



## Teacher, peer, and family support is associated with compliance behavior in consuming blood supplement tablets

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### ABSTRACT

The prevalence of anemia in young women aged 15-24 years in Indonesia reaches 23.9%. Anemia occurs at all stages of human life and is more likely to occur in young women, one of which is female students. Compliance with iron supplement consumption is a form of behavior to prevent and treat anemia so the tendency of young women to adhere to regular blood supplement consumption can be analyzed using a behavioral theory, namely the Theory of Planned Behavior (TPB). This study aims to determine the relationship and influence of peer information support, teacher information support, and family information support on adherence to blood supplement consumption among female students at Al-Ikhlas Islamic Boarding School Ujung Bone in 2023. This research is a quantitative study using a cross study design. sectional. The statistical test used is chi-square. The research instrument was a structured questionnaire sheet, with a sample of 120 female students. The results showed that there was a statistically significant relationship between peer information support, teacher information support, and family information support on adherence to blood supplement consumption among female students at Al-Ikhlas Islamic Boarding School Ujung Bone in 2023.

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## 1. Introduction

Anemia is a condition where the number of red blood cells and their oxygen carrying capacity are insufficient to meet the body's physiological needs. The anemia threshold value for adolescent girls is 12 gr/dL, while for adolescent boys it is 13 gr/dL (Ministry of Health of the Republic of Indonesia, 2013). Globally, WHO states that the prevalence of anemia in 2021 in women of childbearing age (WUS) aged 15-49 years is 29.9% (World Health Organization, 2021). Meanwhile, Riskesdas 2013 showed that the prevalence of anemia in young women in Indonesia aged 15-24 years reached 23.9%, higher than that of

young men at 18.4% (Ministry of Health of the Republic of Indonesia, 2013). In addition, the prevalence of anemia in adolescent girls in 2018 has increased, reaching 27.2% and anemia in adolescent boys 20.3% (Ministry of Health of the Republic of Indonesia, 2018). Adolescent girls have a ten times greater risk of developing anemia than adolescent boys (Herwandar & Soviyati, 2020).

Based on data from the South Sulawesi Provincial Health Service, the number of young women who suffer from anemia reaches 33.7% (South Sulawesi Provincial Health Service, 2018). The prevalence of anemia in adolescent girls aged  $\geq 15$  years in South Sulawesi is 10.3% (Ministry of Health of the Republic of Indonesia, 2013). Based on data from the Bone District Health Service in 2018, the number of anemia in teenagers was 29.76% and in 2019 it was 22.70% (Haslan & Pattola, 2021). Al-Ikhlâs Ujung Bone Islamic Boarding School is one of the educational institutions in the working area of the Dua Bocoe Community Health Center. Based on the results of examinations from the Dua Bocoe Community Health Center (2021), of the 115 female students who received Hb examinations, the number of anemia at the MA level was obtained, namely from 60 female students. There were 23 female students who were anemic (13.8%) while at the MTs level of the 55 female students, there were 17 female students who were anemic (9.35%).

Adolescent girls who experience anemia will have a negative impact on reducing immunity, learning concentration, fitness and productivity (Ministry of Health of the Republic of Indonesia, 2018). In the long term, anemia in adolescent girls that is not treated will have a major impact on pregnancy, childbirth, namely abortion, giving birth to a LBW baby, experiencing difficulties when giving birth to a baby because the uterus is not able to contract properly, as well as the risk of postpartum bleeding which causes death. mother and child (Alizadeh et al., 2014; Eka, 2018; Koura et al., 2012). The Indonesian government is preventing and controlling anemia in adolescent girls by prioritizing the provision of blood supplement tablets with one tablet every week, to reduce (50%) the prevalence of anemia in adolescent girls by 2025, one of which is through educational institutions (Ministry of Health of the Republic of Indonesia, 2018).

The coverage of giving blood supplement tablets to young women in Indonesia in 2021 is 31.3% (Ministry of Health of the Republic of Indonesia, 2022). According to 2018 Riskesdas data, the proportion of young women aged 10-19 years in South Sulawesi who received blood supplement tablets was 85.9%. Adolescent girls who received blood supplement tablets at school were 87.6%. The proportion figure that obtained and consumed less than 52 tablets was 98.7%, meaning that only 1.3% of students who received blood supplement tablets spent as recommended, namely 52 tablets for 1 year. The three most common reasons for those who received blood supplement tablets and did not take them as recommended by the 52 items were forgetting (20.9%), bad taste and smell (22.2%) and feeling unnecessary (29.6%) (Ministry of Health of the Republic of Indonesia, 2018). Based on data from the South Sulawesi Provincial Health Service, out of 338,550 teenage girls aged 12-18 years, 260,071 (76.8%) received blood supplement tablets from January to May 2020, while in Bone Regency, out of 31,288 teenage girls, 26,858 who received blood supplement tablets.

## 2. Method

This research is a type of analytical observational research with a cross sectional design. The population in this study were all female students at the Al-Ikhlâs Ujung Bone Islamic Boarding School for the 2022/2023 academic year, namely 368 female students. Sampling was carried out using a two-proportion hypothesis test formula, and a sample size of 120 samples was obtained. Data collection techniques were carried out by conducting interviews and filling out questionnaires by respondents. Data collection time was carried out during May - July 2023.

## 3. Results and Analysis

Based on the results of the analysis regarding the compliance behavior of consuming blood supplement tablets among female students at the Al-Ikhlâs Ujung Bone Islamic Boarding School, it is known that:

### Characteristics of Respondents at Al-Ikhlas Ujung Bone Islamic Boarding School

Based on Table 1, it is known that the characteristics of the respondents in this study consisted of female MTs students (60.8%) and female MA students (39.2%). Most respondents were 13 years old (30%) and at least 12 years old (5%). Most respondents experienced menarche at the age of 12 years (38%), and at least 9 years old (1.7%). Most of the respondents' parents' last education was tertiary (51.7%) and the lowest was elementary school (2.5%). In addition, the majority of respondents were at high socioeconomic levels >3,384,876 (54.2%) and low socioeconomic levels <3,384,876 (45.8%).

**Table 1.**  
Distribution of Respondents Based on Characteristics of Students at the Al-Ikhlas Ujung Bone Islamic Boarding School

No	Individual Characteristics	n	%
1	Education Level		
	Junior High School	73	60,8
	Senior High School	47	39,2
2	Age (Years)		
	12	6	5
	13	36	30
	14	23	19,2
	15	10	8,3
	16	27	22,5
	17	18	15
3	Age of Menarche (Years)		
	9	2	1,7
	10	7	5,8
	11	44	36,7
	12	46	38,3
	13	16	13,3
4	Parents' Last Education		
	Elementary school	3	2,5
	Junior high school	11	9,2
	Senior high school	44	36,7
5	College	62	51,7
	Economic Status		
	<3.384.876	55	45,8
	>3.384.876	65	54,2

Support from peers, teachers and family for compliance with blood supplement tablet consumption

**Table 2.**  
Relationship between Information Support from Friends, Teachers and Family on Compliance Behavior in Consuming Blood Supplement Tablets among Students of the Al Ikhlas Ujung Bone Islamic Boarding School in 2023

Variable		TTD Consumption Compliance Behavior						P value
		Not obey		Obey		Total		
		n	%	n	%	n	%	
Support from peers, teachers and family	High	36	41,9	50	58,1	86	100	0,000
	Low	1	2,9	33	97,1	34	100	
	Total	37	30,8	83	69,2	120	100	

Based on table 2, it is known that respondents who received high information support and had obedient behavior were 58.1%, with a P value < 0.05, which means there is a statistically significant relationship between information support from peers, teachers and family and compliance behavior. consume blood increasing tablets. The student's statement regarding this information support shows

that the female student strongly agrees with positive statements such as "Teachers/clerics at school think that consuming TTD regularly once a week is an obligation that must be carried out". In this study, the form of support came from the Islamic boarding school, family and peers who were sources of support for the female students in complying with the consumption of blood supplement tablets. This research is in line with the research results of Quraini (2019), that there is a relationship between information support from friends, teachers and family with the intention to comply with the consumption of blood supplement tablets. Apart from that, Anastasya's research (2022) also states that there is a relationship between information support from friends, teachers and family with the intention to implement anemia prevention behavior among state high school students in Makassar.

Apart from that, there were respondents who received high information support, but had disobedient behavior (2.9%). An explanation of this can be seen from the analysis of respondents' answers that female students agree with negative statements such as "Parents think that consuming blood supplement tablets must follow a doctor's prescription" and "Parents think that consuming blood supplement tablets is a medicine that is only consumed during menstruation." This is caused by parents who have insufficient knowledge of the importance of consuming blood supplement tablets. One of the roles of the family is to maintain the health of family members, especially during adolescence which is a period of rapid physical growth. It is very important to increase knowledge and information about anemia and blood-added tablets among young women by teachers and parents so that young women can share this knowledge with their peers, so that more young women will be obedient in consuming blood-added tablets because they are motivated by their friends' habits. peers (Ilham et al., 2023).

Adolescent girls who received teacher support were 4.7 times more obedient in consuming blood supplement tablets compared to adolescent girls who did not receive teacher support. Apart from that, consuming blood supplement tablets together with friends can also increase compliance with taking blood supplement tablets and increase hemoglobin levels (Nuraeni et al., 2019). The results of research conducted by Nuradhiani et al (2017) showed that the success of compliance with consuming blood supplement tablets among young women was due to support from teachers. Apart from that, while female students at general formal schools have parental figures, especially mothers, with whom they can interact every day to discuss or talk about the complaints they are experiencing, for female students there is a gap in interaction with the ustadzah who is a substitute parent figure in the Islamic boarding school environment. Even though they carry out the same role as educators, this can be caused by the condition of the female student's relationship with the ustadzah, which is a student-educator relationship and is different from the female student's relationship with their parents, which is a mother-child family relationship (Bujawati et al., 2017).

#### 4. Conclusions

Compliance behavior in consuming blood supplement tablets is caused by positive information support from peers, teachers and family as an effort to prevent anemia in female students at the Al-Ikhlas Ujung Bone Islamic Boarding School. Therefore, health workers can provide education to provide information about the impact of anemia. Counseling was provided regarding the correct rules for taking blood supplement tablets according to regulations, as well as providing further health education regarding the side effects experienced by female students after consuming TTD. Apart from that, young women can also further improve their compliance behavior in consuming blood supplement tablets by increasing their knowledge through IEC. After receiving education, they can apply it in everyday life and can share their knowledge with their peers and the surrounding environment. Future researchers should use mixed methods research methods by conducting FGDs with female students, teachers and program implementers. As well as checking Hb levels to see the impact after complying with the consumption of blood supplement tablets. It can also be carried out on other groups of

teenagers, namely teenagers who are no longer in school, teenagers who live in areas far from health facilities.

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