019

Behavior	Number of people)	Percentage (%)
Active	18	60
Passive	12	40
Total	30	100

Based on Table 3, it can be seen that of the 30 respondents the majority have active behavior, namely 18 respondents (60%).

4) Distribution of Respondents Based on Anemia

Anemia in young women in Bulanjahe Village, Barusjahe District, Karo Regency in 2019, can be seen in the table as follows:

Table 4

Distribution of Anemia in Adolescent Women About Nutrition in Bulanjahe Village, Barusjahe District, Karo Regency in 2019

Amount of HB	Information	amount	%
<11 gr / dl	Anemia	12	40
> 11 gr / dl	Not anemia	18	60
Total		30	100

Based on Table 4, it can be seen that of the 30 respondents the majority are not anemic as many as 18 respondents (60%) in Bulanjahe Village, Barusjahe District in 2019.

b) Bivariate data analysis

Bivariate data analysis was used to see the significance of the relationship between the independent variable and the dependent variable which was carried out by using the Chi-square statistical test).(χ^2)

From the research conducted, it can be obtained data about the relationship of knowledge about nutrition in adolescent girls to the incidence of anemia in Bulanjahe Village, Barusjahe District, Karo Regency in 2019, which are as follows:

Table 5

Cross tabulation of the Relationship between Knowledge of Nutrition in Young Women and The Incidence of Anemia in Bulanjahe Village, Barusjahe District, Karo Regency in 2019

Knowledge	The occurrence of anemia					Chi-Square Test
	Anemia%		Not anemia%		Total	
Good	0	0	5	17	5	0.001
Enough			5	17	13	
Less			7	23	0	
					0	
Total			12	40	18	
					60	30

From table 5, the majority of respondents with sufficient knowledge are 18 respondents (60%), and as many as 5 respondents have anemia (17%). No anemia as many as 13 respondents (43%).

Table 6

Cross tabulation of the Relationship of Behavior About Nutrition in Young Women Against The Incidence of Anemia in Bulanjahe Village, Barusjahe District, Karo Regency in 2019

Behavior	The occurrence of anemia					Chi-Square Test
	Anemia%		Not anemia%		Total	
Active	18	60	0	0	18	0,000
Passive	12	40	0	0	12	
Total	30	100	0	0	30	

From table 6, the majority of respondents have active behaviors about nutrition among young women as many as 18 respondents (60%) and 18 respondents (60%) who do not experience anemia.

4.2 Discussion

a) Respondents' Knowledge About Nutrition in Young Women

The results of the analysis showed that out of 30 female adolescents the majority had sufficient knowledge as many as 18 people (60%), 5 people had good knowledge (16%), and 7 people had less knowledge (24%).

Notoatmodjo's theory states that knowledge is the result of knowing and this occurs after people sense a certain object. Sensing occurs through the five human senses, namely the senses of sight, hearing, smell, touch and taste (Notoatmodji, 2012).

Research by Liza, et al. (2013) entitled the relationship between knowledge and behavior about nutrition in adolescent girls against the incidence of anemia in grade IX students in three high schools in Yogyakarta, shows that the results of research on grade IX students said that knowledge about malnutrition had a risk of developing anemia twice large compared to knowledge of good nutrition

The results of the study are in line with the theory of Notoatmodjo, 2012, based on the results of the above research that the knowledge of young women about nutrition in Bulanjahe Village, Barusjahe District, Karo Regency in 2016 is more knowledgeable, namely 18 people (60%), this is due to the lack of information obtained about nutrition in young women.

b) Respondents' Behavior About Nutrition in Young Women

The results of the analysis showed that of the 30 girls, the majority had active behavior as many as 18 people (60%) and 12 people had passive behavior (40%).

The theory of Wawan et al. States that behavior is an individual response to a stimulus or action that can be observed and has a specific frequency, duration and purpose, whether consciously or not (Wawan, et al, 2015).

Research by Hapza and Yulita (2012) entitled the relationship between knowledge and behavior about nutrition in SMA Negeri 8 Pekanbaru shows that from the results of research on grade IX students said that behavior about active nutrition has a smaller risk of anemia than behavior about passive nutrition.

The results of the study are in line with the theory of Wawan et al. 2015, based on the results of the above research that the behavior of young women about nutrition in Bulanjahe Village, Barusjahe District, Karo Regency in 2016 was more passive as many as 12 people (40%) because young women lacked information.

c) Analysis of the Relationship between Knowledge and Behavior about Nutrition on the Incidence of Anemia

Judging from the results of research conducted on 30 young women in Bulanjahe Village, Barusjahe District, out of 18 young women who had sufficient knowledge, as many as 5 respondents who had anemia (17%) and 13 respondents who were not anemic (43%) and young women who behaved 18 people (60%) were active.

Knowledge and behavior about nutrition is very influential on anemia. Insufficient knowledge and passive behavior can possibly occur anemia. The results of the chi-square statistical test for knowledge obtained p value = 0.001. This means that the p value is less than α (0.05) and thus H_0 is rejected and H_a is accepted. While the chi-square statistical test results obtained p value = 0.000. This means that the p value is less than α (0.05) and thus H_0 is rejected and H_a is accepted.

The results of this study are in line with the research of Hapza and Yulita (2012) entitled the relationship of knowledge and behavior about nutrition to the incidence of anemia in female students at SMA Negeri 8 Pekanbaru. . The results of the research from 100 respondents found that 60 respondents (81.1%) had anemia. The statistical test results obtained p = 0.000, which means there is a relationship between knowledge and behavior about nutrition on the incidence of anemia.

Thus it can be concluded in this study that there is a relationship between knowledge and behavior about nutrition on the incidence of anemia. This is due to inadequate knowledge and passive behavior that can cause anemia. So from the results of this study there is no gap between the research results and the theory that has been put forward. above.

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5. Conclusions and suggestions

5.1 Conclusion

- a) The knowledge of young women about nutrition in Bulanjahe Village, Barusjahe District, Karo Regency in 2019, the majority of respondents who had sufficient knowledge were 18 respondents (60%), 5 respondents had good knowledge (17%), and those with less knowledge were 7 respondents (24%).
- b) The behavior of young women about nutrition in Bulanjahe Village, Barusjahe District, Karo Regency, in 2019 the majority of 18 respondents (60%) have active behavior and 12 people (40%) have passive behavior.
- c) There is a significant relationship between the knowledge of young women about nutrition and the incidence of anemia in Bulanjahe Village, Barusjahe District, Karo Regency in 2019 where good knowledge can reduce the occurrence of anemia, with a p value = 0.001.
- d) There is a significant relationship between the behavior of young women about nutrition and the incidence of anemia in Bulanjahe Village, Barusjahe District, Karo Regency in 2019 where active behavior can reduce the occurrence of anemia, with a value of p = 0.000.

5.2 Suggestion

- a) It is suggested to young women in Bulanjahe Village to further improve their knowledge about nutrition, so that the nutritional needs of young women are met.
- b) It is recommended that village midwives in Bulanjahe Village, Barusjahe District, Karo Regency provide counseling on nutrition.
- c) It is recommended for researchers to investigate the factors that influence anemia in adolescent girls, such as knowledge about nutrition and behavior about nutrition.

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