

Original Research Article

Knowledge, Attitudes and Behaviors of Female Adolescents in Preventing Anemia in Junior High School (SMP) South Aceh

Tasnimin^{1*}, Teuku tahlil², Zurnila Marli Kesuma³¹Master of Nursing, Syiah Kuala University, Banda Aceh, Indonesia²Faculty of Nursing, Syiah Kuala University, Banda Aceh, Indonesia³Faculty of Mathematics and Natural Sciences, Syiah Kuala University Banda Aceh, Indonesia**Article History**

Received: 21.11.2021

Accepted: 26.12.2021

Published: 30.12.2021

Journal homepage:<https://www.easpublisher.com>**Quick Response Code**

Abstract: Anemia or low levels of hemoglobin (Hb) in the blood are a health problem that frequently occurs in developing countries. Adolescents who suffer from anemia are easily lethargic and fatigued which has an impact on creativity and productivity. In addition, adolescents are at risk of experiencing susceptibility to diseases and deliveries that might cause the babies to have nutritional problems when they grow up. This study aims to examine the knowledge, attitudes and behaviors of anemia prevention in female adolescents in South Aceh Junior High School (SMP). The research design used a cross-sectional study. Samples were taken by total sampling with a total of 123 female adolescents. The results of the chi-square test showed that the variable associated with anemia prevention behavior was knowledge with p-value of 0.028 (<0.05). The results of the study are expected to be a reference to further increase the knowledge of adolescents regarding anemia prevention.

Keywords: Anemia, Knowledge, Attitude, Anemia Prevention, female adolescents.

Copyright © 2021 The Author(s): This is an open-access article distributed under the terms of the Creative Commons Attribution **4.0 International License (CC BY-NC 4.0)** which permits unrestricted use, distribution, and reproduction in any medium for non-commercial use provided the original author and source are credited.

1. INTRODUCTION

Anemia or low levels of hemoglobin (Hb) in the blood are a health problem that frequently occurs in developing countries. As many as 30% of the world's population is estimated to suffer from anemia, especially in adolescents and pregnant women (Adriani, 2016). Teenagers who suffer from anemia is easily lethargic and tired so that it has an impact on creativity and productivity. In addition, adolescents are also at risk of experiencing susceptibility to diseases and deliveries that might cause the babies to have nutritional problems. The occurrence of anemia in adolescents leads to various impacts such as disturbances in physical and emotional growth which causes disruption of learning concentration, decreased memory, and fatigue easily and results in low productivity.

Several factors are predicted to contribute to the high incidence of anemia in female adolescents. The need for iron absorption in female adolescents increases at the age of 14-15 years, while the increase happens at one or two following years in male adolescents (WHO, 2011). In addition, female adolescents experience menstruation every month and require more nutritional intake during their growth period.

Early prevention efforts can help reduce the prevalence of anemia. Increasing one's knowledge, attitudes and behaviors in preventing anemia is likely to reduce the prevalence of anemia. In Indonesia, according to the latest data from Basic Health Research (Riskesdas) in 2018, anemia in adolescents has increased by 32%, meaning that 3-4 out of 10 adolescents suffering from anemia are influenced by habits of lack of nutritional intake and physical activity (Kemenkes, 2021). In Aceh, research on anemia cases is still limited, especially for adolescents in the Aceh province. Hence, there is little information known regarding the knowledge, attitudes and behaviors of preventing anemia in adolescents in Aceh, especially in the South Aceh at Junior High School (SMP) level.

2. METHODOLOGY

This research is a quantitative study using a *cross-sectional study* design. It was held from November 7th to November 9th, 2021 and used a total sampling technique toward 123 female adolescents of the South Aceh Junior High Schools (SMP) conducted in two schools. Measurement of knowledge, attitudes and behaviors to prevent anemia used a questionnaire. Data collection was carried out directly, and it still met

the rules of health protocols during a pandemic by continuing using masks during the research period. This research was approved by the Research Ethics Committee of the Faculty of Nursing, Syiah Kuala University. Data were analysed using (a) univariate

analysis with frequency distribution, and (b) bivariate analysis with chi-square test.

3. STATISTICAL ANALYSIS

Univariate Analysis

Table-1: Knowledge, attitude, and behavior levels of female adolescents

No.	Variable	Frequency (f)	Percentage (%)
1.	Knowledge		
	Good	18	14.6
	Sufficient	77	62.6
	insufficient	28	22.8
2.	Attitude		
	Good	120	97.6
	Not good	3	2.4
3.	Anemia prevention behavior		
	Good	117	95.1
	Not good	6	4.9

Table 1 above shows that 77 out of 123 respondents have sufficient knowledge (62.6%). Regarding the attitude variable, 120 respondents are in the category of good (97.6%). Meanwhile, 117

respondents have a good category of anemia prevention behavior (95.1%).

Bivariate Analysis

Table-2: Correlation between knowledge and anemia prevention behavior

	Behavior				Total		P-Value
	Not Good		Good				
Knowledge	FF	5%	FF	5%	FF	%%	0,028
Insufficient	4	14.3	24	85.7	28	100	
Sufficient	2	2.6	75	97.4	77	100	
Good	20	0.0	18	100	18	100	

Based on Table 2, out of 123 respondents, 77 female adolescents possess sufficient knowledge and good anemia prevention behavior that is 75 (97.4%). The results of chi-square test showed a P-value of 0.028, meaning that there is a significant relationship between knowledge and anemia prevention behavior.

4. DISCUSSION

The result of bivariate analysis for the relationship between knowledge and anemia prevention behavior indicated a p-value of 0.028. This concludes that knowledge has a significant relationship with anemia prevention behavior, with a total of 77 female adolescents having sufficient knowledge and good anemia prevention behavior, namely 75 (97.4%).

This finding is consistent with a study conducted by (Serbesa & Iffa, 2018), revealing that when respondents have a good knowledge, then they perform positive behaviors towards anemia prevention. It can be visible from respondents' lifestyle by consuming foods that are rich in iron and fiber.

The similar finding was found by (Kesuma & Kartini, 2021), stating that one of efforts to prevent anemia is having good knowledge of anemia. The knowledge can be improved through education on

nutrition. Thus, it is expected that adolescents show a significant change in anemia prevention behavior.

However, a study of (Singh *et al.*, 2019) reported different results, that there was no significant relationship between young females' knowledge and good anemia prevention behavior. It is obvious from the fact that many young females do not care of their cleanliness and rarely consume nutritious food, even though they recognize how to prevent anemia and its symptoms.

The risk of anemia in adolescents has been a common problem worldwide. Thus, it is necessary to conduct more optimal prevention efforts by increasing knowledge and health promotion. This opinion is also expressed by (Hosseini *et al.*, 2006) in their study, that providing regular health promotions can increase knowledge that later on will give a positive impact on health behavior.

Similarly, (Abu-baker *et al.*, 2021) stated that structured education given to adolescents is highly effective to improve their knowledge and influences their behaviors to a healthy lifestyle; therefore, it will decrease the prevalence of anemia in adolescents. It can be concluded that one's knowledge is significantly related to his anemia prevention behavior. If the health

promotion is conducted in every school, adolescents' understanding of anemia will increase, not only recognizing but also improving their living to be healthier.

5. CONCLUSION

In general, adolescents' knowledge and attitudes towards anemia prevention have been considered good. However, providing a regular health promotion is necessary as it is one of our efforts to prevent anemia for a long period. It is expected that every school gets involved and seriously concerns on the health issues that may affect adolescents.

REFERENCES

- Abu-baker, N. N., Eyadat, A. M., & Khamaiseh, A. M. (2021). The Impact of Nutrition Education On Knowledge, Attitude, And Practice Regarding Iron Deficiency Anemia Among Female Adolescents Students In Jordan. *Sciencedirect*, 7(2).
- Adriani, M. (2016). *Peranan gizi dalam siklus kehidupan*. Jakarta: Prenada Media Group.
- Hosseini, M., Shojaeizadeh, D., Chaleshgar, M., & Pisva, H. (2006). *A study of educational intervention on knowledge, attitude, practice about iron deficiency anemia in female adolescent students*.
- Kemenkes. (2021). *Remaja Sehat Komponen Utama Pembangunan SDM Indonesia*. Riskesdas.
- Kesuma, N. I., & Kartini, F. (2021). *changes in knowledge and attitudes in preventing anemia in female adolescent: a comparative study*, 1(2).
- Serbesa, M. L., & Iffa, M. T. (2019). Knowledge, attitude and practice on prevention of iron deficiency anemia among pregnant women attending ante-natal care unit at public hospitals of Harar Town, Eastern Ethiopia: institutional based cross-sectional study. *Int J Pregn & Chi Birth*, 5(2), 48-55.
- Singh, M., Rajoura, O., & Honnakamble, R. (2019). *anemia-related knowledge, attitude, and practices in adolescent schoolgirls of delhi: A cross sectional study*.

Cite This Article: Tasnimin *et al* (2021). Knowledge, Attitudes and Behaviors of Female Adolescents in Preventing Anemia in Junior High School (SMP) South Aceh. *EAS J Nurs Midwifery*, 3(6), 291-293.