

From Small Talk to Health Awareness: Anemia Socialization for Adolescent Girls in North Bogor

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ABSTRACT

This condition poses a risk of decreased learning concentration, productivity, and future reproductive health. This activity aims to increase adolescent girls' knowledge and awareness about anemia through informal discussions as a communicative educational approach. The activity was conducted with 15 adolescent girls in RW 06, Tanah Baru Village, Cimahpar District, North Bogor Regency. The method used was interactive education through informal discussions, material delivery, and a question-and-answer session. Evaluation was conducted qualitatively through participant observation and participant understanding. The activity showed an increase in participants' understanding of anemia, its causes, symptoms, and prevention. The informal discussions proved effective in increasing active participant participation. This aligns with previous research and community service findings, which indicate that increased knowledge is significantly associated with a reduced risk of anemia.

INTRODUCTION

Anemia is a public health problem that remains a global concern, particularly among vulnerable groups such as adolescent girls and women of reproductive age. By definition, anemia is a condition in which hemoglobin levels in the blood are below normal, disrupting the blood's ability to transport oxygen to body tissues (Killeen & Tambe, 2024). This condition can impact various aspects of health, ranging from decreased immunity and cognitive impairment to serious complications for reproductive health in the future. Globally, anemia remains a significant problem. The World Health Organization reports that approximately 30% of women of reproductive age suffer from anemia, with a higher prevalence in developing countries (Jaelani et al., 2017). Adolescent girls are particularly vulnerable to anemia due to increased iron requirements during growth and regular blood loss due to menstruation. This condition is further exacerbated by inadequate diets and insufficient intake of essential micronutrients, particularly iron.

In Indonesia, anemia in adolescent girls remains a serious problem. Based on various recent studies, the prevalence of anemia in adolescent girls ranges from 30–40% and can even reach over 50% in certain regions (Andini et al., 2026; Prasetyowati, 2024). These high rates indicate that anemia is not only an individual problem but also a public health issue requiring comprehensive intervention. The causes of anemia in adolescent girls are multifactorial. One of the main causes is iron deficiency due to inadequate dietary intake. Adolescents tend to have unbalanced diets, such as consuming fast food low in iron and skipping meals (Triana, 2023). Furthermore, consuming foods or drinks that inhibit iron absorption, such as tea and coffee, also exacerbates anemia.

In addition to nutritional factors, knowledge also plays a significant role in the occurrence of anemia. Research shows that adolescents with low levels of knowledge about anemia have a higher risk of developing the condition (Rahman & Fajar, 2024). Lack of understanding of the importance of iron, the symptoms of anemia, and how to prevent it leads to adolescents being unaware of their condition and not taking optimal preventive measures. The impact of anemia on adolescent girls should not be underestimated. Anemia can cause decreased concentration in learning, fatigue, decreased academic performance, and impaired physical and mental development. In the long term, anemia in adolescent girls also carries the risk of continuing into pregnancy and increases the risk of complications such as low birth weight, prematurity, and maternal and infant mortality (Anaemia in Women and Children, 2026). The Indonesian government has implemented various efforts to address anemia, including a program to provide iron supplements (TTD) to adolescent girls. However, the implementation of this program still faces various obstacles, including low compliance with TTD consumption, limited understanding of its benefits, and insufficient, ineffective, and unsustainable education (Rahmayanti et al., 2025)

In the context of health promotion, education is a key strategy for increasing public knowledge and awareness. Effective health education not only conveys information but also changes individual attitudes and behaviors. Therefore, educational methods are needed that are innovative, engaging, and tailored to the characteristics of adolescents. One approach that can be used is the informal discussion method. This method emphasizes two-way communication and an informal atmosphere, making participants feel more comfortable interacting and expressing their opinions. Research shows that participatory educational approaches are more effective in increasing knowledge than conventional lecture methods (St Rosmanely & KM, 2025) . The informal discussions also allow participants to exchange experiences, which can strengthen understanding and increase collective awareness. In the context of adolescents, this approach is particularly relevant because it aligns with their characteristics, which tend to be more responsive to social interaction than one-way learning.

The target partners for this community service activity were adolescent girls in RW 06, Tanah Baru Village, Cimahpar District, North Bogor Regency. This location was chosen because the area is residential, with a heterogeneous population and limited access to comprehensive health education. Based on initial observations and communication with local health cadres, several key issues related to anemia in adolescent girls were identified, including: 1) Low level of knowledge about anemia (Most adolescents do not fully understand anemia, including its causes, symptoms, impacts, and prevention methods. This indicates an information gap that needs to be addressed immediately through health education); 2) Lack of awareness of the importance of iron intake (adolescents tend to pay little attention to the nutritional quality of their daily diet. Consumption of foods high in iron remains low, while fast food consumption is prevalent); 3) Unhealthy lifestyles (some adolescents engage in habits that can increase the risk of anemia, such as skipping breakfast, unhealthy diets, and consuming caffeinated beverages, which can inhibit iron absorption); 4) Lack of community-based health education (health education activities in these communities are still limited and not conducted routinely. Adolescents are also not widely involved in health promotion and prevention programs); 5) Low compliance with iron supplementation (government programs related to iron supplementation have not been fully optimized due to adolescents' limited understanding and motivation to take iron supplements regularly).

This situation demonstrates the urgent need for effective and sustainable health education interventions. Education must not only be informative but also increase adolescent motivation and awareness to adopt healthy lifestyle behaviors. Therefore, this community service activity is expected to be a strategic effort to increase health awareness among adolescent girls, particularly in preventing anemia. Considering the conditions and needs of the target partners, anemia awareness activities through informal discussions are highly relevant. This activity is expected to not only provide knowledge but also encourage sustainable behavioral changes in maintaining the health of adolescent girls.

IMPLEMENTATION AND METHODS

This community service activity was carried out in Neighborhood Association (RW) 06, Tanah Baru Village, Cimahpar District, North Bogor Regency, targeting 15 adolescent girls.

Implementation Stages

1. Preparation
 - a. Coordination with the neighborhood association (RW) head and health cadres.
 - b. Preparation of educational materials on anemia.
 - c. Preparation of simple educational media.
2. Implementation
 - a. Method: informal discussion.
 - b. Material presented includes: definition of anemia, causes and risk factors, signs and symptoms, impact of anemia, prevention (diet and iron supplementation).
 - c. Followed by an interactive question and answer session.
3. Evaluation
 - a. Observation of participant activity.
 - b. Evaluation of understanding through follow-up discussions.
 - c. Feedback from participants.

This method was chosen because it is participatory and can increase active participant involvement.

RESULTS AND DISCUSSION

The evaluation of the community service activities was conducted using a pre-test and post-test questionnaire consisting of 10 multiple-choice questions related to anemia, covering its definition, causes, symptoms, impacts, and prevention. Each correct answer was given a score of 10, resulting in a maximum score of 100.

Respondent Characteristics

A total of 15 adolescent girls, aged 13–18, participated in this activity. All respondents participated from beginning to end.

Table 1. Pre-test and Post-test Scores

No	Respondents	Pre-test Score	Post-test Score
1	R1	50	80
2	R2	60	90
3	R3	40	70
4	R4	70	90
5	R5	50	80
6	R6	60	85
7	R7	55	80
8	R8	45	75

9	R9	50	85
10	R10	65	90
11	R11	55	80
12	R12	60	85
13	R13	50	80
14	R14	55	85
15	R15	45	75

Table 2. Descriptive Analysis

Parameters	Value
Pre-test Average	54,0
Post-test Average	82,7
Average Improvement	+28,7
Minimum Score (pre)	40
Maximum Score (post)	90

Table 3. Knowledge Level Categories

Category	Pre-test (%)	Post-test (%)
Good (≥ 76)	13,3%	80%
Enough (56-75)	40%	20%
Poor (≤ 55)	46,7%	0%

The results showed a significant increase in the level of knowledge of adolescent girls after the educational intervention through informal discussions. The average pre-test score of 54.0 increased to 82.7 in the post-test, representing a 28.7-point increase. This indicates that the intervention was highly effective in improving participants' understanding of anemia. Before the intervention, nearly half of the respondents (46.7%) were in the low knowledge category. This reflects the adolescents' lack of understanding of anemia, which aligns with previous research that suggests low knowledge is a major risk factor for anemia in adolescent girls (Triana, 2023; Yuwanti et al., 2021). After the education, there was a significant change in distribution, with 80% of respondents in the good knowledge category and no respondents in the poor knowledge category. This indicates that the informal discussion method was able to improve understanding evenly across all participants. Individually, all respondents experienced an increase in scores without a decrease in scores. This indicates that the material presented was well understood by all participants. The highest increase reached 35 points, indicating a significant change in knowledge.

The informal discussion method used in this activity proved effective because it allowed for two-way communication between the facilitator and participants. Participants not only passively received information but also actively asked questions and engaged in discussions. This approach aligns with participatory learning theory, which states that active participant involvement can improve information retention (Moka et al., 2025; Rahmayanti et al., 2025). Furthermore, the informal atmosphere made participants more comfortable expressing their opinions and personal experiences. This is important in health education because it allows participants to relate the material to real-life situations they experience.

The results of this activity also align with research showing that interactive health education is more effective than conventional methods in improving adolescents' knowledge and attitudes toward anemia prevention (Setyaningrum et al., 2023). This increased knowledge is a crucial first step in changing health behaviors. According to health behavior theory, knowledge is a predisposing factor that influences the formation of health attitudes and practices. With increased knowledge, it is hoped that young women will be more aware of:

- a. Consuming foods high in iron.
- b. Avoiding habits that inhibit iron absorption.
- c. Regularly taking iron supplements.

However, this activity has limitations, namely the lack of inferential statistical tests such as paired t-tests to determine the statistical significance of differences. Furthermore, the relatively small sample size also limits the generalizability of the results. Nevertheless, descriptively, the results obtained show a clear and consistent improvement across all respondents. This indicates that the intervention has great potential for wider application. Therefore, it can be concluded that education through informal discussions is an effective method for increasing adolescent girls' knowledge about anemia and can be a strategy for anemia prevention in the community.

Documentation of activities as in Figure 1 below:



Figure 1. Activity Documentation

CONCLUSIONS AND RECOMMENDATIONS

The community service activity titled "From Casual Conversation to Healthy Awareness: Anemia Socialization for Adolescent Girls in North Bogor" was successfully implemented and had a positive impact on increasing the knowledge of adolescent girls. Based on the evaluation results using pre-test and post-test questionnaires, there was a significant increase in participants' knowledge about anemia. The average score increased from 54.0 to 82.7, with all participants experiencing individual increases. Furthermore, there was a shift in the knowledge category from predominantly "poor" to "good," demonstrating the effectiveness of the educational intervention. The informal discussion method proved effective in increasing understanding because it created an interactive, communicative, and participatory learning environment. This approach enabled participants to be more active in asking questions, discussing, and gaining a deeper understanding of the material. Overall, this activity successfully increased adolescent girls' awareness of the importance of preventing anemia through a healthy diet and iron consumption. Therefore, the informal discussion-based educational method is recommended as a promotive and preventive strategy to reduce the incidence of anemia among adolescent girls in the community.

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