
RESEARCH ARTICLE

Pepes Timlo in Youth with Media Leaflets at SMPN 1 Baki

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ABSTRACT

Anemia is a decrease or low level of hemoglobin (Hb) in the blood, while hemoglobin is an erythrocyte that helps the body distribute oxygen. Based on Riskesdas (2018), as many as 32% or 4 out of 10 Indonesian adolescents suffer from anemia. The results of the question and answer with students of SMPN 1 Baki on October 15, 2022, found that 7 out of 10 students did not like vegetables and skipped breakfast. 8 out of 10 students do not know the consequences of hemoglobin deficiency or anemia. 9 out of 10 female students say that when menstruating, the abdomen is painful, the body is weak, and it is easy to get sleepy. They do not know that it is a symptom sign of anemia. This study aimed to determine the influence of health education with leaflet media about the importance of hemoglobin in adolescence. This study was conducted on January 18, 2023. This type of research is a cross-sectional, quantitative analysis with a pretest-posttest design without a control group (one group pre and post-test design). The population of 10,030 students, and the sample of 197 students (Accidental Sampling). Analysis with the Wilcoxon test results ($p=0.000$), then, there is an influence of health education with leaflet media on the importance of hemoglobin in adolescence.

KEYWORDS

Health education, Leaflet, Adolescent, Hemoglobin

ARTICLE INFORMATION

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1. Introduction

Adolescence is a process of maturation from childhood to adulthood. At this time, there is rapid physical and emotional development. Therefore, nutritional intake is needed during adolescence, comparable to adolescents' growth (Muwakhidah et al., 2021). Teenagers are people who have just grown up, are aware of other genders, understand their place in society, accept the identity that has been bestowed upon them, and can realize all their potential. Adolescence is the age range where childhood ends and youth begins, and it determines how mature a person is in adulthood. Adolescence is a period between childhood and adulthood when physical, mental and emotional development occurs very quickly (Harahap, 2018). According to WHO (2018), adolescents are 10-19 years old.

Based on Riskesdas (2018), as many as 32% or 4 out of 10 Indonesian youth suffer from anemia. Based on the results of interviews conducted with SMPN 1 Baki students on October 15, 2022, it was found that 7 out of 10 students did not like vegetables and skipped breakfast. 8 out of 10 students do not know the consequences of hemoglobin deficiency or anemia. 9 out of 10 female students said that during menstruation, the stomach feels painful, the body feels weak, and it is easy to fall asleep. They are not aware that these symptoms are signs of anemia. Anemia is a decrease or low hemoglobin level (Hb) in the blood, while hemoglobin is a component of red blood cells (erythrocytes) that helps the body distribute oxygen. Body tissues will lack oxygen if Hb is low, while the body needs oxygen to drive metabolic processes (Tonasih et al., 2019).

Hemoglobin as a determinant indicator of anemia. The hemoglobin level (Hb) in the blood falls below the normal range, which is called anemia. Normal hemoglobin levels in teenage women, this range is 12-16 g/dL, and for teenage boys, it is 13-17 g/dL (Husnah et al., 2021). Low hemoglobin levels are caused by iron, folic acid, vitamin B12 and vitamin A deficiencies, as well as several other nutrients. Anemia can be caused by acute and ongoing inflammation, parasitic infections, congenital disabilities that interfere with hemoglobin synthesis, or deficits in red blood cell formation (Husnah et al., 2021). Iron intake can be obtained from foods such as red meat, liver and organ meats, fish, spinach, broccoli, dark chocolate, beans, brown rice, eggs and wheat to maintain sufficient hemoglobin levels. Increase consumption of folic acid, consume vitamin B12, and vitamin C, exercise regularly, avoid smoking and consumption of alcohol, and consume blood-boosting tablets. The dangers of a lack of hemoglobin levels in the blood include: decreased reproductive health, decreased mental and motor development, decreased intelligence, decreased achievement, easy drowsiness, weakness, and dizzy head (Harahap, 2018). Ambon bananas can also accelerate hemoglobin levels in people with anemia (Muslikah & Sulastri, 2018).

Level of knowledge is a predisposing factor in health behavior modification. Their lack of understanding of the importance of hemoglobin in adolescents is one of the triggers for anemia. Therefore, there needs to be an effort to teach teenagers about the importance of hemoglobin, such as by counseling them. Health education is an effort to persuade or teach the community so that people want to take action to maintain and improve their health (Notoatmodjo, 2018).

Print media includes posters, flyers, brochures, magazines, newspapers and stickers. Health professionals most often use the leaflet during counseling. The advantage of using leaflet media is that it facilitates and makes students understand the message conveyed in short, concise and easy-to-understand sentences and is equipped with colors and pictures so that it attracts students' attention more, and the method of making it relatively easy (Sugiarti et al., 2019). Leaflets are a means of conveying information or health messages that are shaped like folded sheets and contain particular printed text and graphics (Afina et al., 2021).

2. Materials and Methods

This research uses a cross-research sectional, quantitative analysis with plans pretest-posttest without a control group (one group pre and post-test design). This research was conducted on January 18, 2023, at SMPN 1 Baki. The sampling technique used is engineering Accidental Sampling, which limits the time to meet with respondents to 1x12 hours to save research time. The criteria for respondents in this study were students in grades 7-9 at SMPN 1 Baki. In this study, the dependent variable is students' knowledge, behavior and attitudes. The independent variable is health education using leaflet media regarding the importance of hemoglobin. The primary data source for this research is data taken by filling out a questionnaire pretest by the respondent directly after the respondent signed informed consent.

The data in this study were processed by entering data into a computer system to analyze whether the data distribution was normal. This study uses the analysis Kolmogorov-Smirnov because the number of samples is 197 respondents. The results of the data analysis test found that all data came from the group pretest, and the posttest was not distributed, as well as the sig orp value 0,000 ($p < 0, 05$). Then the bivariate test uses a non-parametric test, namely test Wilcoxon.

3. Results and Discussion

According to the data in table 1, it is known that the sample is 197 respondents in grade 8, totaling 82 students (41.6%). Meanwhile, the least number of respondents was grade 7, which consisted of 37 students (18.8%). Grade 9 totaled 78 students (39.6%).

Table 1. Distribution of Respondent Characteristics

Class	Frequency	Percent
7	37	18,8
8	82	41,6
9	78	39,6
Total	197	100

According to table 2, it can be concluded that respondents' level of knowledge regarding the importance of hemoglobin in adolescence before being given health education was 14.63. The level of knowledge about the importance of hemoglobin in adolescence for most of the respondents before health education was carried out needed to be improved. After conducting health education, the results were obtained posttest of 98.74. Based on the data posttest, it can be concluded that the level of student knowledge increases after being given treatment or health education. The minimum score before health education is 3. The respondent can only answer 3 correct questions, while the maximum score is 10, or the respondent can answer the question entirely. While the minimum score after health education is 6, the maximum score is 10.

Table 2. Level of Knowledge Before and After Treatment (Health Education)

Knowledge Level Score	Mean Rank	Min	Max
Pretest	14,63	3	10
Posttest	98,74	6	10

In table 3, it can be concluded that the average value before being given health education was 6.29. After being given health education, the average score was 9.58. It was concluded that students' knowledge level after being given health education increased. The standard deviation pretest of 1,226 and posttest of 0.769 is good because it is smaller than the average value. Based on the test Wilcoxon, the significance value obtained is 0.000 ($p < 0.05$). Thus, leaflet media increases students' knowledge about the importance of hemoglobin in adolescence.

Table 3. Differences in Average Knowledge Levels Before and After Treatment (Health Education)

Knowledge Level Score	Mean	Std. Deviation	P
Pretest	6,29	1,226	0,000
Posttest	9,58	0,769	

Education level affects one's knowledge and health status. The higher the level of education, the closer a person is to achieving optimal health status. Factors that affect a person's knowledge besides education are experience, age, work, environment and socio-culture (Kubillawati & Warastuti, 2018). Income or the economy can also affect a person's knowledge and health status (Purwaningtyas & Prameswari, 2017). This is in line with the opinion that defines health education according to Nurmala (2018), an expectation that there will be changes in the knowledge, attitudes and behavior of individuals, families and communities in maintaining healthy living behaviors as well as an active role as an effort to improve optimal health. The education of mothers and parents affects the growth and development of children (Sholihatin Nisa, 2020).

Adolescents themselves are just growing up, aware of other genders, understand their place in society, accept the identity that has been bestowed upon them, and can realize all their potential. Adolescence is the age range where childhood ends and youth begins, and it determines how mature a person is in adulthood. Adolescence is the period between childhood and adulthood when physical, mental and emotional development occurs very quickly (Harahap, 2018). Most adolescents participate in risky behavior deemed necessary for their normal development. The use of tobacco products, alcohol, and illegal substances is adolescents' most common and dangerous behavior (Wulandari & Fitriasih, 2014). So there is a need for health education to increase adolescents' knowledge and improve their health quality.

The education of most active smoker's respondents was junior high school, and most started smoking habits in junior high school (Mirnawati et al., 2018). Factors that cause a lack of knowledge are lack of parental support, independent learning, natural challenges, facilities and limited resources (Umar & Widodo, 2022). Parenting patterns affect the knowledge and behavior of adolescents (Ayuningtyas Kusumastuti & Indriastuti, 2021). As future mothers, young women need to get health education about anemia because the risk of death for pregnant women is affected by the most complications of comorbidities, namely anemia (Sulastri & Nurhayati, 2021). Anemia is a comorbid disease in gravida or pregnant women (Sulastri et al., 2019). The higher the level of one's knowledge, the higher one can judge something (Radiyani Oktavia et al., 2018).

Research conducted by Maharani (2020) concluded that after conducting health education in the form of lectures, students experienced an increase in knowledge marked by enthusiastic students answering questions raised by researchers after being given health education. Research conducted by Permanasari (2020) entitled The Relationship between Knowledge of Anemia and Hemoglobin Levels in Young Girls at SMAN 05 Pekanbaru concluded that there is a relationship between the level of knowledge and the incidence of anemia in young girls. Another researcher, Afina (2021), with the title Education Regarding Iron Deficiency Anemia for Young Girls Using Media Leaflets, numbered 31 respondents using the Wilcoxon and got results p-value (0.000). Leaflet media is effective for increasing knowledge and suitable for health education media. Research conducted by Sumarna, Nurhakim, and Rosidin (2021) with the title Increasing Knowledge Regarding the Importance of Maintaining Hemoglobin Levels in the Blood in Garut 1 Public High School Students, the number of respondents was 71 students. After carrying out health education, students' knowledge increased. The average pretest was 36.36 to 68.18 at the moment posttest. Researcher Muwakhidah (2021), with the

title Educational Effectiveness Using Media Booklets, Leaflets and Posters on Knowledge about Anemia, states that the average student's knowledge after carrying out health education increases by 11.9 points in leaflet media.

Based on the research above, the researcher researched the influence of health education with leaflet media on the importance of hemoglobin in adolescence. Leaflets are informational or health message delivery tools shaped like folded sheets and contain specific printed text and graphics. Researchers conducted this study because previous researchers used several respondents below 100, and most studies only used female respondents.

4. Conclusions

From the study results, it can be concluded that health education with leaflet media influences increasing knowledge. Researchers previously examined the influence of social media to increase knowledge about the importance of hemoglobin in adolescence. The drawbacks of this study were that the researchers limited the time to only 12 hours, and the number of questionnaires was only 10 with closed questions, not digging deeper into the respondents' answers. Suggestions for future researchers to examine the influence of social media to increase knowledge about the importance of hemoglobin in adolescence use a quantitative method with a questionnaire that combines closed and open questions to dig deeper.

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