

## Literature Review: Factors Causing Anaemia in Adolescent Girls

Ayu Endang Purwati<sup>1</sup>, Metty Nurherliyany<sup>1</sup>, Rosidah Solihah<sup>1</sup>, Sri Wulan Ratna Dewi<sup>1</sup>

<sup>1</sup>Department of Midwifery, STIKes Muhammadiyah Ciamis, Ciamis, Indonesia

Correspondence Author: Ayu Endang Purwati

Email: [ayuendang86@gmail.com](mailto:ayuendang86@gmail.com)

Address: Jl. K.H. Ahmad Dahlan No. 20, Ciamis, West Java, Indonesia, +6285864103070

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### ABSTRACT

**Introduction:** Anaemia is one of the problems that often occurs in adolescent health, especially adolescent girls. the prevalence of anaemia in adolescents aged 15-24 years is 32%, meaning that it is estimated that as many as 3-4 adolescents out of a total of 10 adolescents suffer from anaemia. Adolescents are vulnerable to health risks due to rapid body development and adequate nutritional intake is one of the factors that can affect nutritional status in adolescents, the results of the study explained that the lack of nutritional intake has an impact on the nutritional status of adolescents. the impact of anaemia experienced by adolescent girls will make adolescents feel lethargic, can reduce memory ability so that academic achievement is not optimal and can also have a more serious impact, considering that they are prospective mothers who will become pregnant and give birth to babies, thereby increasing the risk of maternal death, giving birth to premature babies and low birth weight. Translated with DeepL.com (free version).

**Objective:** This study aims to determine the factors that cause anaemia in adolescent girls.

**Method:** Literature study of five scientific articles obtained through google scholar database published between 2028 and 2023.

**Result:** All studies show that there are several factors that cause anaemia in adolescent girls. **Conclusion:** Factors that can cause anaemia in adolescent girls include menstrual conditions, unbalanced nutritional intake, eating and drinking patterns, non-compliance with Fe tablet consumption and lack of knowledge.

**Keywords:** adolescent girls, anaemia, causal factors

## **Introduction:**

Anaemia is one of the problems that often occurs in adolescent health, especially adolescent girls. According to the Indonesian Ministry of Health (2018), the prevalence of anaemia in adolescents aged 15-24 years is 32%, meaning that it is estimated that 3-4 adolescents out of a total of 10 adolescents suffer from anaemia. (Kusnadi, 2021). Adolescents are vulnerable to health risks due to rapid body development and adequate nutritional intake is one of the factors that can affect nutritional status in adolescents, the results of the study explained that the lack of nutritional intake has an impact on the nutritional status of adolescents (Harahap, 2018).

According to the World Health Organisation (WHO), adolescents are people aged 10-19 years, while according to the Indonesian health ministerial regulation Number 25 of 2014 stipulates that adolescents are people aged 10-18 years (Kusnadi, 2021).

Adolescent girls who are prone to anaemia mostly coincide with menstruation, during this period there is an expenditure of iron which is needed at the age of 5-14 years, adolescent girls 10-18 years and age 19-45 years, in line with the results of research which explains that women have the highest risk of anaemia, especially in adolescent girls (Angelina et al., 2020).

According to Briawan in the article, the impact of anaemia experienced by adolescent girls will make teenagers feel lethargic, can reduce memory ability so that academic achievement is not optimal and can also have a more serious impact, considering that they are prospective mothers who will become pregnant and give birth to babies, thereby increasing the risk of maternal death, giving birth to premature babies and low birth weight (Sari et al., 2020).

The symptoms of anaemia are generally caused by target organ anoxia and the body's compensatory mechanisms to the decrease in haemoglobin in all types of anaemia. Symptoms include weakness, fatigue, lethargy, headache, dizziness, and foginess. Another opinion explains that the causes of anaemia that occur in adolescents include nutritional intake, parents' education level, economic level, level of knowledge about anaemia from adolescent girls, Fe consumption, and duration of menstruation (Sari et al., 2020).

Based on this background, the researcher is interested in conducting a literature review of several research results on the theme of factors that cause anaemia in adolescent girls.

## **Objective**

This study aims to determine the factors that cause anaemia in adolescent girls.

## **Method**

This research is a type of literature study that includes a series of actions related to the methods of managing research materials, reading and recording, and collecting library data. Researchers conduct literature research by reading various literatures, such as books and articles related to the subject they are studying.

This research is a literature review of several research results related to factors that cause anaemia in adolescent girls. The source of journal searches through google scholar in the period from 2018 to 2023.

## **Result**

Based on the results of the literatue review of 5 articles explained that there are several factors that cause anaemia in adolescent girls.

Table 1. Article Search Result

No	Title and Year of Publication	Author	Methods and Samples	Results
1	Study Phenomenology Causes Anaemia at Adolescents in Surabaya. 2020	Astrida Budiarti, Sri Anik, Ni Putu Gita Wirani	The method used in this research is qualitative research. The qualitative approach used is descriptive phenomenology. The sample was selected using purposive sampling technique. Respondents were obtained 10 respondents with the consideration that data saturation had occurred.	The results showed that the factors that cause anaemia include knowledge, nutrient intake, diet and drinking patterns, menstruation, iron tablets, nutritional status, and socioeconomics. To ensure that students understand nutrition and can apply it in real life, education is essential. The use of Student Activity Units (SMUs) in the health sector in the form of a program to provide Fe tablets to female students every month, can reduce the number of anaemia cases.
2	Relationship between knowledge level about anaemia With the Incidence of Anaemia in Adolescent Girls. 2021	Fajrian Noor Kusnadi	This article is a literature study. The population of this study were all adolescent girls in SMA Negeri 3 Kota Bukit Tinggi.	There is a relationship between the level of knowledge and the incidence of anaemia in adolescent girls. Adolescent girls who have good knowledge will be more aware of preventing anaemia than adolescent girls who have poor knowledge. In addition, there are several other factors that influence the incidence of anaemia, namely menstruation, as well as the desire of adolescent girls to have a slim stomach so that they can have a healthy body.
3	Factors Related to The Incidence of Anemia in Adolescents	Sri Wulandari Rahman, Usman, Fitriani Umar, Henni Kumalade wi Kengky	This study used observational methods with a cross sectional approach, the population in this study consisted of students at SMPN 8 Parepare class VIII as many as 56 students and class IX43 students. The total population is 99 students.	This study used observational methods with a cross sectional approach, the population in this study consisted of students at SMPN 8 Parepare class VIII as many as 56 students and class IX43 students. The total population is 99 students

No	Title and Year of Publication	Author	Methods and Samples	Results
4	Analysis of Anaemia in Adolescent Girls. 2022	Yenny Aulya, Jenny Anna Siauta, Yasmin Nizmadilla	This type of research is qualitative. The samples in this study were 7 teenage girls as the main informants in the Ciputat area of South Tangerang, which were obtained using the snowball technique. The data collection technique in this study uses triangulation test, processed using data reduction and presented in the form of narrative text.	Adolescent girls still lack a clear understanding of anaemia, so anaemia suffered by adolescent girls is caused by poor diet and sleep and heavy menstrual discharge.
5	Factors associated with anaemia among adolescent girls.2019	Andi Suyatni, Musrah, Widyawati	The type of research used is quantitative using Cross Sectional design. Sampling using the total sampling method, the sample in this study were all female adolescents in class XI class2018/2019 at SMKN 16 Bengkuring, namely 56 female students.	A total of 41% of adolescent girls experienced anaemia. then there is an association between menstrual patterns (p-value=0.000) and diet (p-value=0.122) with the incidence of anaemia.

## Discussion

The adolescent phase is an important part of a person's developmental cycle as it is a transitional period that allows for the development of a healthy adulthood. Adolescents sometimes like to ignore health problems, so cases of malnutrition such as anaemia appear when they are still teenagers. Most adolescents who experience anaemia are caused by iron deficiency based on ignorance of its side effects, in accordance with the results of community service which explain that there is an increased understanding of anaemia after being given health education (Julaecha, 2020).

Prevention of anaemia in adolescents can be done in various ways, one of which is providing health information related to factors that can cause anaemia including menstrual conditions, lack of iron intake, unhealthy eating and drinking patterns, lack of taking Fe tablets and lack of knowledge. In line with the explanation which says that factors that cause anaemia in adolescents include lack of knowledge about anaemia and how to choose nutritious foods, not used to having breakfast, the habit of drinking tea and coffee, and lack of intake of iron, protein, and vitamin C (Budiarti et al., 2020).

The results explained that the factors causing anaemia in adolescent girls include menstrual patterns, poor diet, worm infections, the habit of consuming tea or coffee after meals, sleep duration, lack of vitamin C intake and economic factors (Elisa et al., 2023).

Menstrual conditions can be a major factor in adolescent girls if not managed properly, according to the results of a study stating that there is a relationship between menstrual patterns and anaemia in adolescents (Andriani, 2021). Another explanation says that the factors that influence the incidence of anaemia are menstruation, as well as the desire of adolescent girls to have a slim stomach that affects the fulfilment of nutrition (Kusnadi, 2021).

Another study explained that adolescent girls who experience menstruation and want to stay slim, so they reduce their portion of food, which has an impact on the lack of nutritional fulfillment (Rahayu et al., 2021). In line with the explanation which states that as many as 82% of adolescents experience anemia with varying nutritional status including thin nutritional status 35.5%, normal nutritional status 57.3%, fat nutritional status 7.3%. So that anemia in adolescent girls still requires special attention (Nurjannah & Putri, 2021).

Another factor that causes anemia is poor diet, this is caused by the high level of junk food consumption and the number of adolescents who skip meals. In line with the results of the study, which explained that most of the adolescent girls who experienced anemia had a history of poor diet (Nafisah & Salafas, 2021). Another opinion states that the relationship between diet, knowledge, and menstruation on the incidence of anemia has no relationship, while at the level of compliance with Fe tablet consumption with the incidence of anemia in adolescents at SMPN 8 Parepare there is a relationship (Rahman et al., 2023).

Adolescent compliance in taking Fe tablets is another factor that can cause anemia, especially during menstruation. This is due to the fact that there are still many adolescents who feel side effects such as feeling nauseous, thus reducing the level of compliance. In line with the results of the study which explained that the more adolescents who felt the effects after taking Fe tablets, the more non-compliant, and vice versa, the more adolescents who did not feel the effects of Fe tablet consumption, the more compliance would increase (Zamadi et al., 2022).

Ignorance is the next factor causing anemia in adolescent girls, in line with research which explains that there is a relationship between the level of knowledge and the incidence of anemia in adolescent girls. Adolescent girls who have good knowledge will be more aware of preventing anemia than adolescent girls who have poor knowledge (Kusnadi, 2021). The results of other studies explain that there is a relationship between the incidence of anemia in adolescents with knowledge, menstruation, and dietary habits (Astuti, 2023).

In cases of adolescent ignorance about anemia, interventions related to providing information are one of the solutions that can be done. This is in line with the results of community service which explain that the knowledge of SMA N 12 Merangin students about anemia has increased by an average of 10-15%, from an average score of 83 to 95 (Junta & Wulansari, 2021). Other studies explain that one of the factors associated with anemia risk behavior in adolescent girls is predisposing factors that include knowledge, attitudes, education and income (Kamilah, 2021).

The impact of anaemia is difficulty concentrating, frequent fatigue, fatigue, lethargy, and dizziness, which can interfere with productivity. Many other factors can cause anaemia in adolescent girls including menstrual conditions, unbalanced nutritional intake, eating and drinking patterns, non-compliance with Fe tablet consumption and lack of knowledge. This will have a negative impact on adolescents if not treated, the impact arising from anaemia is difficulty concentrating, often experiencing fatigue, easily tired, lethargic, and complaints of dizziness so that it can interfere with productivity. In line with the results of the study that the impact felt by adolescent girls who experience anaemia is dizziness, lethargy, weakness, pallor

on the face, especially the lips, foggy eyes, decreased learning concentration and decreased physical activity (Aulya et al., 2022).

## Conclusion

According to the five articles that have been studied, it was found that there are factors that can cause anaemia in adolescent girls including menstrual conditions, unbalanced nutritional intake, eating and drinking patterns, non-compliance with Fe tablet consumption and lack of knowledge.

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