

THE RELATIONSHIP BETWEEN *SELF-EFFICACY* AND SOCIAL SUPPORT WITH COMPLIANCE WITH THE CONSUMPTION OF BLOOD-INCREASING TABLETS IN ADOLESCENT GIRLS IN SMAN 9 KUPANG CITY

Ina Victoria Deku *, Marni Marni, Eryc Z. Haba Bunga, Maria Magdalena Dwi Wahyuni

Public Health Study Program, Faculty of Public Health, Universitas Nusa Cendana

Jl. Adisucipto, Penfui, Kupang City, East Nusa Tenggara 85001, Indonesian

Email: inavictoria14@gmail.com

Abstract

Anemia in adolescent girls remains a public health problem that impacts health, cognitive development, and productivity. One effort to prevent anemia is through the distribution of iron supplements (IBT), but compliance with iron supplements among adolescent girls remains low. A factor suspected of being associated with iron supplement compliance is *self-efficacy* magnitude. and instrumental social support. This study aims to determine the relationship between *self-efficacy* magnitude and instrumental social support with adherence to iron supplement consumption in female adolescents at SMAN 9 Kupang City. This study used an analytical observational quantitative design with a *cross-sectional approach*. The study population was all 122 female adolescents in grade X of SMAN 9 Kupang City, with a sample of 54 respondents selected using a simple random sampling technique. Data were collected using a questionnaire and analyzed univariately and bivariately using the *Chi-Square test*. The results showed that most respondents had *self-efficacy* in the confident category (53.7%), received supportive instrumental social support (51.9%), and were compliant in consuming iron supplement (63.0%). The results of the bivariate analysis showed that there was a relationship between *self-efficacy* and adherence to iron supplement consumption ($p = 0.007$), while instrumental social support did not have a significant relationship with adherence to iron supplement consumption ($p = 0.723$). It was concluded that *self-efficacy* was associated with adherence to iron supplement consumption, while instrumental social support was not associated with adherence to iron supplement consumption among female adolescents at SMAN 9 Kupang City. Efforts are needed to increase *self-efficacy* through education and strengthening adolescents' confidence in consuming iron supplement regularly.

Keywords: Self-Efficacy Magnitude, Instrumental Social Support, Compliance, Iron Tablets, Adolescent Girls

Introduction

Anemia remains a public health problem in adolescent girls because it can impact decreased learning concentration, productivity, reproductive health, and quality of life in the future (Maula et al., 2026) . *The World Health Organization* reports that the global prevalence of anemia in women of childbearing age is still high, which is 30.7% in 2023, with a prevalence of 35.5% in pregnant women and 30.5% in non-pregnant women. In Indonesia, the prevalence of anemia in the 15–24 age group increased from 18.4% in 2013 to 32% in 2018. The prevalence of anemia in women (27.2%) is also higher than in men (20.3%) (*Riskesdas 2018*) . In East Nusa Tenggara Province, the prevalence of anemia in adolescent girls at the junior high/high school level reached 17.744%, while in Kupang City it was 16.38% (NTT Provincial Health Office, 2024). One of the government's efforts to reduce anemia is through a program to provide iron supplements (TTD), but compliance with TTD consumption among adolescent girls is still low.

Riskesdas (2018) reported that 76.2% of adolescent girls received iron tablets (TTD) in the past 12 months, but only 1.4% took them as recommended, while in NTT only 0.5% of adolescent girls were compliant with iron tablets. This low compliance is influenced by various obstacles such as forgetfulness, unpleasant taste and smell of the tablets, and side effects after consumption. The results of initial observations at SMAN 9 Kupang City on 27 adolescent girls showed that only 18% of students took iron tablets regularly, while the other 81% were non-compliant, citing forgetfulness, the unpleasant smell of the tablets, and side effects such as nausea. Iron tablet compliance is influenced by various factors, both personal and environmental factors. A personal factor suspected to play a role is *self-efficacy*, specifically the magnitude dimension related to adolescent girls' confidence to continue taking iron tablets despite facing various obstacles (Bandura, 1977; Alenius et al., 2024). In addition, environmental factors such as instrumental social support from parents, teachers, and peers are also thought to play a role through real assistance in the form of reminders, supervision, and direct support in TTD consumption (Smith, 2011; Ririanty, 2024).

Research by (Soltan et al., 2025) shows that *self-efficacy* is related to health adherence behavior, where individuals with high self-efficacy tend to be more able to maintain healthy behaviors consistently. Other research also shows that social support plays a role in increasing adherence to iron supplement consumption. However, research results related to social support still show inconsistencies, where not all forms of social support are related to iron supplement compliance.

Although several studies have examined factors influencing iron tablet adherence in adolescent girls, previous research findings have shown inconsistencies, particularly regarding the role of social support. Furthermore, research specifically examining magnitude *self-efficacy* and instrumental social support on iron tablet adherence is limited. To date, no research has examined both variables simultaneously in adolescent girls at SMAN 9 Kupang City. Therefore, this study aims to analyze the relationship between magnitude *self-efficacy* and instrumental social support with iron tablet adherence in adolescent girls at SMAN 9 Kupang City.

Method

This quantitative observational analytical study with a *cross-sectional design* was conducted to analyze the relationship between *self-efficacy* magnitude and instrumental social support with adherence to iron supplementation (IBF) consumption in adolescent girls. The study was conducted at SMA Negeri 9 Kupang City in April 2026. The study population was all 122 female students in grade X who received the IBF program through the Health Unit (UKS). The study sample consisted of 54 respondents determined using the Lemeshow formula for limited populations and selected using a simple random sampling technique. The data sources used were primary data obtained directly from the respondents. The research instruments were *self-efficacy* magnitude questionnaires, instrumental social support questionnaires, and iron supplementation adherence questionnaires that had been prepared based on the indicators of each variable. Data collection was carried out by filling out questionnaires directly by respondents after obtaining research approval. Data were analyzed using univariate analysis to see the frequency distribution of each variable and bivariate analysis using the *Chi-Square test* with a significance level of $p < 0.05$ to determine the relationship between variables.

Results

This study involved 54 female students in grade X of SMAN 9 Kupang City. The characteristics of the respondents are presented in Table 1.

Table 1 Distribution of respondent characteristics in female adolescents

Characteristics	Category	n	%
Age	15 years	18	33.3
	16 years	27	50.0
	17 years	8	14.8
	18 years	1	1.9
Class	XA	15	27.8
	XB	8	14.8
	XC	16	29.6
	XD	3	5.6
	XE	3	5.6
	XF	3	5.6
	XG	6	11.1
Residence Status	Boarding house	1	1.9
	Parent	43	79.6
	Guardian	10	18.5
Total		54	100%

Based on Table 1, of the total 54 respondents, the majority of respondents were 16 years old, namely 27 people (50.0%), while the least were 18 years old, namely 1 person (1.9%). Based on class, the majority of respondents came from class XC, namely 16 people (29.6%), while the least came from class XD, XE, and XF, each with 3 people (5.6%). Based on residential status, the majority of respondents lived with their parents, namely 43 people (79.6%), while the least lived in boarding houses, namely 1 person (1.9%).

Univariate analysis

Table 2 Distribution of respondents' *self-efficacy* magnitude in female adolescents

Variables	Category	n	%
<i>Self-efficacy</i> magnitude	Low	5	9.3
	Currently	36	66.7
	Tall	13	24.1
	Total	54	100

Based on the distribution of respondents' *self-efficacy* magnitude, it can be seen that of the 54 respondents, the majority of respondents had a medium *self-efficacy* magnitude, namely 36 respondents (66.7%). Meanwhile, respondents with a high *self-efficacy* category were 13 respondents (24.1%), and the low category was the smallest proportion, namely 5 respondents (9.3%).

Table 3. Distribution of respondents for instrumental social support in adolescent girls

Variables	Category	n	%
Instrumental	Low	13	24.1
Social	Currently	35	64.8
Support	Tall	6	11.1
	Total	54	100

Based on the distribution of respondents Instrumental social support, it can be seen that of the 54 respondents, the majority of respondents had a medium level of instrumental social support, namely 35 respondents (64.8%), while respondents with a low level of instrumental social support were 13 respondents (24.1%), and the high level was the smallest proportion, namely 6 respondents (11.1%).

Table 3 Distribution of respondents regarding compliance with TTD consumption in adolescent girls

Variables	Category	n	%
TTD	Low	44	81.5
Consumption	Tall	10	18.5
Compliance			
	Total	54	100

Based on the distribution of respondents regarding compliance with TTD consumption, it can be seen that of the 54 respondents, respondents have a low level of compliance with TTD consumption, namely 44 respondents (81.5%), while respondents in the high category are 10 respondents (18.5%).

Bivariate Analysis

Table 4. Results of the analysis of *self-efficacy* with adherence to TTD consumption in adolescent girls

Variables	n	r_s (Spearman's ρ)	p-value
<i>Self-efficacy</i> magnitude with TTD Consumption Compliance	54	0.424	0.001

Based on the results of the bivariate analysis using *the Spearman Rank test*, the *Spearman's rho* correlation coefficient (r_s) was obtained at 0.424 with a significance value (*p-value*) of 0.001. A *p-value* <0.05 indicates a significant relationship between *self-efficacy magnitude* and adherence to iron supplement consumption. Meanwhile, the correlation coefficient value of 0.424 indicates a positive relationship between the two variables with moderate strength.

Table 5. Results of the analysis of instrumental social support with compliance with TTD consumption in adolescent girls

Variables	n	r_s (<i>Spearman's rho</i>)	p-value
Instrumental Social Support with TTD Consumption Compliance	54	0.074	0.593

Based on the results of the bivariate analysis using *the Spearman Rank test*, the *Spearman's rho* correlation coefficient (r_s) was obtained at 0.074 with a significance value (*p-value*) of 0.593. A *p-value* > 0.05 indicates that there is no significant relationship between instrumental social support and adherence to iron supplement consumption. Meanwhile, the correlation coefficient value of 0.074 indicates that the relationship between the two variables is positive with a very weak relationship strength.

Discussion

The relationship between *self-efficacy* magnitude and compliance with iron supplement consumption in female adolescents at SMA N 9 Kupang City

The results of the study showed a significant relationship between *self-efficacy magnitude* and adherence to iron supplement consumption in female adolescents at SMA Negeri 9 Kupang City. Based on the *Spearman Rank test*, a correlation coefficient (r_s) of 0.424 was obtained. with a *p-value* of 0.001 ($p < 0.05$), indicating a positive relationship with moderate strength. This means that the higher the *self-efficacy* magnitude, the higher the tendency of adolescent girls to adhere to taking iron tablets. However, *self-efficacy* magnitude is not the only factor related to adherence, as there are other factors such as knowledge, motivation, side effects, family support, health care support, and the environment.

The findings of the *self-efficacy* magnitude field study revealed that some young women still doubted their ability to continue taking iron supplements (IBT) when experiencing side effects such as dizziness, stomachache, and nausea. This finding indicates that side effects after taking IBT are still one of the obstacles that influence young women's confidence in maintaining adherence to IBT consumption. This finding is supported by the results of a qualitative study by (Ridho1 & Hartono, nd) using a SWOT analysis to identify factors that influence adherence to IBT consumption among young women at school. The study shows that side effects in the form of nausea and discomfort after taking TTD are one of the main weaknesses that cause young women to be reluctant to continue taking TTD regularly. The results of this study are in line with research (Soltan et al., 2025) which found a significant relationship between *self-efficacy* of one's own experience with adherence to consuming Iron Tablets (TTD) in young women. The consistency of this relationship is also found in various other health behavior contexts. Research (Alshammari, 2025) on Type 2 Diabetes Mellitus patients in Saudi Arabia found that increased *self-efficacy* is associated with increased medication adherence. In line with that, research by (Simanjuntak et al., 2025) on tuberculosis patients found a significant relationship between *self-efficacy* and adherence to taking TB medication, and research (Hepilita et al., 2025) on diabetes mellitus patients at the Cancar Community Health Center, Manggarai Regency, found a significant relationship between *self-efficacy* and dietary adherence. This finding strengthens the results of research that individual beliefs in their own abilities play an important role in shaping health adherence behavior. The higher a person's *self-efficacy*, the greater their ability to maintain recommended health behaviors despite facing various obstacles.

The relationship between instrumental social support and compliance with iron supplementation (TTD) consumption in female adolescents at SMA N 9 Kupang City

Based on the Spearman Rank test results, the Spearman's ρ (r_s) correlation coefficient value was obtained at 0.074 with a significance value (p -value) of 0.593. A p -value > 0.05 indicates that the relationship between the two variables is not statistically significant. Meanwhile, the correlation coefficient value of 0.074 indicates that the relationship between instrumental social support and adherence to iron supplement consumption is positive with a very weak relationship strength. This indicates that instrumental social support has only a very small relationship with adherence to iron supplement consumption in adolescent girls.

Field findings revealed that some adolescent girls who did not receive instrumental social support from their parents, teachers, or peers still demonstrated adherence to iron supplementation (IBT) consumption. This was because they understood the benefits of iron supplementation in preventing anemia and maintaining health. On the other hand, there were also adolescent girls who received support in the form of reminders, guidance, and assistance from their parents and teachers, but still did not routinely consume iron supplementation due to forgetfulness, laziness, or concerns about side effects such as nausea, dizziness, and stomach ache after consuming the tablets. The results of this study are in line with those of Lubis et al. (2024) and Hasmita (2025) who showed that peer and teacher support were not significantly associated with iron supplementation. However, this study differs from Hidayanty et al. (2025) who found that support from parents, peers, teachers, and health workers can support iron supplementation compliance. These differences in results are likely due to differences in respondent characteristics, the type of social support measured, and the research method. Hidayanty et al. using a qualitative approach to explore social support in depth, while this study quantitatively only measures instrumental social support.

Conclusion

There is a relationship between *self-efficacy* magnitude and adherence to iron supplementation (TTD) consumption among female adolescents at SMA Negeri 9, Kupang City. There is no relationship between instrumental social support and adherence to iron supplementation (TTD) consumption among female adolescents at SMA Negeri 9, Kupang City.

References

- [1] Alenius, S., Westergren, A., Lindström, P. N., Nilsson, M., & Rask, M. (2024). Pengembangan dan penilaian kualitas sifat psikometrik dari skala Efikasi Diri dalam Konseling Gaya Hidup. 1–15.
- [2] Alfonsina, A., Ndun, H. J. N., & Liufeto, M. O. L. (2024). Analisis faktor risiko kepatuhan konsumsi tablet tambah darah pada remaja putri di sma negeri 5 kupang. *Jurnal Penelitian Kedokteran Dan Kesehatan*, 6(2).
- [3] Alshammari, A. M. (2025). The Impact Of An Educational Intervention On Medication Adherence *Self-Efficacy* In Patients With Type 2 Diabetes In Hail, Saudi Arabia. 23(4), 1–9.
- [4] Atiqah, N., Sulhan, A., Ardaniah, N. H., & Rahmadi, M. S. (2024). Behavior : Jurnal Pendidikan Bimbingan Konseling dan Psikologi Volume 1 No 1 Mei 2024 Periodisasi Perkembangan Anak Pada Masa Remaja : Tinjauan Psikologi. 1(1), 9–36.
- [5] Bandura, A. (1977). Self-efficacy : Toward a Unifying Theory of Behavioral Change. 84(2), 191–215.
- [6] Berel, S., Suralaga, C., & Lail, N. H. (2024). Pengaruh Pemberian Telur Rebus dan Madu Terhadap Kadar Haemoglobin Remaja Putri di Posyandu Remaja Raemadia Wilayah Kerja Puskesmas Seba Nusa Tenggara Timur. *Jurnal Surya Medika*, 10(1), 340–353. <https://doi.org/10.33084/jsm.v10i1.5508>
- [7] Christanti, A., & Caroline Lisa Setia Wati. (2023). Hubungan Antara Dukungan Sosial Dengan Penyesuaian Diri Pada Mahasiswa Rantau Yang Berdomisili Di Dormitory Unika Atma Jaya. *Psiko Edukasi*, 21(2), 106–122. <https://doi.org/10.25170/psikoedukasi.v21i2.4947>
- [8] Damayanti F, Kusharisupeni, Adawiyah AR, Hymawati. Determinan kepatuhan mengonsumsi tablet tambah darah (TTD) pada remaja putri di SMAN 02 Gunung Putri Kabupaten Bogor. *Jurnal Untuk Masyarakat Sehat (JUKMAS)*. 2025;9(1):15–31.
- [9] Firmansyah, D., & Saepuloh, D. (2022). Social Learning Theory : Cognitive and Behavioral Approaches Teori Pembelajaran Sosial : Pendekatan Kognitif dan Perilaku. 1(3), 297–324.
- [10] gita somantri. (2018). Analisis Faktor Yang Berhubungan Dengan *Self Efficacy* Klien Tb Paru Dalam Menjalani Pengobatan Di Puskesmas Wilayah Kota Surabaya. https://repository.unair.ac.id/85194/4/full_text.pdf
- [11] Hasmita. Pengaruh *self-awareness*, dukungan guru dan teman sebaya terhadap kepatuhan mengonsumsi tablet tambah darah di SMP Negeri 58 Surabaya. *J Kesehat Tambusai*. 2025;6(3):10789–10800.
- [12] Hepilita Y, Natul FK, Angelina RPT. The relationship between *self-efficacy* and dietary compliance in patients with diabetes mellitus at Cancar Public Health Center. *Dunia Keperawatan*. 2025;13(2):177–183. doi:10.20527/dk.v13i2.7733
- [13] Hidayanty, H., Nurzakiah, N., Irmayanti, I., Yuliana, Y., & Helmizar, H. (2025). Perceived Barriers and Enablers for Taking Iron – Folic Acid Supplementation Regularly Among Adolescent Girls in Indonesia : A Pilot Study. 1–17.
- [14] Jayanti, C., & Anggraeni, O. A. (2025). The Role of Social Support in Iron Folic Acid Supplement Adherence Among Adolescent Girls in a Public Junior High School in Jakarta. *Contagion: Scientific Periodical Journal of Public Health and Coastal Health*, 7(1), 186. <https://doi.org/10.30829/contagion.v7i1.24085>
- [15] Karimy, M., Koohestani, H. R., & Araban, M. (2018). The association between attitude, *self - efficacy*, and social support and adherence to diabetes self - care behavior. *Diabetology & Metabolic Syndrome*, 1–6. <https://doi.org/10.1186/s13098-018-0386-6>
- [16] Kemenkes. (2018a). Menkes: Remaja Indonesia Harus Sehat. <https://kemkes.go.id/id/menkes-remaja-indonesia-harus-sehat>
- [17] Kemenkes, R. (2018b). Pedoman Penatalaksanaan Pemberian Tablet Tambah Darah. Kemenkes

- RI, 46. https://promkes.kemkes.go.id/download/fpck/files51888Buku_Tablet_Tambah_darah_100415.pdf
- [18] Laily, N., & Urip Wahyuni, D. (2018). Efikasi Diri (*Self Efficacy*). In Efikasi Diri dan Perilaku Inovasi. www.indomediapustaka.com
- [19] Lam, W. Y., & Fresco, P. (2015). Medication Adherence Measures: An Overview. BioMed Research International, 2015. <https://doi.org/10.1155/2015/217047>
- [20] Lubis DW, Sari MP, Asiah N. (2024). Faktor Konsumsi Tablet Tambah Darah Remaja Putri Di Sma Negeri 2 Cileungsi. 1(6), 1283–1289.
- [21] Maula, I. S., Arbi, A., & Septiani, R. (2026). Kepatuhan konsumsi tablet tambah darah pada siswi di SMA Negeri 1 Leupung Kabupaten Aceh Besar. 7, 6–10.
- [22] Mulyah, P. (2020). Efikasi Diri Dengan Dukungan Sosial Orang Tua. Journal GEEJ, 7(2), 14–40.
- [23] Notoadmojo, S. (2012). Metodologi Penelitian Kesehatan. Rineka Cipta.
- [24] Pou, R., Azhari, E. S., & Virzanisda, R. (2024). Dukungan Guru Terhadap Kepatuhan Konsumsi Tablet Tambah Darah Rutin Remaja Putri Sekolah. Jurnal Penelitian Dan Karya Ilmiah Lembaga Penelitian Universitas Trisakti, 9, 97–105. <https://doi.org/10.25105/pdk.v9i1.16927>
- [25] Putri K, Rahman H, Yusuf RA. Hubungan teman sebaya dengan perilaku konsumsi tablet tambah darah pada remaja putri SMAN 14 Makassar. Window Public Health J. 2025;6(2):370–376.
- [26] Rasnita, L. Z., Amalia, I. N., & Listia, M. (2020). Hubungan *Self-Efficacy* Dengan Kepatuhan Minum Obat Pada Pasien Dengan Diagnosa Tuberculosis Paru Di Uptd Puskesmas Griya Antapani Bandung. Cao Et Al, 1–10.
- [27] Ridho1, M., & Hartono, R. K. (n.d.). Strategi Peningkatan Kepatuhan Konsumsi Tablet Tambah Darah pada Remaja Putri di Sekolah.pdf. Jurnal Surya Medika (JSM), 11(3), 79–91. <https://doi.org/10.33084/jsm.v11i3.10404>
- [28] Ririanty, I. I. dan M. (2024). Peran Peer Educator Sekawan's dalam Pendampingan Kepatuhan Minum Obat Pasien TBC RO di Wilayah Jember. 01(2), 26–34.
- [29] Riskesdas 2018. (n.d.). Laporan Riskesdas 2018.
- [30] Sari, E. R. (2017). Hubungan Antara Dukungan Sosial Dengan Kesiapan Kerja. Psikoborneo: Jurnal Ilmiah Psikologi, 5(2), 279–283. <https://doi.org/10.30872/psikoborneo.v5i2.4375>
- [31] Simanjuntak FJ, Indriarini MY, Widianoro FX (2025). Dukungan sosial dan *self-efficacy* meningkatkan kepatuhan minum obat pada pasien tbc. 13(2), 0–5.
- [32] Simanjuntak, L. S., & Sulistyaningsih, W. (2018). the Differences in Psychological Well-Being of the. Psikologia, 1(7), 59–73.
- [33] Smith, E. P. S. T. W. (2011). Health Psychology: Biopsychosocial Interactions. Wiley. <https://ndl.ethernet.edu.et/bitstream/123456789/49580/1/267.pdf>
- [34] Soltan, N., Mardiana, N., & Hendriani, D. (2025). Hubungan *Self-Efficacy* dengan Kepatuhan Remaja Putri di Smp Negeri 22 Samarinda dalam Mengonsumsi Tablet Tambah Darah. Jurnal Ilmu Multidisiplin, 4(1), 246–255. <https://doi.org/10.38035/jim.v4i1.867>
- [35] Suaib Fatmawaty, D. (2024). Media Kesehatan Politeknik Kesehatan Makasar. Jurnal Kebidanan : Jurnal Ilmu Kesehatan Budi Mulia, 19(1), 171–176.
- [36] Sugiyono. (2019). Metode Penelitian Kuantitatif, Kualitatif, dan R&D. Alfabeta.
- [37] Sunyoto, D. (2015). Penelitian Sumber Daya Manusia. *Self-Efficacy*: Studi Indigenus Pada Guru Bersuku Jawa, 2(2), 61–67.
- [38] Wardani, D. S. S. J. (2024). Studi Literatur : Faktor-Faktor yang Berhubungan dengan Kepatuhan Konsumsi Tablet Tambah Darah pada Remaja Putri di Indonesia Literature Review : Factors Related to Iron Tablets Consumption Compliance among Adolescent Girls in Indonesia. Media Gizi Kesmas, 13(2), 878–897.
- [39] WHO. (2025a). Global Anaemia Estimates 2023. World Health Organization.

- <https://www.who.int/data/gho>
- [40] WHO. (2025b). Report. World Health Organization. <https://www.who.int/health-topics/adolescent>
- [41] Wisudahningsih, E. T., Aminudin, H., & Ramadhani, I. (2025). Tahapan Perkembangan Remaja: Perspektif Psikologis dan Implikasi Pendidikan. 1204–1222.