

## The Relationship Between Teacher Support and Student Motivation with Adherence to Consumption of Blood Supplementary Tablets in Female Students at Smp Negeri 2 Muara Kaman Year 2023

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### ABSTRACT

Anemia is a condition where the level of hemoglobin (Hb) in the blood is less than normal. Young women are prone to anemia because they experience menstrual periods and catch up on growth. Preliminary studies on female students of SMP Negeri 2 Muara Kaman found that there were those who did not consume Blood Supplement Tablets given by the teacher. The aim is to determine the relationship between teacher support and student motivation with adherence to consumption of Blood Supplementary Tablets in female students. This type of research is analytic observation using a cross sectional design. The population is 198 students at SMP Negeri 2 Muara Kaman, using the Lemeshow formula, a sample of 84 people is obtained. The sampling technique uses simple random sampling. Data analysis using Chi-Square. The characteristics of the respondents were mostly 13-year-old students (48.8%), parents had graduated from high school (41.7%) and their parents worked as private employees (40.5%). Most of the teacher's support was not good (51.2%), the motivation of the students was mostly moderate/weak (48.8%) and they were not compliant with consuming iron supplement tablets (54.8%)

## **INTRODUCTION**

According to the World Health Organization in 2018, the prevalence of anemia in adolescents is almost evenly distributed in various regions of the world, ranging from 40-88%. The prevalence of adolescent anemia in developing countries is 27% and 6% in developed countries. For Southeast Asia around 25-40% of young women suffer from anemia (WHO, 2018).

The prevalence of anemia in Indonesia based on the 2018 Riskesdas is 32% (Ministry of Health RI, 2020). In East Kalimantan, adolescents with anemia are quite high, reaching 43.2%. For the incidence of anemia in adolescents in Kutai Kartanegara Regency in 2021 there is 23.5% (East Kalimantan Province Health Profile, 2021).

Young women are prone to anemia due to experiencing menstrual periods and chasing the growth period. Teenage girls who are menstruating experience twice as much iron loss as boys. Besides that, this can be caused by unfavorable health behaviors such as: pay attention to body shape, thus limiting food consumption. This can cause reduced intake of nutrients including iron (Widyastuti, 2019).

Efforts by the East Kalimantan Provincial Health Office to reduce the incidence of anemia in young girls by involving hundreds of students in a national nutrition action movement which is carried out simultaneously nationally and is also implemented in all Regencies/Cities in East Kalimantan Province on October 26 2022 in the form of gymnastics, breakfast together and drinking movement iron supplement tablets (TTD) for junior and senior high school students to prevent anemia. This activity became a joint movement, not only to distribute tablets, but to pay attention to adherence to consumption of Blood Supplement Tablets (TTD) every day (Arumanto, 2022).

A preliminary study conducted at SMP Negeri 2 Muara Kaman found that the number of students at SMP Negeri 2 Muara Kaman was 198 people including 62 students in class VII, 69 students in class VIII and 67 students in class IX. Through initial interviews with the students or young women, they stated that they did not consume the Blood Supplement Tablets (TTD) given by the teacher. Then the students also stated that the teacher only gave Blood Supplement Tablets (TTD) but did not remind or explain the benefits. In addition, they are lazy to take Blood Supplement Tablets (TTD) because they forget or don't like it at home because it makes them nauseous due to the taste and smell of the medicine as well as headaches and easy sleepiness.

Non-adherence of young women consuming Blood Supplement Tablets (TTD) is heavily influenced by bad perceptions of blood supplement tablets such as causing nausea due to the taste and smell of the tablets which can cause dizziness and headaches. The motivation to consume iron tablets cannot be separated from the information and knowledge a person acquires, this is because knowledge is a factor that influences a person's consumption behavior. The behavior of consuming iron tablets is a person's actions that can be influenced by the circumstances of the surrounding environment and oneself. The results of Partami's research (2020) show that motivation to take iron tablets is an important factor for increasing hemoglobin levels.

Based on the description of this phenomenon, the researcher is interested in conducting research with the title "The Relationship between Teacher Support and Student Motivation with Compliance with Consumption of Blood Supplementary Tablets (TTD) in Students at SMP Negeri 2 Muara Kaman in 2023".

## **LITERATURE REVIEW**

### **Anemia**

Anemia is a condition in which low hemoglobin levels are caused by a medical condition. Fe deficiency is one of the causes of anemia, but not the only cause of anemia (Ani, 2016).

### **Blood Supplement Tablets (TTD)**

Iron Supplement (TTD) is a nutritional supplement containing 60 mg of elemental iron and 0.25 mg of folic acid (as recommended by WHO). When taken regularly, iron tablets can prevent and treat nutritional anemia. The recommended dose of iron supplements for young women is 1 tablet per week and 1 tablet daily during menstruation (RI Ministry of Health, 2016).

### **Teacher Support**

Nuradiani (2017) showed that the factor most related to female adolescent adherence to Fe pills was teacher support. Indeed, young women spend more time at school and serve as role models for teachers: Young women listen more to the information conveyed by teachers than anyone else, including parents. Young women will be more obedient in taking Fe pills if they get support from the school and teachers. The role of the teacher as an educator must be able to provide knowledge about anemia and information related to the use of iron supplements. The teacher also acts as a supervisor, monitoring the management process until the iron tablets are consumed by girls. Not only that, teachers can also act as facilitators in communicating with parents through the school board to care about the nutritional status of young women and how to take iron tablets at home.

### **Student Motivation**

Motivation is a process of willingness to exert high effort to achieve organizational goals based on the ability of these efforts to satisfy the needs of some individuals. While motivation usually refers to the effort expended to achieve each goal, we refer to organizational goals here because we focus on work-related behavior (Robbins & Coulter, 2017).

### **Teenage Girl**

Adolescence is a period of transition or transition from childhood to adulthood which is characterized by physical, psychological and psychosocial changes. The term teenager or young adult comes from the Latin word to grow up or grow into an adult, so it has a broader meaning that includes mental, emotional, social maturity. Social and physical (Dieny, 2017).

## METHODOLOGY

This type of research is analytic observation using a cross sectional design. The population is 198 students at SMP Negeri 2 Muara Kaman, using the Lemeshow formula, a sample of 84 people is obtained. Inclusion criteria: Student at SMP Negeri 2 Muara Kaman, already menstruating and willing to be a respondent. Exclusion criteria: absent from school due to illness, permission and negligence.

The results of the reliability test, namely teacher support, obtained a Cronbach Alpha value of 0.920 > 0.6, so it was reliable. Student motivation obtained Alpha Cronbach value of 0.960 > 0.6, so it is reliable. Compliance with iron supplement consumption obtained a Cronbach Alpha value of 0.954 > 0.6, so it is reliable.

The sampling technique uses simple random sampling. Data analysis using Chi-Square.

## RESULTS

### Univariate Analysis

#### a. Characteristics of Respondents

**Tabel 1.**  
**Karakteristik Responden**

No	Karakteristik Responden	N	%
1	<b>Usia Siswi</b>		
	12 tahun	10	11,9
	13 tahun	41	48,8
	14 tahun	30	35,7
	15 tahun	3	3,6
2	<b>Pendidikan Orang Tua</b>		
	Tidak Tamat SD	6	7,1
	Tamat SD	4	4,8
	Tamat SMP	25	29,8
	Tamat SMA	35	41,7
3	<b>Pekerjaan Orang Tua</b>		
	Tamat Perguruan Tinggi	14	16,6
	IRT	11	13,1
	PNS	12	14,3
	Karyawan Swasta	34	40,5
	Wiraswasta/Pedagang	27	32,1

Sumber : Data Primer, 2023

The age of students is almost half of the 13 year old respondents totaling 41 people (48.8%), the education of parents is almost half of the respondents graduating from high school totaling 35 people (41.7%) and the work of parents of almost half of the respondents as private employees is 34 people (40.5%).

#### Teacher Support

**Tabel 2.**  
**Distribusi frekuensi dukungan guru pada siswi di SMP Negeri 2 Muara Kaman**

No	Dukungan Guru	N	%
1	Baik	41	48,8
2	Kurang Baik	43	51,2
	Jumlah	84	100

Sumber : Data Primer, 2023

Most of the teachers' support came from the poor respondents, amounting to 43 people (51.2%), while the good ones were 41 people (48.8%).

**b. Student Motivation**

**Tabel 3.**  
**Distribusi frekuensi motivasi siswi di SMP Negeri 2 Muara Kaman**

No	Motivasi Siswi	N	%
1	Kuat	43	51,2
2	Sedang/Lemah	41	48,8
	Jumlah	84	100

Sumber : Data Primer, 2023

Most of the students' motivation came from moderate/weak respondents totaling 41 people (48.8%), while the strong were 43 people (51.2%).

**c. Compliance with Consumption of Blood Supplement Tablets (TTD)**

**Tabel 4.**  
**Distribusi frekuensi kepatuhan konsumsi Tablet Tambah Darah (TTD) pada siswi di SMP Negeri 2 Muara Kaman**

No	Kepatuhan Konsumsi TTD	N	%
1	Patuh	38	45,2
2	Kurang Patuh	46	54,8
	Jumlah	84	100

Sumber : Data Primer, 2023

Compliance with the consumption of Blood Supplement Tablets (TTD) was mostly from 46 respondents (54.8%) who were less compliant, while 38 people (45.2%) adherent.

**Bivariate Analysis**

**The Relationship Between Teacher Support and Adherence to Consumption of Blood Supplement Tablets (TTD) in Female Students**

**Tabel 5.**  
**Hubungan dukungan guru dengan kepatuhan konsumsi Tablet Tambah Darah (TTD) pada siswi di SMP Negeri 2 Muara Kaman**

No	Dukungan Guru	Kepatuhan Konsumsi TTD				Total	%	p value
		Patuh		Kurang Patuh				
		n	%	n	%			
1	Baik	25	29,8	16	19	41	48,8	
2	Kurang Baik	13	15,5	30	35,7	43	51,2	*0,009
	Jumlah	38	45,2	46	54,8	84	100	

\* Analisis Uji Chi Square  $p < \alpha$

$\alpha = 0,05$

The results of the chi square statistical test obtained a p value of  $0.009 < \alpha : 0.05$ , meaning that there is a relationship between teacher support and adherence to consumption of Blood Supplementary Tablets (TTD) in female students at SMP Negeri 2 Muara Kaman.

**The Relationship Between Female Students' Motivation and Adherence to Consumption of Blood Supplementary Tablets (TTD) in Female Students**

**Tabel 6**  
**Hubungan dukungan guru dengan kepatuhan konsumsi**  
**Tablet Tambah Darah (TTD) pada siswi di SMP Negeri 2 Muara**  
**Kaman**

No	Motivasi Siswi	Kepatuhan Konsumsi TTD				Total	%	p value
		Patuh		Kurang Patuh				
		n	%	n	%			
1	Kuat	27	32,1	16	19	43	51,2	
2	Sedang / Lemah	11	13,1	30	35,7	41	48,8	*0,002
	Jumlah	38	45,2	46	54,8	84	100	

\* Analisis Uji Chi Square  $p < \alpha$

$\alpha = 0,05$

The results of the chi square statistical test obtained a p value of  $0.002 < \alpha : 0.05$ , meaning that there is a relationship between student motivation and adherence to consumption of Blood Supplementary Tablets (TTD) in female students at SMP Negeri 2 Muara Kaman.

**DISCUSSIONS**

**The Relationship Between Teacher Support and Adherence to Consumption of Blood Supplement Tablets (TTD) in Female Students at SMP Negeri 2 Muara Kaman**

Based on the results of the study, it was found that the respondents had good teacher support, almost half of the respondents who adhered to iron tablets consumption were 25 people (29.8%), while 16 people (19%) were less compliant with iron supplements. Then the respondents who had poor teacher support, almost half of the respondents who were not compliant with iron supplements consumption, were 30 people (35.7%), while 13 people (15.5%) were obedient to iron supplements consumption. Based on the results of the chi square statistical test, the results obtained were a p value of  $0.009 < \alpha : 0.05$ , meaning that there was a relationship between teacher support and adherence to consumption of Blood Supplementary Tablets (TTD) in female students at SMP Negeri 2 Muara Kaman.

The results of this study are in accordance with previous research conducted by Nuradiani (2017) showing that teacher support affects the level of adherence to consumption of Blood Supplement Tablets (TTD) in female adolescents. Yuki's research (2020) shows that there is a relationship between school support and student awareness in taking iron tablets.

There is Respondents stated that teacher support was good but they were still not compliant with iron supplement consumption. This is because at home they often forget to take iron tablets, where the teacher only reminds them at school and takes the medicine home. Until the students were at home, their parents did not provide enough support for taking iron tablets. In addition, the lack of knowledge about the importance of taking iron tablets makes female students feel that their consumption is not important.

Respondents stated that the teacher's support was not good but they adhered to iron supplement consumption. This is because they have an interest in taking iron tablets as a result of having information about the importance of consuming iron supplements obtained from social media or the internet as well as from health workers, supported by parents reminding them to consume them.

The Precede-Proceed model developed by Green and Kreuter in Notoatmodjo (2017) at this stage includes three factors that can be used in investigating behaviors that contribute to health status including adherence to consumption of Blood Supplementary Tablets (TTD) in female students including strengthening factors are the factors that encourage or reinforce the occurrence of behavior. Reinforcing factors include teacher support.

Nuradiani (2017) shows that the most factors related to the adherence of young women consuming Fe tablets is teacher support. This is because young women spend more time at school and set the teacher as an example: young women listen more to information conveyed by teachers than other parties, including parents. Adolescent girls will be more obedient in consuming Fe tablets if there is support from the school and teachers. The role of the teacher as an educator is expected to be able to provide knowledge about anemia and information related to iron supplement consumption. The teacher also acts as a supervisor who monitors the administration process until the iron tablets are consumed by young women. Not only that, the teacher can also act as a communication facilitator with parents through the school committee to pay attention to the nutritional status and consumption of iron tablets for young women at home.

Researchers assume that there is relationship between teacher support and adherence to consumption of blood supplement tablets (TTD) in female students at SMP Negeri 2 Muara Kaman. This is because the better the teacher's support, the more obedient the students consume Blood Supplement Tablets (TTD), and conversely the less good the teacher's support is, the less obedient the students consume Blood Supplement Tablets (TTD).

## **Relationship Between Female Students' Motivation and Adherence to Blood Supplement Consumption (TTD) in Female Students at SMP Negeri 2 Muara Kaman**

Based on the results of the study, it was found that the respondents had strong motivation, almost half of the respondents were compliant with iron tablets consumption, totaling 27 people (32.1%), while 16 people (19%) were less compliant with iron supplements. Then the respondents had moderate/weak motivation, almost half of the respondents were less compliant with iron supplements consumption, totaling 30 people (35.7%), while 11 people (13.1%) were obedient. Based on the results of the chi square statistical test, the results obtained were a p value of  $0.002 < \alpha: 0.05$ , meaning that there was a relationship between student motivation and adherence to consumption of Blood Supplementary Tablets (TTD) in female students at SMP Negeri 2 Muara Kaman.

The results of this study are in accordance with previous research conducted by Partami (2020) showing that motivation to take iron tablets is an important factor for increasing hemoglobin levels.

There are respondents who have strong motivation but are less compliant with iron tablets consumption. This is due to taking iron tablets according to recommendations, but taking blood tablets with tea, taking iron tablets is not accompanied by eating fruits, lack of understanding that during menstruation they consume iron tablets every day while the respondent still consumes once a week even during menstruation.

There are also respondents who have moderate/weak motivation but adhere to iron tablets consumption. This is because parents are reminded to consume iron tablets at home every week and every menstruation.

The Precede-Proceed model developed by Green and Kreuter in Notoatmodjo (2017) at this stage includes three factors that can be used in investigating behaviors that contribute to health status including adherence to consumption of Blood Supplementary Tablets (TTD) in female students including predisposing factors which are factors -Factors that facilitate behavior change based on thought or motivation to behave. Predisposing factors include student motivation.

Motivation is a process that describes the intensity, direction and persistence of an individual to achieve his goals. Motivation can be interpreted as an effort that encourages someone to do something, both intrinsically and extrinsically. Intrinsically, motivation to function does not require external stimulation because within the individual there is an urge to do it. Extrinsic motivation functions because of external stimuli (Sardiman, 2017).

Researchers assume that there is relationship between female students' motivation and adherence to blood supplement consumption (TTD) in female students at SMP Negeri 2 Muara Kaman. This is because the stronger the motivation of the students, the more obedient the students consume Blood Supplement Tablets (TTD), and conversely the more moderate/weak the motivation of the students, the less obedient the students consume Blood Supplement Tablets (TTD). The non-adherence of young women consuming Blood Supplement Tablets (TTD) is heavily influenced by bad perceptions of blood supplement tablets such as causing nausea due to the taste and smell of the tablets



which can cause dizziness and headaches. The motivation to consume iron tablets cannot be separated from the information and knowledge a person acquires, this is because knowledge is a factor that influences a person's consumption behavior.

### **CONCLUSIONS AND RECOMMENDATIONS**

There is a relationship between teacher support and adherence to consumption of blood supplement tablets (TTD) in female students at SMP Negeri 2 Muara Kaman ( $p$  value :  $0.009 < \alpha : 0.05$ ). There is a relationship between female students' motivation and compliance with blood supplement consumption (TTD) in female students at SMP Negeri 2 Muara Kaman ( $p$  value :  $0.002 < \alpha : 0.05$ ).

For Public health center expected to socialize about Blood Supplement Tablets (TTD) use available media increase adherence to consumption of Blood Supplement Tablets (TTD) in female students through visits to schools and carried out periodically or repeatedly and evenly in each school that is included in its working area. Students are expected to be more active in seeking information about benefits consumption of Blood Supplement Tablets (TTD) through social media and other media.

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