

THE RELATIONSHIP BETWEEN MOTIVATION AND COMPLIANCE OF FEMALE ADOLESCENTS IN CONSUMING FE TABLETS AT SMPN 1 TUHEMBERUA DISTRICT NORTH NIAS REGENCY NORTH SUMATERA PROVINCE 2023

Ellina Kristina Sihombing¹, Herna Rinayanti Manurung², Basaria Manurung³, Desy Herawati Napitupulu⁴, Cris Angelina Br Manik⁵, Dia Astami⁶, Nora Vivi Lovelia⁷

^{1,2,3,4,5,6,7}Sekolah Tinggi Ilmu Kesehatan Mitra Husada Medan

Email : 2319001164@mitrahusada.ac.id¹, hernarinayanti@mitrahusada.ac.id²,
basariamanurung@mitrahusada.ac.id³, 2219201020@mitrahusada.ac.id⁴, 2119201011@mitrahusada.ac.id⁵,
2419201720@mitrahusada.ac.id⁶, 2419201707@mitrahusada.ac.id⁷

ABSTRACT

Adolescent girls are individuals who are vulnerable to suffering from anemia due to the menstrual period that occurs every month. In addition, factors suspected to be the cause of anemia in adolescent girls include poor nutritional intake patterns, worm infections, frequent drinking of tea or coffee after meals, prolonged sleep, vitamin C deficiency and economic factors. This study aims to determine the Relationship of Motivation with Compliance of Adolescent Girls in Consuming Fe Tablets at SMPN 1 Tuhemberua, Tuhemberua District, North Nias Regency, North Sumatra Province in 2023. This study is a study with a Cross-sectional design (sectional cut). The number of samples used was 42 people obtained using the Random sampling technique. The data analysis technique used chi-square analysis. The results obtained in this study from 42 respondents, based on a statistical test with a p-value of 0.004 (p-value <0.05), indicate a relationship between motivation and compliance of adolescent girls in consuming iron tablets at SMPN 1 Tuhemberua, Tuhemberua District, North Nias Regency, North Sumatra Province in 2023. It is recommended that health workers increase health promotion to adolescents to prevent anemia in adolescents.

Keywords: *Motivation, Iron Tablets, Adolescent Girls*

Introduction

To produce a quality generation, the government is targeting adolescent girls in the 2020-2024 National Medium-Term Development Plan (RPJMN). One effort is providing iron supplements, commonly known as Iron Tablets (TTD), to adolescent girls. This aims to prevent and reduce the incidence of anemia and increase iron reserves, as preparation for the pre-pregnancy period, thus producing healthy children who are not at risk of stunting (Kemenkes, 2021)

Adolescent girls are particularly vulnerable to iron deficiency anemia due to their rapid physical growth and the onset of menstruation, which increases the body's need for iron. Iron deficiency can lead to anemia, which negatively impacts health, such as fatigue, dizziness, decreased concentration, decreased academic performance, and a reduced overall quality of life (Feriayanti and Rahayu, 2024)

Adolescent girls are particularly vulnerable to anemia due to their monthly menstrual cycle. Other factors suspected of

causing anemia in adolescent girls include poor nutritional intake, worm infections, frequently drinking tea or coffee after meals, prolonged sleep, vitamin C deficiency, and economic factors (Elisa and Oktarlina, 2023)

Although the TTD provision program has become a national program, there are still obstacles in its implementation so that the TTD coverage target for adolescent girls has not been achieved according to the target. In 2020, the coverage of TTD provision for adolescent girls in Indonesia was 39%

Compliance of adolescent girls in consuming TTD requires special attention because at this age they really need this supplement (Feriyyanti *et al.*, 2022). One indicator of the success of anemia prevention programs in adolescent girls is their adherence to taking iron supplements correctly. Non-compliance with iron supplements will certainly hinder the benefits of iron supplements and will not have an impact on reducing anemia in adolescents (Savitri *et al.*, 2021).

Compliance in consuming iron tablets is a form of behavior that can be analyzed using the theory of planned behavior. According to this theory, individual behavior can be predicted from intentions. Components in the theory of planned behavior can predict individual tendencies in behavior. In the theory of planned behavior, individual intentions are influenced by three factors: attitudes, subjective norms, and perceived behavioral control (Diatry *et al.*, 2022).

To prevent anemia, one of the government's health interventions is the regular provision of iron tablets (blood-boosting tablets) to adolescent girls through school health programs. Iron tablets serve as an additional source of iron to meet the body's increasing needs and

prevent iron deficiency anemia (Feriyyanti and Rahayu, 2024).

A similar study on adherence to iron supplementation concluded that there is a relationship between behavioral control and the intention to regularly consume iron supplements. The purpose of this study was to analyze the adherence of adolescent girls to iron supplementation and the factors most influencing adherence based on the theory of planned behavior (Quraini, Ningtyias and Rohmawati, 2020).

Motivation in the context of health is an internal drive to act toward specific health goals, such as preventing anemia or maintaining good health. Highly motivated adolescents tend to be more compliant with health programs, such as regularly taking iron tablets, than those with low motivation (Mei *et al.*, 2023).

Research Method

This study uses a descriptive correlation research design with a cross-sectional approach (Manurung, 2022). The aim is to determine the relationship between motivation and compliance of female adolescents in consuming iron tablets at SMPN 1 Tuhemberua, Tuhemberua District, North Nias Regency, North Sumatra Province in 2023

Result

This research was conducted at SMPN 1 Tuhemberua, Tuhemberua District, North Nias Regency, North Sumatra Province in 2025 to analyze the Relationship between Motivation and Compliance of Female Adolescents in Consuming Fe Tablets at SMPN 1 Tuhemberua, Tuhemberua District, North Nias Regency, North Sumatra Province in 2023. The results are as follows:

Table 1. Respondent Characteristics Based on Motivation and Compliance of Female Adolescents in Taking Iron Tablets at SMPN 1 Tuhemberua, Tuhemberua District, North Nias Regency, North Sumatra Province 2023

No	Motivation	Frekuensi	Persentase (%)
1.	Yes	14	33,3
2.	No	28	66,7
	Amount	42	100

Based on table 4.1, it shows that of the 42 respondents, 14 (33.3%) received motivation and 28 (66.7%) did not receive motivation

Table 2. Compliance of Female Adolescents with Iron Tablet Consumption at SMPN 1 Tuhemberua, Tuhemberua District, North Nias Regency, North Sumatra Province 2023

No	Compliance	Frekuensi	Persentase (%)
1.	Obedient	13	31
2.	Not obey	29	69
	Amount	42	100

Based on table 4.2, it shows that of the 42 female adolescent respondents, 13 (31%) were compliant in consuming Fe tablets and 29 (69%) were non-compliant in consuming Fe tablets

Table 3. Cross-tabulation of the relationship between family support and pregnant women's compliance in conducting ANC visits at the Ujung Padang Community Health Center, Ujung Padang District, Simalungun Regency, North Sumatra Province in 2023

Motivation	Compliance				Total		P-VALUE
	Obedient n	%	Not obey n	%	n	%	
Yes	10	23,8	4	9,5	14	33,3	0,004
No	3	7,2	25	59,5	28	66,7	
Amount	13	31	29	69	42	100	

Based on Table 4.3, the analysis of the relationship between motivation and compliance in consuming iron tablets by adolescent girls shows that of the 42 respondents, 14 (33.3%) received motivation, 10 (23.8%) were compliant, and 4 (9.5%) were non-compliant. Twenty-eight (66.7%) respondents did not receive family support, and 3 (7.2%) were compliant, while 25 (59.5%) were non-compliant.

Based on the above data and using the chi-square test using SPSS at a 5% error level, calculations were performed

to determine whether there was a relationship between the independent and dependent variables.

The chi-square test yielded a significance value of $0.004 < 0.05$, concluding that there is a significant relationship between motivation and compliance in consuming iron tablets by adolescent girls at SMPN 1 Tuhemberua, Tuhemberua District, North Nias Regency North Sumatra Province in 2023

Discussion

Anemia in adolescents, especially young girls, is a serious public health problem. Prevention can be achieved through education, increased consumption of nutritious foods, and adherence to iron tablet consumption. Managing anemia from adolescence is crucial to ensuring future health, especially as they enter childbearing years (Sinaga, 2022)

Adolescence is a transitional period marked by growth, development, and maturation of the reproductive organs. Adolescence, also known as puberty, is a unique transition period marked by various physical, emotional, and psychological changes (Destin, 2021).

From the results of the research that has been conducted to determine the Relationship between Motivation and Compliance of Female Adolescents in Consuming Fe Tablets at SMPN 1 Tuhemberua, Tuhemberua District, North Nias Regency, North Sumatra Province in 2023, it was found that out of 42 respondents, there were 14 people (33.3%) who received motivation, among them there were 10 people (23.8%) who were Compliant and there were 4 people (9.5%) who were not Compliant. respondents who did not receive family support were 28 people (66.7%) and among them there were 3 people (7.2%) who were Compliant, there were 25 people (59.5%) who were not Compliant.

Based on the above data and the chi-square test using SPSS at a 5% error level, calculations were performed to determine whether there was a relationship between the independent and dependent variables.

The chi-square test yielded a significance value of $0.004 < 0.05$, concluding that there is a significant relationship between motivation and

adherence among adolescent girls in taking iron tablets at SMPN 1 Tuhemberua, Tuhemberua District, North Nias Regency, North Sumatra Province, in 2023.

Motivation is an internal drive to perform an action to achieve a specific goal. In a health context, adolescent girls' motivation to take iron tablets is an important internal factor determining adherence.

Adolescents with high motivation are more likely to be compliant in taking iron tablets regularly. They are more aware of the long-term benefits and are better able to cope with mild side effects (such as nausea) that often lead to discontinuation of iron tablets

This research is in line with the results of research conducted by (Tablet, Di and Bergas, no date) This shows that low compliance is more common among respondents with moderate motivation, as many as 33 people (44%). And the least motivated are those with low compliance, with 3 people (4%).

This research is in line with the research on "The Relationship Between Knowledge and Attitudes of Adolescents in Consuming Iron Tablets at Tunas Bangsa Kwala Begumit Private High School, Binjai District, Langkakat Regency in 2022" that there is a significant relationship between knowledge and attitudes of adolescents in consuming iron tablets (Desliza *et al.*, 2024)

Conclusion and Suggestion

Based on the results of the study conducted to determine the relationship between motivation and compliance of pregnant women in attending antenatal care visits at the Ujung Padang Community Health Center, Ujung Padang District, Simalungun Regency, North Sumatra Province in 2023, the following conclusions can be drawn:

The Chi-Square test results obtained a significant value of $0.004 < 0.05$, thus concluding that there is a

References

- Desliza, D. *et al.* (2024) 'Hubungan Pengetahuan Dan Sikap Remaja Dalam Mengonsumsi Tablet Zat Besi Di Sma Swasta Tunas Bangsa Kwala Begumit Kecamatan Binjai Kabupaten Langkat Tahun 2022 judul " Hubungan Pengetahuan dan Sikap Remaja dalam Mengonsumsi Tablet Zat Besi di SMA Swasta Tunas Bangsa Kwala Begumit Kecamatan Binjai Kabupaten Langkat', 2(2).
- Diatri, D. *et al.* (2022) 'Analisis Sikap dan Pengetahuan Terhadap Kepatuhan Remaja Putri Dalam Mengonsumsi Tablet Fe di SMPN 36 Semarang Analysis of Attitudes and Knowledge of Teenage Girls ' Compliance in Consuming Fe Tablets in Public Junior High Schools 36 Semarang', pp. 827–834.
- Elisa, S. and Oktarlina, R.Z. (2023) 'Literature Review : Faktor Penyebab Kejadian Anemia pada Remaja Putri Literature Review : Factors that Cause Anemia in Adolescent Women', pp. 2018–2021.
- Feriyanti, A. *et al.* (2022) 'DETERMINAN KEPATUHAN SUPLEMENTASI ZAT BESI PADA REMAJA PUTRI DALAM UPAYA INTERVENSI SPESIFIK
- significant relationship between motivation and compliance of adolescent girls in consuming iron tablets at SMPN 1 Tuhemberua, Simalungun District.
- ### THANK YOU (If Any)
- I would like to express my gratitude to all parties who have helped or contributed during the implementation of this research.
- PENCEGAHAN STUNTING : A SYSTEMATIC REVIEW', (1), pp. 90–96.
- Feriyanti, A. and Rahayu, A.P. (2024) 'Social Support and Iron Tablet Supplementation in Adolescents : A Literature Review', 1(1), pp. 52–61.
- Kemkes (2021) 'Kemkes RI. 2021. Profil Kesehatan Indonesia 2020. Jakarta: Kemkes RI', *Journal of Materials Processing Technology* [Preprint].
- Manurung, H.R. (2022) 'The influence of giving varied food menu on increasing toddler weight in paud harapan the nation of Labuhan Batu Utara District year 2022', 10(4).
- Mei, N. *et al.* (2023) 'SENTRI : Jurnal Riset Ilmiah', 2(5), pp. 1649–1662.
- 'No Title' (2021), pp. 5–8.
- Quraini, D.F., Ningtyias, F.W. and Rohmawati, N. (2020) 'Perilaku Kepatuhan Konsumsi Tablet Tambah Darah Remaja Putri di Jember , Indonesia Compliance Behavior of Iron Tablet Supplement Consumption to Adolescent Girls In Jember , Indonesia', 8(2), pp. 154–162. Available at: <https://doi.org/10.20473/jpk.V8.I2.2020.154-162>.
- Savitri, M.K. *et al.* (2021) 'HUBUNGAN KEPATUHAN KONSUMSI TABLET



TAMBAH DARAH DENGAN
KEJADIAN ANEMIA PADA
REMAJA PUTRI'; 2, pp. 43–49.
Sinaga, S.N. (2022) 'Quality Management
of Maternal and Child Health Services
in Antenatal Care Services in The
Time of The Covid-19 Pandemic',

*Jurnal Aisyah : Jurnal Ilmu
Kesehatan*, 7(1), pp. 399–406.
Available at:
<https://doi.org/10.30604/jika.v7i1.1503>.

Tablet, M., Di, F.E. and Bergas, S. (no
date) 'No Title'.

MiHHICo
2025 '5'
STIKes Mitra Husada Medan