



THE RELATIONSHIP BETWEEN KNOWLEDGE AND COMPLIANCE WITH IRON SUPPLEMENT IN ADOLESCENT WOMEN

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Abstract

Background: The incidence of anemia in Indonesia is still quite high. According to Riskesdas data in 2013, it was relatively higher for female adolescents who experienced anemia, namely 23.9% and increased to 48.9% in 2018, with the proportion of anemia in the age group 15-24 years and 25-34 years. Efforts to prevent nutritional anemia among adolescents are still low, based on the coverage figures for iron supplement received by adolescents daughter by 76.2%. However, only 1.4% took iron tablets as recommended. This research aims to analyze the relationship between knowledge and adherence to taking iron tablets in young women. **Method:** This study used analytic observational with a cross sectional approach. The sample for this study was female adolescents at SMP Negeri 1 Purwoasri-Kediri, East Java, who were included in the inclusion criteria and were determined using a simple random sampling technique. Retrieval of data through primary data and secondary data. Primary data was obtained by filling out a questionnaire about knowledge of iron supplement filled out by young women. While the secondary data is in the form of data on the number of young women who received iron tablets and consumed iron tablets. Research data were analyzed using the chi-square test. **Results:** The research results show most of the respondents had sufficient knowledge, namely 57 respondents or 75%. There were 14 respondents (18.4%) with poor knowledge and 5 respondents (6.6%) with good knowledge. There were 29 respondents (38.2%) who were not compliant in consuming blood supplement tablets with sufficient knowledge category. The results of bivariate analysis with the Chi-Square test obtained $p = 0.001$. **Conclusion:** The data shows that there is a significant relationship between knowledge with adherence to taking iron tablets in young women. In future researchers, it is hoped that they will investigate further regarding knowledge with the consumption of blood supplement tablets by adding an assessment of the adequacy of individual iron intake.

Keywords : compliance, knowledge, adolescents, iron supplement

BACKGROUND

The incidence of anemia in Indonesia has increased in 2018. Based on the 2018 Basic Health Research, the prevalence of anemia among young women in Indonesia is 48.9%. In Kediri District, the prevalence of anemia is around 25% in female adolescents and around 17% in women of childbearing age. In the 2020-2024 National Health Strategic Plan, the goals of



the Maternal and Child Nutrition and Health Programs are the availability and affordability of quality health services throughout the community, with indicators of improving community nutrition. Iron supplement for young women targeting 30% in 2019 (Dinkes Kabupaten Kediri, 2018). In general, programs for giving iron tablets have been carried out in Indonesia. Knowledge is one of the factors for a person's compliance in taking iron tablets. Regulation of the Minister of Health no 88 of 2014, so it is very important for adolescents to prevent anemia in adolescence (Kemenkes, 2014).

Young women's knowledge about iron tablets that is lacking will affect adherence in consuming them. Knowledge is influenced by several factors such as level of education, information, experience and also the economy. In the information factor or mass media, the information obtained from both formal and non-formal education can have a short-term effect resulting in a change or increase in knowledge (Deviani, 2017). Efforts to overcome the problem of anemia in adolescents are related to risk factors that can cause anemia, including consuming foods high in iron and folic acid, eating foods that contain vitamins A and C, taking iron tablets 1 tablet per week and 1 tablet every day during menstruation to replace iron lost with menstrual blood (Kemenkes RI, 2018).

Based on the results of a preliminary study conducted at SMP Negeri 1 Purwoasri, students since the beginning of entering school after the pandemic received iron tablets, but not 50% of students consumed iron tablets. This is in line with the results of research conducted by Rodhiyana, Rize, and Adityawarman (2022) on young women at Islamic boarding schools showing that there is a relationship between knowledge and adherence to taking iron tablets and there is no relationship regarding attitude to adherence to iron tablets consumption.

Knowledge has an influence on the consumption of iron tablets, but the relationship between knowledge and adherence to taking blood tablets in young women is SMP Negeri 1 Purwoasri not yet known. Therefore, there is a need for research on knowledge and adherence to taking iron tablets in female adolescents SMP Negeri 1 Purwoasri. This study aims to analyze knowledge with adherence to taking iron tablets in young women.

METODE

This research method uses cross sectional with a retrospective approach. This approach was used by researchers to determine the adherence of young women in consuming iron supplement. Data collection was carried out using a questionnaire containing questions about iron tablets as well as data on young women who had taken blood tablets 1 month before from school. The study population was 316 young women at SMP Negeri 1 Purwoasri-Kediri. SMP



Negeri 1 Purwoasri-Kediri had 3 grade levels with 8 classes at each level. The researcher took 85 samples of young women aged 12-18 years and were selected by probability sampling technique in the form of simple random sampling. Consideration of taking the population at the age of 12-18 years is included in the early-middle teenage years, where adolescent thinking is still unstable. The hope is that you can have your own will in taking blood booster tablets for better personal health, and there is still a chance for improvement after conducting research as an evaluation.

The independent variable in this study was knowledge of iron supplement, while the dependent variable was female adolescent compliance in consuming iron supplement. The analysis used the Chi-Square test with a significance level of $p < 0.05$. all management techniques in research using SPSS.

RESULT

Prior to data collection, the validity and reliability of the questionnaire was first tested, with the results of the validity test 0.410-0.984 and the reliability test 0.961. The sample in this study were 76 young women. Based on the analysis, the following results were obtained,

Table 1. Frequency distribution of respondents based on age and class

Characteristics	Frequency	Percentage (%)
Age		
12 years	15	19.7 %
13 years	21	27.6 %
14 years	32	42.1 %
15 years	7	9.2 %
16 years	1	1.3 %
Total	76	100.0 %
Class		
7 th grade	30	39.5 %
8 th grade	25	32.9 %
9 th grade	21	27.6 %
Total	76	100.0 %

The data above shows that of the 76 young women the majority are 14 years old, namely 32 young women (42.1%). 13-year-old female adolescents occupy the second most places, namely 21 female adolescents (27.6%), and 1 female adolescent (1.3%) who is 16 years of age. From the data above it shows that the class with the most respondents was class 7 (39.5%) with an age range of 12-14 years.

Table 2. Frequency distribution of knowledge and adherence to taking iron tablets in female adolescents

	Frequency	Percentage (%)
Knowledge		
Good	5	6.6 %
Enough	57	75 %
Not enough	14	18.4 %
Total	76	100.0 %

Obedience		
obey	32	42.1 %
Not obey	44	57.9 %
Total	76	100.0 %

The data above shows that most of the respondents have sufficient knowledge (75%). Respondents who have good knowledge (6.6%) and respondents who have less knowledge (18.4%). At the level of compliance, the majority of respondents were disobedient in consuming iron supplement tablets, namely 44 respondents (57.9%).

Table 3. Relationship between knowledge and adherence to taking iron tablets

Obedience Category	Compliance with the Consumption of Blood Supplement Tablets				Total	P Value
	obey		Not obey			
	f	%	f	%		
Good	4	5.3	1	1.3	5	0.001
Enough	28	36.8	29	38.2	27	
Not enough	0	0.0	14	18.4	14	

The table above shows that the majority of young women with adequate knowledge are still disobedient in taking iron supplement tablets, namely 29 young women (38.2%). Bivariate test showed sig. value 0.001 which means sig. <0.05 so it can be interpreted that there is a relationship between knowledge and adherence to taking iron tablets.

DISCUSSION

Age

Hidayati (2016) states that the early adolescent category is a transitional period between childhood and biological and psychological development. Biologically it is characterized by the growth and development of primary and secondary sex, while psychologically it is characterized by unstable attitudes and feelings, desires and emotions.

The rate of change in attitudes and behavior during adolescence parallels level of physical change. During early adolescence, when physical changes occur rapidly, changes in behavior and attitudes are also taking place rapidly. Some teenagers are ambivalent towards any change. They want and demand freedom, but they are often afraid take responsibility for the consequences and doubt their ability to solve the problem (Hurlock, 2017).

Knowledge

In this study, most of the knowledge about iron supplement tablets in young women at SMP Negeri 1 Purwoasri was sufficient. The results of this study are in line with Deviani's research (2017) at SMA Negeri 10 Bogor City which stated that the study of measuring knowledge regarding the consumption of iron (Fe) tablets that had been conducted on 70 female adolescents showed that more than half, namely 39 female adolescents (56%) had sufficient knowledge, less than half, namely 25 female adolescents (36%) had good knowledge, and a small proportion, namely 6 female adolescents (8%) had insufficient knowledge.



Meanwhile, research conducted by Riana (2018) at SMAN 1 Gianyar showed that 44.6% of respondents had good knowledge about blood supplement tablets.

A person's behavior is the result of all kinds of experiences and interactions between humans and their environment which are manifested in the form of knowledge, attitudes and practices. An attitude is not automatically manifested in an action (overt behavior). In order to manifest an attitude into a real action, it is necessary to have an intention from oneself and a supporting factor or a condition that allows it, including facilities.

Obedience

The results of the study showed that most of the samples (38.2%) were disobedient in taking iron tablets, even though 29 young women had sufficient knowledge but were less compliant in consuming iron tablets, the thing that underlies students' lack of compliance was their perception that they think iron tablets are medicine and they think they are no longer sick, apart from that the bad taste, smell and side effects are the reasons for the low consumption of blood tablets in SMP Negeri 1 Purwoasri.

Susanti's research (2016) on young women in Tasikmalaya Regency, stated that the highest reason for not consuming supplements was boredom or laziness. Another factor that causes young women to be disobedient in taking iron tablets is the side effects they experience after taking blood tablets (Yuniarti et al. 2015). The low level of subject adherence to taking iron tablets during menstruation is caused by a lack of interest in taking blood tablets which is based on the individual feeling sick and does not need blood tablets (Lestari, 2015). In addition, research by Riana (2018) at SMA N 1 Gianyar also stated that 19.2% of a total of 130 respondents found female adolescents who obediently consumed iron supplement tablets.

Relationship between knowledge and adherence to taking iron tablets

The results of the statistical test using chi-square showed that there was a significant relationship between knowledge and adherence to consuming iron tablets in young women with a p value = 0.001 less than the significance level $\alpha = 0.05$, so it can be concluded that knowledge has a relationship with adherence to consuming blood supplement tablets in young women. According to Notoatmodjo (2007), behavior (consumption of iron supplement tablets) is not only influenced by internal factors which include knowledge, but also influenced by external factors which include the environment and other internal factors, namely intelligence, emotional perception and motivation which play a role in processing stimuli from outside. So that it can be explained that there are students with good or sufficient knowledge categories who do not use iron supplement tablets as recommended by the government, the reason may

be due to lack of motivation and awareness, so that their ability to deal with external stimuli is also weak. Consumption is a form of behavior that is strongly influenced by information, but before humans behave, there is an adaptive process behind this behavior. One of the behavioral adaptive processes is experimentation, at this stage people try new behaviors according to their knowledge, awareness and attitudes. If the person has knowledge but no awareness of action in this experimentation phase, it means that the behavioral assumption process has not been successful. The results of this study are in line with Andika's research (2022) which showed the results of a significant relationship between anemia knowledge and adherence to blood name tablet adherence in young women with P Value = 0.011.

CONCLUSION

The results of this study indicate that the majority of respondents are disobedient in consuming iron tablets and have sufficient knowledge. Compliance can be caused by several factors. Based on the results of the study it is known that there is a relationship between knowledge and adherence to taking iron tablets. It is hoped that future researchers will investigate further by adding an assessment through food recall.

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