Dunia Keperawatan: Jurnal Keperawatan dan Kesehatan @ JDK 2023
DOI: 10.20527/dk.v11i2.510 eISSN: 2541–5980; pISSN: 2337-8212
Received June 2023; Accepted July 2023

Relationship between Knowledge Level about Anemia, Parents' Income and Menstrual Pattern with Anemia Status in Young Girls at 7th-Grade Junior High School Students in Palangka Raya City

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ABSTRACT

Background: Adolescence was a spanning period because at this time youth had a direct impact on the psychological and physical changes of adolescents. Adolescents would have many problems that could have a negative effect on their health, especially adolescent nutrition. One of the most common problems in adolescents was iron anemia. In adolescents who experience anemia, it would had very significant effects such as reduced body fitness, decreased learned abilities, suboptimal height, decreased physical abilities and pale faces. Factors related to anemia in female adolescents were knowledge level, parents' income, consumption of iron supplement tablets, increased iron requirements, menstruation, and nutritional status.

Objective: : To analyze the relationship between knowledge levelled, parental income and menstrual patterns with anemia status in young girls at 7th-grade junior high school in Palangka Raya city. **Method:** The design of this studied was an analytical descriptive with a quantitative cross-sectional studied, a sample of 146 of 1409 population of 7th-grade

students spread across 47 schools in the city of Palangka Raya. The instrument used a knowledge questionnaire and a digital hemometer. The analysis used in this studied was the spearman correlation test and multiple logistic regression.

Result: : There was a relationship between the leveled of knowledge of anemia and anemia status in young girls at 7th-grade junior high school in Palangka Raya city (p-value=0.0001;r=0.325). There was a relationship between parents' income and anemia status in young girls at 7th-grade junior high school in Palangka Raya city (p-value=0.0001;r=0.392). There was a relationship between menstrual patterns and anemia status in 7th-grade junior high school girls in Palangka Raya city (p-value=0.006;r=0.227). Parents' income factor was the factor that most influences the incidence of anemia in young women (exp. B=8.241).

Conclusion: Knowledge was a protective factor which means a protective action in the form of anemia prevention behaviour. The high leveled parental income would affect the growth and development of children because parents could meet all the needs of children.

Keywords: Anemia Status, Anemia Knowledge; Menstrual Patterns; Parents Income.

Cite this as: Theresia, N dan Putri, F.R.W. Relationship between Knowledge Level about Anemia, Parents' Income and Menstrual Pattern with Anemia Status in Young Girl at 7th- Grade Junior High School Students In Palangka Raya City. 2023;11(2): 192-204. DOI: 10.20527/dk.v11i2.510.

INTRODUCTION

Adolescence is a spanning period because during this period adolescents have a direct impact on the psychological and physical changes of adolescents (1). In this condition a person's physique continues to develop, as well as his social and psychological aspects. Adolescents will have many problems that can have a negative impact on health, especially adolescent nutrition. One of the most common problems in adolescents is iron anemia. Anemia is a health problem in developing countries where it is estimated that around 30% of the world suffers from anemia. Anemia can be caused by a deficiency of nutrients that have an important role in the formation of hemoglobin (2). These nutrients are iron, protein, vitamin B6 which act as a catalyst in the synthesis of hem in the hemglobin

molecule, vitamin C, zinc which affects the absorption of iron and vitamin E affecting the stability of the red blood cell membrane. Adolescent girls are a group that is prone to anemia (3). In Southeast Asia, including in Indonesia, reports from various studies in Indonesia show that the prevalence of anemia is still high. Iron deficiency in young women ranging from 20-50%. According to the World Health Organization (WHO) anemia in adolescents is 27% in developing countries and 6% in developed countries (4). The highest prevalence is among children and women of childbearing age (WUS), especially in pregnant women. Very high anemia (range between 80-90%) in preschool children, adolescents, pregnant and lactating women. In India 55.8% of adolescents aged 15-19 years are reported to have anemia (5).

In adolescents who experience anemia will have very influential impacts such as a growth period that is easily infected, reduced body fitness, and decreased enthusiasm for learning. Thus, young women have an impact, namely decreased learning ability, non-optimal height, reduced physical ability and also causes pale faces (6). According to Basic Health Research in 2018 the prevalence of anemia in Indonesia is 21.7% with anemic sufferers aged 5-14 years by 26.4% and 18.4% of patients aged 15-24 years. Iron is a very important substance in blood clotting because it plays a role in synthesizing hemoglobin (7). If a person experiences an excess of nutrients, the protein consisting of hemosiderin and ferritin will be stored in the liver, spleen, muscles and spinal cord. Whereas someone who experiences a deficiency of this substance can experience a decrease in ferritin levels followed by a decrease in transferrin saturation or a high protoporphyrin. Conditions that continue will cause iron deficiency anemia, in which hemoglobin levels fall below normal values. According to the report on the results of the 2018 National Basic Health Research (Riskesdas) outlining the prevalence of anemia from 33 provinces, it is known that as many as 20 provinces have an anemia prevalence rate that is greater than the Indonesian average, one of which is on the island of Kalimantan, namely West Kalimantan 11, 9%, Central Kalimantan 12.7%, South Kalimantan 10.9%, and East Kalimantan 13.9% (8).

Several factors will cause young women to experience anemia. Factors related to the incidence of anemia in female adolescents are the level of knowledge, parents' income, consumption of iron supplement tablets, increased iron requirements, menstruation, and nutritional status (3,9). Socio-economic families can cause anemia to occur in especially in young girls. Parents' income is a determining factor for the quality and quantity of food consumed by family members. High family income means that it will also increase the opportunity to buy food with much better quality and quantity, conversely if family income decreases, it will cause a decrease in food purchasing power. causes anemia (10). Based on research by Priscillia, Malonda, and Kawatu (2016) showed that there was a relationship between family income level and the incidence of anemia at SMPN 2 Manado ($p = 0.022$). Adolescent girls are at a higher risk of developing anemia than male adolescents because adolescent females experience menstrual cycles (menstruation) every month (11).

The results of Siahan's research (2011) show that the subject is classified as in the early adolescent stage, namely 12-14 years, at which age the adolescent is at the junior high school level (12). At this stage, most

adolescents are already menstruating. Overall the incidence of anemia can be caused by various factors, the low level of absorption of iron in the body is the main difficulty in meeting iron needs, especially iron sources from vegetables which are only absorbed 1-2%. Anemia in adolescents occurs due to lack of knowledge and income levels of parents which causes nutritional deficiencies, the menstrual cycle also affects the incidence of anemia. Menstruation is a physiological change that is influenced by hirmin and occurs in a woman's body periodically. The menstrual cycle is the distance between a person's past menstruation and the next menstruation. Adolescent girls will experience anemia if there are short menstrual cycles (<21 days) this is because the amount of blood that comes out is greater (13).

The general objective of this study was to analyze the relationship between knowledge level, parental income and menstrual patterns with anemia status in female adolescents at 7th-grade junior high school in Palangka Raya City. While the specific objectives of this research are; 1) Analyzing the relationship between the level of knowledge of anemia and anemia status in young girls at the 7th-grade junior high school level in Palangka Raya City, 2) Analyzing the relationship between parental income and anemia status in young girls at the 7th-grade junior high school level in Palangka Raya City, 3)Analyzing the relationship between menstrual patterns and anemia status in young girls at 7th-grade junior high school in Palangka Raya City.

METHOD

The design of this research is a descriptive analytic with a quantitative cross-sectional study that functions to analyze the relationship between knowledge of anemia, parents' income, and menstrual patterns with the status and incidence of anemia. The population used was all 1409 7th-grade junior high school students spread across 47 schools in the city of Palangka Raya. (15) In taking the sample the authors had inclusion criteria, namely: 1) Young girls at 7th-grade level who had drawn one cluster, 2) young women who are not menstruating, and 3) young women who are not fasting. The sample technique for this study used cluster sampling. This sampling technique is used to determine a sample whose data is very broad. The groups drawn from this study consist of geographic units. Of the 47 junior high schools in Palangka Raya City, the researchers divided them into 5 (five) research area clusters based on sub-districts. The schools that will be sampled for each cluster are drawn using a lottery technique to obtain the serial number of the schools that will be sampled. If the school with serial number 1 does not give permission, then the sample falls on the school with serial number 2, and so on, then cluster 1 consists of 5 schools, then one will be drawn to be used as the sample. Likewise for the next research area (cluster) the same thing will be applied. Determination of the sample size in this study was determined by the 2 proportion difference test formula (Lemeslow):

$$n = \frac{\{Z_1-\alpha/_2\sqrt{2P(1-P)} + Z_1-\beta\sqrt{P_1(1-P_1)+P_2(1-P_2)}\}^2}{(P_1-P_2)^2}$$

$$n = \frac{\{1,96\sqrt{2.0,545\,(1-0,545)} + 1,64\sqrt{0,69(1-0,69)+0,4(1-0,4)}\}^2}{(0,69-0,4)^2}$$

$$n = \frac{\{1,377+1,103\}^2}{(0,084)}$$

$$n = \frac{6,150}{0,084}$$

$n = 73,21 \approx 73$

$n = 73 \times 2 = 146$ samples

Information:

n = Expected sample size

Z1-α/2 = The level of significance in α = 5% (Z-score = 1,96)

Z1-β = Test power on β = 95% = 1,64
P = (P1+P2)/2 = 0,545
P1 = 0,69 (28).
P2 = 0,4 (28).

Based on the above results, a sample of 146 of 1409 populations was obtained. This study used a questionnaire about the identity of the respondent, the results of hemoglobin examination on the respondent, data on the income level of the respondent's parents and knowledge of anemia. The questionnaire used refers to previous research questionnaires that have been tested for validity and reliability. Research on knowledge about anemia is based on the number of correct answers from respondents. Of the 12 knowledge questions submitted, they were given a weight/value for the correct answer which was 1 and the wrong answer was 0. Hb levels were measured using a digital hemometer. A digital hemometer has a more valid accuracy than a valid hemometer, a faster and easier way to check.

Univariate analysis resulted in the distribution and percentage of the dependent variable, namely anemia status and the independent variables knowledge level of anemia, parental income level and menstrual pattern. Bivariate analysis was performed to explain the relationship between the two variables, namely the independent variable and the dependent variable using the Spearman correlation test with a significance level (α) of 5% (95% confidence level). Multivariate analysis was carried out to see several independent variable relationships so that it is known which independent variable relationships have the greatest influence on the dependent variable. The type of multivariate analysis used is multiple logistic regression.

RESULTS AND DISCUSSION

RESULTS

1. **Univariate Analysis**

   Following are the results of the study using univariate analysis which produces the distribution and percentage of the dependent variable, namely anemia status and the independent variables knowledge level of anemia, parental income level and menstrual pattern.

Table 1. Distribution of the frequency of anemia status, level of knowledge, parents' income, and menstrual pattern

Variables	Frequency (f)	Percentage (%)
Anemia Status		
Anemia	28	19,2
Not Anemia	118	80.8
Total	146	100
Knowledge level		
Low	44	30.1
High	102	69.9
Total	146	100
Parents Income		
Low	41	28.1
High	105	71.9
Total	146	100
Menstrual Pattern		
Abnormal	51	34.9
Normal	95	65.1
Total	146	100

Table 2. The relationship between the level of anemia knowledge and anemia status in young girls at 7th-grade junior high school in Palangka Raya City

Knowledge level	Anemia Status				Total		Correlation Results
	Anemia		Not Anemia				
	f	%	f	%	f	%	
Low	17	38.6	27	61.4	44	100	p-value = 0.0001
High	11	10.8	91	89.2	102	100	r = 0.325

Based on table 1 above, it was found that 118 respondents (80.8%) did not have anemia, which was greater than those who had anemia. Most of the respondents had a high level of knowledge, namely as many as 102 people (69.9%) and respondents had high parental income, namely as many as 105 people (71.9%). In addition, the data shows that the majority of respondents have normal menstrual patterns, namely as many as 95 people (65.1%).

2. **Bivariate Analysis**

Following are the results of the study using bivariate analysis using the Spearman correlation test with a significance level (α) of 5% (95% confidence level).

Based on table 2 above, it was found that out of 44 respondents who had a low level of knowledge, 17 people (38.6%) had anemia, while out of 102 respondents who had a high level of knowledge, there were 91 people (89.2%) of respondents who did not experience anemia. Statistical test results using the Spearman correlation test showed a p-value of 0.0001 (<0.05), which means there is a relationship between the level of anemia knowledge and anemia status in young women at 7th-grade junior high school in Palangka Raya City. The correlation coefficient value shows the number 0.325. This means that there is a moderate relationship between the level of anemia knowledge and anemia status in young women at 7th-grade junior high school in Palangka Raya City. The direction of the relationship obtained is positive, so it can be concluded that the better the knowledge of young women about anemia, the better the anemia status of adolescents (not experiencing anemia).

Based on table 3 above, it was found that out of 41 respondents with low parental income, 18 people (43.9%) had anemia, while out of 105 respondents with high parental income, there were 95 people (90.5%) of respondents who did not experience anemia. The results of statistical tests using the Spearman correlation test showed a p-value of 0.0001 (<0.05), which means that there is a relationship between parental income and anemia status in young women at 7th-grade junior high school in Palangka Raya. The

Table 3. The relationship between parents' income and the incidence of anemia in young girls at 7th-grade junior high school in Palangka Raya City

Parents Income	Anemia Status				Total		Correlation Results
	Anemia		Not Anemia				
	f	%	f	f	%	f	
Low	18	43.9	23	56.1	41	100	p-value = 0.0001
High	10	9.5	95	90.5	105	100	r = 0.392

Table 4. The relationship between menstrual patterns and the incidence of anemia in young girls at 7th-grade junior high school in Palangka Raya City

Menstrual Pattern	Anemia Status				Total		Correlation Results Anemia
	Anemia		Not Anemia				
	f	%	f	f	%	f	**f**
Abnormal	16	31.4	35	68.6	51	100	p-value = 0.006
Normal	12	12.6	83	87.4	95	100	r = 0.227

correlation coefficient value shows the number 0.392. This means that there is a moderate relationship between parental income and anemia status in young girls at 7th-grade junior high school in the city of Palangka Raya. The direction of the relationship obtained is positive, so it can be concluded that the higher the parents' income, the better the anemia status of adolescents (not anemia).

Based on table 4 above, it was found that out of 51 respondents who had abnormal menstrual patterns, 16 (31.4%) had anemia, while 83 of the 95 respondents who had normal menstrual patterns (87) .4%) of respondents who did not experience anemia. Statistical test results using the Spearman correlation test showed a p-value of 0.006 (<0.05), which means there is a relationship between the level of anemia knowledge and anemia status in young women at 7th-grade junior high school in the city of Palangka Raya. The correlation coefficient value shows the number 0.227. This means that there is a weak relationship between menstrual patterns and anemia status in young women at 7th-grade junior high school in Palangka Raya City. The direction of the relationship obtained is positive, so it can be concluded that the better the menstrual pattern of female adolescents, the better the anemia status of adolescents (not anemia).

Multivariate Analysis

Based on table 5, it was found that the multivariate test conducted proved that there were only 2 factors that simultaneously had an influence on the incidence of anemia in junior high school 7th-grade girls in Palangka Raya City. The two factors are the level of knowledge with a p value of 0.0001 and parents' income with a p-value of 0.0001. Based on the value of Exp (B), it can be seen that the factor of parental income is the factor that most influences the incidence of anemia in young women (Exp.B = 8.241).

DISCUSSION

Table 5 Results of multivariate analysis

Variables	B	p-values	Exp (B)	95% Confidence Interval (CI)
Knowledge level	1.770	0.0001	5.870	2.200 – 15.658
Parents Income	2.109	0.0001	8.241	3.091 – 21.972
Menstrual Pattern	0.608	0.227	1.836	0.685 – 4.920
Constant	-0.860	0.065	0.423	

Relationship Between Anemia Knowledge Level and Anemia Status in Young Girls at 7th-grade Junior High School in Palangka Raya City

Based on the research results, it was found that out of 44 respondents who had a low level of knowledge, 17 people (38.6%) had anemia, while out of 102 respondents who had a high level of knowledge, there were 91 people (89.2%). %) of respondents who did not experience anemia. Knowledge is the result of knowing, occurs after someone senses an object. According to Notoadmojo (2014), knowledge is divided into 2, namely knowledge that comes from experience and knowledge that comes from information (14).

The results of the statistical test showed a p-value of 0.0001 (<0.05), which means that there is a relationship between the level of anemia knowledge and anemia status in young women at 7th-grade junior high school in Palangka Raya. The results showed that most of the anemia cases occurred in respondents with a low level of knowledge. One of the individual factors that can influence the incidence of anemia is knowledge, especially knowledge about anemia. If a teenager has good knowledge about anemia then the way to act and respond to prevention of anemia is also good, so that the incidence of anemia in young women can be avoided. The results of this study are in line with research conducted by Putri (2018) which states that there is a relationship between knowledge and the incidence of anemia in young women in the working area of the Paal Merah Health Center in Jambi City in 2018 (p value = 0.000). (12) Other research conducted by Laksmita and Yenie (2018) also showed that there was a relationship between young women's knowledge about anemia and the incidence of anemia (p value = 0.034) (15).

The correlation coefficient value on the research results shows the number 0.325. This means that there is a moderate relationship between the level of anemia knowledge and anemia status in young women at 7th-grade junior high school in Palangka Raya City. The direction of the relationship obtained is positive, so it can be concluded that the better the knowledge of young women about anemia, the better the anemia status of adolescents (not experiencing anemia). Knowledge about anemia is a cognitive process because a person is not only required to know but also needs to understand and understand the conditions or circumstances related to anemia, for example understanding that anemia is a condition of lack of red blood cells, understand the signs and symptoms and factors that can cause anemia. anemia so that what has been understood can become a habit and be applied in everyday life. Apart from being a cognitive process, knowledge is also a protective factor which means a protective action in the form of anemia prevention behavior so that it can reduce the incidence of anemia. This is also supported by Ahmady's research which states that knowledge is not limited to scientific theory but from the behavior of each individual in addressing the prevention of a disease (16).

The Relationship Between Parents' Income and Anemia Incidence in Young Girls at 7th-grade Middle School Level in Palangka Raya City

Based on the research results, it was found that out of 41 respondents with low parental income, as many as 18 people (43.9%) had anemia, while out of 105 respondents with high parental income, there were as many as 95 people (90, 5%) of respondents who did not experience anemia. Income is an economic factor that is quite dominant as a determinant of food consumption. Income is related to food

consumption at a macro level, the higher the family income, the more diverse the consumption pattern (9).

The results of the statistical test showed a p value of 0.0001 (<0.05), which means that there is a relationship between parents' income and anemia status in young women at 7th-grade junior high school in Palangka Raya City. The factor causing the high incidence of anemia in developing countries is the economic condition below average. The results of this study are in line with research conducted by Suryani (2020) which states that parental income is related to the incidence of anemia in young women at State Vocational High School 6, Palu City. The results of the study by Suryani showed that of the 89 respondents who were not anemic, there were 79 respondents (81.4%) with high socioeconomic status and of the 73 respondents who were anemic, there were more socioeconomic status respondents in the low income category, namely 55 respondents. (84.6%). The results of another study conducted by Satriani (2019) also showed a relationship between family income and the incidence of anemia in young women. The results of this study indicate that female students who experience anemia have more family income in the low category than those in the high category of 51.9%. Meanwhile, the majority of female students who do not experience anemia have high family income (80.4%) (12).

The correlation coefficient value in the results of this study shows the number 0.392. This means that there is a moderate relationship between parents' income and anemia status in young girls at 7th-grade junior high school in Palangka Raya City. The direction of the relationship obtained is positive, so it can be concluded that the higher the parents' income, the better the anemia status of adolescents (not anemic). The higher the income of parents, the easier it is to get the facilities and infrastructure needed by children, while parents with low economic backgrounds find it more difficult to get the facilities and infrastructure needed by children and the less time they can give to their children because parents prioritize how to meet daily needs. The high level of parental income will affect the growth and development of children, because parents are able to meet all the needs of children (17,18).

Relationship Between Menstrual Patterns and Anemia Incidence in Young Girls at Class VII Junior High School in Palangka Raya City

Based on the results of the study, it was found that out of 51 respondents who had abnormal menstrual patterns, 16 (31.4%) had anemia, while 83 of the 95 respondents who had normal menstrual patterns (87, 4%) of respondents who did not experience anemia. Menstrual patterns are periodic discharge of blood (usually occurring every month) from the uterus in the form of tissue fluid, fluid mixed with blood and endometrium (13).

The results of the statistical test showed a p-value of 0.012 (<0.05), which means that there is a relationship between menstrual patterns and anemia status in junior high school 7th-grade girls in Palangka Raya City. Menstrual patterns in adolescents are strongly influenced by the condition of the young woman's body, such as fatigue due to busy activities and high stress. This will intersect with the hormones in the body and cause menstrual problems. The results of this study are in line with Astuti and Kulsum (2020) who stated that the pattern of menstruation with the occurrence of anemia in young women at SMK Kesuma Margoyoso Pati (p-value = 0.001). Astuti and Kulsum (2020) showed the results that of the 36 respondents studied, 25 respondents had a

normal menstrual pattern, 16 people (44.4%) had no anemia, 8 people had mild anemia (22.2%), 1 person had moderate anemia (2.8%) and severe anemia in 0 people (0%) while 11 respondents who had abnormal menstrual patterns did not have anemia in 1 person (2.8%), mild anemia in 5 people (13.9%), anemia moderate as many as 5 people (13.9%) and severe anemia as many as 0 people (0%). (11) The results of another study conducted by Sari (2020) also showed that there was a relationship between menstrual patterns and nutritional status with the incidence of anemia (p-value = 0.000). Sari's research (2020) showed the results of 99 respondents, female students who experienced anemia had more abnormal menstrual patterns, namely 26 respondents (72.2%) (3).

The correlation coefficient value in the results of this study shows the number 0.227. This means that there is a weak relationship between menstrual patterns and anemia status in young women at 7th-grade junior high school in Palangka Raya City. The direction of the relationship obtained is positive, so it can be concluded that the better the menstrual pattern of female adolescents, the better the anemia status of adolescents (not anemic). The normal menstrual pattern is that the cycle lasts 21-35 days, the length is 2-8 days and the amount of blood released is approximately 20-80 ml per day. Menstrual patterns that are not normal or also called menstrual disorders, namely when menstrual cycles, length and amount of blood are less or more than described above. Menstrual cycles in women normally range from 21-35 days and only 10-15% have menstrual cycles of 28 days with menstrual lengths of 3-5 days, some 7-8 days (7).

The Most Influential Factors with Anemia Status in Young Girls at 7th-grade Junior High School Level in Palangka Raya City

Based on the research results, it is known that parents' income factor is the factor that most influences the incidence of anemia in young women (Exp. B = 8.241). The results of this study are in line with research conducted by Harahap (2018) which showed that the income level of parents affected the incidence of anemia, obtained p = 0.05 (p <0.05) with OR = 4.081, which means that the incidence of anemia with parental income < UMK is 4.0 times more at risk than parents' income> UMK (19).

Furthermore, the results of this study are also in line with another study conducted by Anggoro (2020) which stated that family income has an influence on the incidence of anemia (p-value = 0.025). Anggoro in his research showed that students with family opinions who were included in the lower UMK category had abnormal Hb levels of 13 people (28.3%) and those who had normal Hb levels were 33 people (71.7%). While students with family income above the UMK, there was 1 student with abnormal Hb levels (4.3%), while 22 students (95.7%) had normal Hb levels.

Indrawatiningsih et al (2021) showed that there is a relationship between parental income and anemia status. The results of Indrawatiningsih et al's research showed that there were 22 respondents (45.8%) who experienced anemia and 26 respondents (54.2%) who did not experience anemia from a number of 48 adolescents whose parents' income was <UMR. The results of the statistical test obtained a p-value = 0.012, so it can be concluded that statistically at an alpha of 0.05 there is a significant relationship between parents' income and anemia status in young women in Sidomakmur Village, Gumawang Health Center, OKU Timur Regency, 2020. From the analysis Also obtained an OR value of 3.385, meaning that adolescents whose parents'

income is <UMR have a 3.385 times greater chance of experiencing anemia compared to adolescents whose parents' income is ≥UMR (3).

A high level of family income will affect the pattern and type of food consumed by the family, where most families who have high incomes will likely consume nutritious food. Students with family income above the UMK find it easier to get all their needs, both primary and secondary needs. High family income can provide good food to family members which can affect nutrition and the provision of a variety of foods that affect good intake of iron nutrition. Conversely, if a low family income cannot provide enough food for family members, it can affect adolescents in consuming nutrients, resulting in a lack of iron intake. The low intake of iron into the body which comes from the intake of iron nutrition from daily food is one of the causes of anemia (19)

LIMITATIONS

The limitation of this research is that researchers cannot control other factors such as religion. In addition, this research sample was carried out in one place which allows for differences if it is carried out in different places.

ETHICAL CLEARANCE

This research was subjected to an ethical test at the Research Ethics Commission at the University of Muhammadiyah Banjarmasin and declared an ethical proper test under the number 028/UM/KE/II/2021 on January 14st, 2021.

CONFLICT OF INTEREST

There is no conflict of interest in this research.

ACKNOWLEDGMENT

Researchers suggest thanks to all parties who have supported the management of this research. Thank you to the respondents who were junior high school students and all the schools that were used as very cooperative research sites to support this research recommendation.

CONCLUSION

Based on the results of the study, it can be concluded that there is a relationship between the knowledge level of anemia and anemia status in young girls at 7th-grade junior high school in Palangka Raya City (p value = 0.0001; r = 0.325). There is a relationship between parents' income and anemia status in young girls at 7th-grade junior high school in Palangka Raya City (p value = 0.0001; r = 0.392). There is a relationship between menstrual patterns and anemia status in 7th-grade junior high school girls in Palangka Raya City (p value = 0.006; r = 0.227). Parents' income factor is the factor that most influences the incidence of anemia in young women (Exp. B = 8.241).

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