

The Correlation Between Family Income and Mom's Education with Anemia

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Abstract -Puberty is a transition period between childhood and adulthood where growth spurt occurs, and people in this period relatively have not reached the stage of mental and social maturity so they must face conflicting emotional and social pressures. According to WHO, adolescents are when children reach the age of 10-18 years. In adolescence there is one of the problems that mostly appears, that is anemia. Anemia in young women is still a public health problem if the prevalence is more than 15%. In general, the high prevalence of iron nutrition anemia is caused by several factors: chronic blood loss, inadequate iron intake, inadequate absorption, and increased need for iron. Based on preliminary studies obtained from interviews with 25 female midwifery study program students of Harapan Bangsa University Purwokerto, the result showed that 45% of students experienced severe anemia, 40% had moderate anemia, and 15% had mild anemia. The purpose of this study was to determine the factors associated with the incidence of anemia in adolescents. The type of this research was correlation analytic research design with cross-sectional approach. Samples were taken using simple random sampling. The results showed that there was a correlation between family income and mom's education with anemia in adolescents.

Keywords: *family income, mom's education, anemia*

I. INTRODUCTION

Puberty is a transition period between childhood and adulthood where growth spurt occurs, and the people in this period relatively have not reached the stage of mental and social maturity so they must face conflicting emotional and social pressures. According to WHO, adolescents are when children have reached the age of 10-18 years [1]. During this period, psychological and biological changes occur. One of the problems experienced by adolescents is anemia. In general, the high prevalence of iron nutritional anemia is caused by several factors: chronic blood loss, inadequate iron intake, inadequate absorption, and increased need for iron. Adolescent girls suffering from anemia is

something understandable because adolescence is a period of growth that requires higher nutrients including iron. Beside that, young women experience menstruation every month, so that they need higher iron, meanwhile the amount of food consumed by them is lower than by the men. Some argue that they want to get a slim body. The abstinence from certain foods and wrong eating habits are also causes of anemia in adolescent girls [2]. Further, young women who suffer from anemia will also decrease their fitness, thus hampering their sports performance and productivity. In addition, adolescence is a period of very rapid growth; hence iron deficiency during this period will result in not achieving optimal height. Based on preliminary studies obtained from interviews with 25 female students of midwifery study program in Harapan Bangsa University of Purwokerto, it was found that 45% of students experienced severe anemia, 40% had moderate anemia, and 15% had mild anemia. From the above problems, the researchers are interested in conducting research on the correlation between family income and mom's education with the anemia in adolescents.

II. METHODS

The research model used was analytic correlation research, a research between two variables in a situation or group of subjects. This study used cross-sectional design. [3] The population in this study were all students of Diploma of Midwifery Study Program in Harapan Bangsa University as many as 82 female students. Sampling technique used was simple random sampling. In taking the sample, the researchers used Solvin formula and generated 50 female students. The research was conducted at Harapan Bangsa University of Purwokerto for one month, from May 3rd to June 4th, 2019 with a total sample of 50 female students. Data was processed using univariate and bivariate analysis.

III. RESULTS AND DISCUSSION

Table 1 Frequency Distribution of Factors Associated with Anemia in Adolescents

Anemia	Frequency	Percentage
Anemia	50	50
No anemia	50	50
Total	100	100
Family	Frequency	Percentage

Income Level		
Low	56	56
High	44	44
Total	100	100
Mom's Education		
Frequency	Percentage	
Low	57	57
High	43	43
Total	100	100

Based on table 1 above, it can be seen that there are 50 female students with anemia and 50 who are not suffering from anemia. The factor associated with the incidence of anemia is mostly low, as many as 56 people (56%). Based on mom's education factors, the majority is from low level of education as many as 57 people (57%).

Table 2 Correlation between Family Income and Anemia

Family Income	Anemia				Total		P Value	α
	Anemia		No Anemia		F	%		
	F	%	F	%				
High	17	34	27	54	17	34	0,044	0.05
Low	33	66	23	46	33	66		

Based on table 2, it can be seen that most of the students who have anemia are students with low family income, as many as 33 people (66%) and few are from family with high income as many as 17 people (34%). Based on the Chi Square test, the result shows that p value is 0.044, hence it can be concluded that there is a correlation between family income and anemia.

Table 3 Correlation between Mom's Education and Anemia

Mom's	Anemia				Total		P Value	α
	Anemia		No Anemia		F	%		
	F	%	F	%				
High	34	68	2	4	3	6	0,026	0.05
Low	16	32	5	1	3	3		
			2	7	4	6		

Based on table 3 it can be seen that most of the students who have anemia are students who have mothers with low education as many as 34 people (68%), and a small proportion of students who have mothers with higher education as many as 16 people (32%). Based on Chi Square test, the result indicates that p value is 0.026, so it can be concluded that there is a correlation between mom's education and anemia.

1. The Correlation between Family Income and Anemia

Adequate family income will support the growth and development of children because parents can provide all the needs of children both primary and secondary needs. Small income cannot provide enough food to family members, so the family's needs are not fulfilled. [4]

Family income has a positive correlation with food expenditure, meaning that the lower the family income, the lower the food expenditure of the subject. Income is directly related to purchasing ability. Families with high incomes have the ability to buy and make it easier to choose food sources such as iron sources like meat, fish, eggs and others to be served. [5]

In addition, the large number of family members at home also affects the food expenditure. The result of study shows that subjects with high food expenditure are influenced by consumptive lifestyles and the large number of family members. Based on the result of the study, it was found that the average food expenditure of the subjects is 48% of the total family expenditure for one month. [6]

The results of the bivariate analysis between food expenditure and iron intake showed that there was a positive correlation, meaning that the lower the food expenditure the lower the iron intake of subjects. The result of another study in the Netherlands showed there was a correlation between income and vitamin and mineral intake, especially iron. A research in India showed that there was a correlation between income and iron intake, at each level of family income has a prevalence of anemia that is almost the same, this is caused by food expenditure of a family which is spent more to buy food with iron sources derived from vegetable protein, cereals and vegetables.[7]

2. The Correlation between Mom's Education and Anemia

Mom's education is one of the main factors that supports the family's finance and also plays a role in the preparation of family meals, as well as children's nurture and care. [8] For families with a high level of education it will be easier to receive health information, especially in the field of nutrition, so that they can increase their knowledge and be able to apply it in their daily lives.

Mother's education can determine knowledge and skills in deciding the diet for her family which will affect the health status of all family members. Lack of knowledge and skills in choosing the diversity of food ingredients and types of cuisine will affect the intake of family members. [10]

IV.CONCLUSIONS

There is a correlation between family income and mom's education with the incidence of anemia in adolescents.

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