

The Effectiveness of Lecture Media and Poster Media Education Methods in Preventing Anemia in Female Students at the Darul Wustha Islamic Boarding School

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ABSTRACT

Anemia in adolescent girls is still quite high, according to the World Health Organization (WHO), the prevalence of anemia in the world ranges from 40-88%. According to WHO, the incidence of anemia in adolescent girls in developing countries is around 53.7% of all teenage girls, anemia often attacks teenage girls due to stress, menstruation, or late meals. Data on the prevalence of anemia in teenage girls for the South Aceh Provincial Health Office is not yet available, as is the prevalence for female students at the Darul Wustha Islamic Boarding School Dayah, West Labuhan Haji District. This is because routine monitoring of anemia has never been carried out. However, the results of research that has been conducted in several areas in South Aceh still show a high incidence of anemia in adolescent girls. Zubir's 2018 study of Adolescent Girls at the AsSyifa School Health Vocational School in Banda Aceh showed that 44% had moderate anemia. Mirani's 2021 study found that the prevalence of anemia in female adolescents with iron deficiency in Langsa City was 33.7%. Objective: To determine the effectiveness of knowledge about anemia before and after providing counseling using lecture methods and poster media to female students at the Darulwustha Islamic Boarding School Dayah, West Labuhanhaji District, South Aceh Regency. This study used a quasi-experimental method and utilized a pretest and posttest design, namely by taking initial measurements before and after treatment was given. The population in this study were all new female students totaling 40 people. The results of this study with a pre-test value of 7.96, a post-test value of 17.18, and a PValue value of 0.000.

INTRODUCTION

Anemia is a health problem that causes sufferers to experience fatigue, tiredness, and lethargy which will affect their creativity and productivity. Not only that, anemia also increases the susceptibility to disease in adulthood and gives birth to a generation with nutritional problems (Kemenkes RI, 2021). Anemia in adolescent girls is still quite high, according to the World Health Organization (WHO), the prevalence of anemia in the world ranges from 40-88%. According to WHO, the incidence of anemia in adolescent girls in developing countries is around 53.7% of all teenage girls, anemia often attacks teenage girls due to stress, menstruation, or late food.

The incidence of anemia in Indonesia is still quite high. the prevalence of anemia in adolescents is 32%, meaning that 3-4 out of 10 adolescents suffer from anemia (Riskesdas, 2018). This is influenced by suboptimal nutritional intake habits and lack of physical activity. The results of study at SMA Negeri 1 Polokarto found 79.4% anemia in adolescent girls (Titin, 2014). The results of study at the Ummul Qura Al-Islam Modern Islamic Boarding School in Bogor found 52% anemia in adolescent girls (Suiyatin, 2016). The results of study at SMA Negeri 14 Palembang found 40% anemia in adolescent girls (Rotua, 2017). From the three research results, the prevalence of anemia is still high. Teenage girls have a ten times greater risk of suffering from anemia. This is because teenage girls experience menstruation every month and are in a period of growth so they need more nutritional intake. An imbalance in the consumption of iron is also a cause of anemia in teenagers (Titin, 2014). In addition, the factor causing anemia in adolescent girls is knowledge. Adolescent knowledge about anemia will affect food consumption patterns which will result in nutritional status. (Ely, 2017).

Islamic boarding schools are one of the choices of places to go to school for children and have a rule that every student must live in a dormitory during their education. Boarding schools will provide food services to meet the needs of students and teachers. The provision of dormitory food is generally limited due to cost issues so there is a possibility that it cannot meet the nutritional needs of students (Alaofe et al., 2009).



Dayah Pesantren Darul Wustha was established in 1987, Name Dayah Darul Wustha Location/Address Jl. Syekh. H. Muda Waly, Ujung Padang Village, Labuhanhaji Barat District, South Aceh Regency Founder Tgk. H. Abdul Hamid Laduni Legal Status of Dayah (Legal Entity) Minister of Law and Human Rights of the Republic of Indonesia, NUMBER: AHU AH Year 2011 Head of Dayah Tgk. H. Abdul Hamid Laduni. Number of Meudagang Male students: 132 Female: 154 Number of Teungku / Male Teachers: 20 Female: 8. Male and female students who live in boarding schools are not provided with meals but cook for themselves in the common kitchen that has been provided.

Knowledge is one of the factors that can give rise to intrinsic motivation (motivation that arises from within oneself without any encouragement from others). Individuals who know a particular field will have this connection (Rotua,2017). Teenagers' knowledge about nutrition is often ignored, and this will have an impact on fulfilling nutritional needs, especially iron, which will result in anemia (Sarwono,2008), (Titin,2014). Lack of knowledge of nutrition and health in adolescents causes them to engage in eating habits that can be detrimental to their health. Lack of knowledge also affects adolescents' eating habits in choosing to eat out or only consume snacks. (Ikhwati 2012, in Rotua 2017).

One way to increase the knowledge of adolescent girls about anemia is to provide nutritional education by providing counseling. This is because a higher nutrition knowledge will affect the attitude and behavior of food consumption. Education can be done through several media and methods. Counseling education with the help of media will make it easier and clearer for the audience to receive and understand the material presented (Nurul, 2016).

In this study, the media that can be used in education is poster media, which contains material about anemia and how to prevent it. Education is given specifically to increase the knowledge of young women to overcome anemia. Posters are given by sticking or installing them in strategic places to attract the attention of teenagers to read them. In previous studies, the use of poster media on anemia in pregnant women greatly influenced the level of knowledge of anemia in the pre-test and post-test (Aulia Meidina Sulistiyowati, 2019).

Based on the results of interviews with several female students during a visit to the Darul Wustha Islamic Boarding School from May 11 to 12, 2024, 9 out of 12 female students stated that they experienced symptoms of weakness, fatigue, dizziness, excessive blood loss during menstruation, often unable to concentrate while studying, rarely consuming foods containing iron, sleeping too late at night, and often going on diet programs, without them realizing that what they were experiencing was anemia, this problem still occurs in female students. This is due to the lack of knowledge and awareness of female students about anemia so the researcher wants to conduct a study on the Effectiveness of Educational Media, Lecture Methods, and Poster Media, Efforts to Prevent Anemia in Female Students at the Darul Wustha Islamic Boarding School, West Labuhanhaji District, South Aceh Regency.

METHOD

Research design

This study uses a quasi-experimental method and a pretest and posttest design, namely by conducting initial measurements before and after treatment is given. This study was used to determine the Effectiveness of the Media of Lecture Education Methods and Poster Media for Anemia Prevention Efforts in Female Students at the Darul Wustha Islamic Boarding School, West Labuhanhaji District, South Aceh Regency.

Population and sample

The population in this study were female students who lived at the Darul Wustha Islamic Boarding School, West Labuhanhaji District, South Aceh Regency.

The sample used in this research was all female students who had just boarded at Dayah Pasantren Darulwustha, West Labuhanhaji District, South Aceh Regency, namely 40 people.



Conceptual framework and research chart



Figure 1. Research conceptual framework

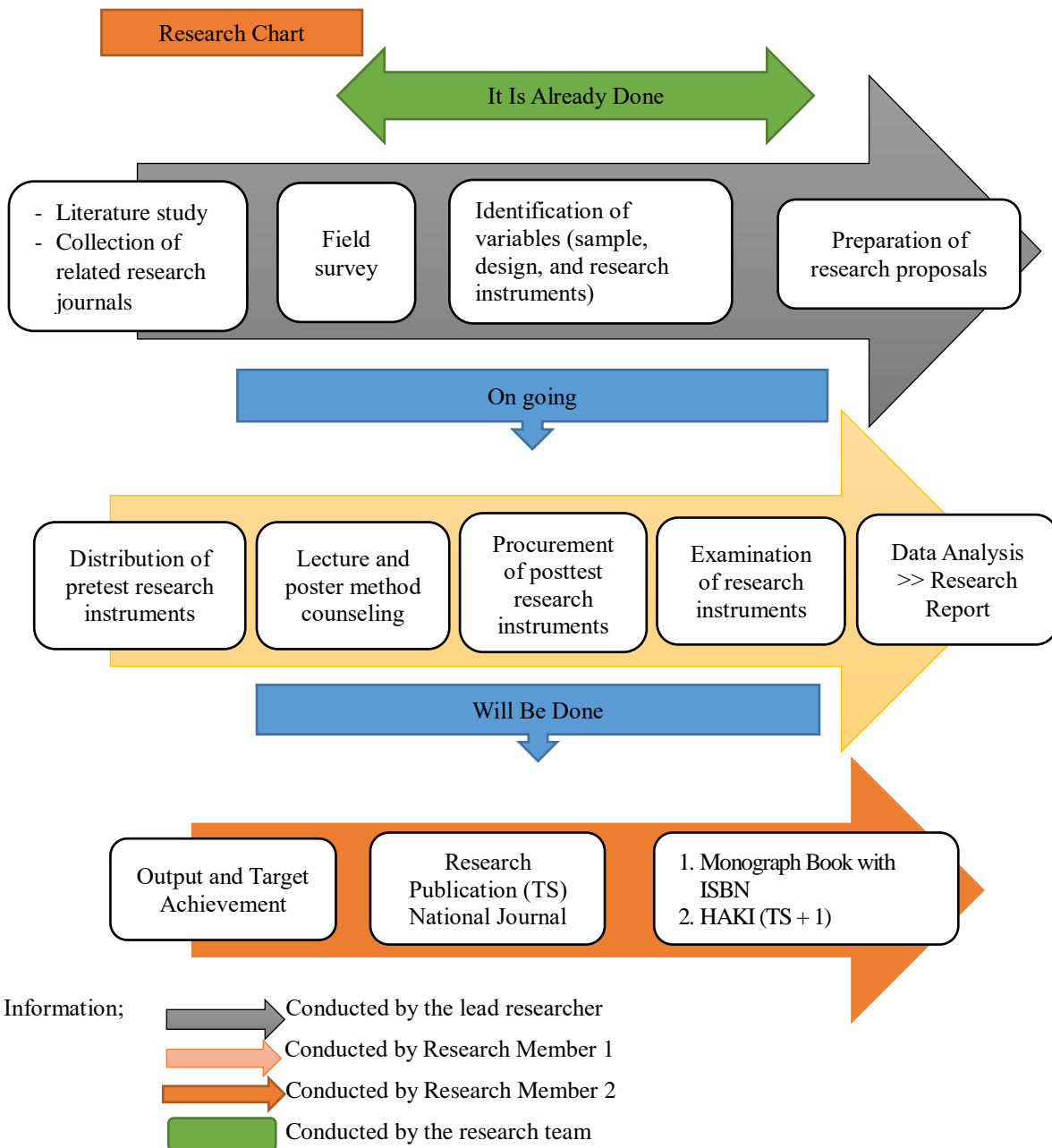


Figure 2. Research Flowchart



Research variables and operational definitions

Table 1. Research variables and operational definitions

Variables	Operational definition	Research instrument	Category	Measurement scale
Lecture and poster education methods	Providing counseling using lectures and posters about the definition of anemia, causes of anemia, symptoms of anemia, ways to prevent anemia, and the impacts of anemia.	-	-	-
Anemia Knowledge	The level of understanding of respondents before and after providing counseling on the definition of anemia, causes of anemia, symptoms of anemia, ways to prevent anemia, and the impacts of anemia.	Knowledge Test Questions: - Pretest - Posttest	The knowledge test questions about anemia consist of 12 questions consisting of 3 answer choices. If the answer is correct, it is given a score of 1 and if the answer is wrong, it is given a score of 0.	Ratio

RESULTS

General description

In 1987, Dayah Darul Wustha was established, which means the middle village, meaning that it is located between Dayah Darussalam and Darul Ihsan which was immediately named by Abuya. Syeikh. H. Muda Waly and this is a very urgent demand in the development of Religious Education in the style of Dayah, besides Dayah Darussalam which was no longer accommodated at that time, so for that the establishment of this Dayah is a demand of the community which is known to expect Religious Education through Dayah.

Dayah Darul Wustha which was founded by Abu .H. Abdul Hamid Laduni and is now under his leadership with an area of approximately three hectares, whose first students numbered 62 people and Alhamdulillah in the following years there was an unexpected increase in students, even though the building at that time was quite concerning, and now we can see the direct development of Dayah Darul Wustha, which Alhamdulillah its students are not only from within the South Aceh area but also from other areas such as Abdya, Nagan Raya, West Aceh, Aceh Jaya, Banda Aceh, Lhok Seumawe, Aceh Besar, North Aceh, East Aceh and even from Jakarta with a total of approximately 800 male and female students.

Dayah Darul Wustha is now under the auspices of the Darul Wustha Al-Hamidiyyah foundation, which was directly authorized by the Minister of Law and Human Rights with the NUMBER: AHU-1329. AH.01.04.Year 2011, and is also registered with the Ministry of Religion with the Statistics number: 510011010019 so that its grip and legal entity are getting stronger.

Univariate Analysis

Table 2. Frequency Distribution Based on Age at the Darul Wustha Islamic Boarding School, West Labuhanhaji District, South Aceh Regency

No	Age group	Frequency	%
1	12 Years - 14 Years	13	32,5
2	15 Years - 17 Years	24	60
3	18 Years - 20 Years	3	7.5
	Total	40	100

From the table above, it can be seen that regarding the characteristics of respondents based on age, it can be seen that the age of female students at Dayah Pasantren Darulwustha, Labuhanhaji Barat District, South Aceh Regency, the age of respondents <14 years is 13 respondents or 32.59%. Respondents aged 15 years - 17 years are 24 people or 60%. Respondents aged 18 years - 20 years are 44 respondents or 7.5%.



Table 3. Frequency Distribution of Respondents' Knowledge About Anemia at the Darulwustha Islamic Boarding School, West Labuhanhaji District, South Aceh Regency

Knowledge	Pre-test		Post-test	
	Frequency	%	Frequency	%
Good	5	12,5	27	67,5
Enough	13	32,5	10	25
Less	22	55	3	7,5
Total	40	100	40	100

Based on the table above, shows that in the pre-test of respondents' knowledge, there were 5 respondents (12.5%) who had good knowledge, 13 respondents (32.5%) who had sufficient knowledge, and 22 respondents (55%) who had poor knowledge. The post-test showed that there were 27 respondents (67.5%) who had good knowledge, 10 respondents (25%) who had sufficient knowledge, and 3 respondents (7.5%) who had poor knowledge.

Bivariate Analysis Wilcoxon Analysis

Table 4. Wilcoxon Test.

	N	Mean	PValue
Pre Test Knowledge	40	7,96	
PostTest Knowledge	40	17,18	0,000

Based on the results of the Wilcoxon test, the effectiveness of the lecture method and poster media extension on increasing knowledge of anemia in female students at the Darulwustha Islamic Boarding School, West Labuhanhaji District, South Aceh Regency, as many as 40 respondents, it is known that the average post-test score (17.18) is higher than the average pre-test score (7.96) and it is known that the P-Value: 0.000 Female Students at the Darulwustha Islamic Boarding School, West Labuhanhaji District, South Aceh Regency.

DISCUSSION

Based on Table 4.3, it can be seen that the effectiveness of the lecture method and poster media counseling in increasing knowledge of anemia in female students of the Darulwustha Islamic Boarding School, Labuhanhaji Barat District, South Aceh Regency, as many as 40 respondents, it is known that the average post-test value (17.18) is higher than the average pre-test value (7.96) and it is known that P Value: 0.000 <0.005 so that H_a is accepted, meaning that statistically it shows that there is a difference in increasing knowledge of the Effectiveness of Lecture Method Counseling and Poster Media on Increasing Knowledge of Anemia in Female Students of the Darulwustha Islamic Boarding School, Labuhanhaji Barat District, South Aceh Regency.

The posttest results showed that several questions that increased in number were answered correctly compared to incorrect answers, namely questions about the definition of iron, normal Hb levels for teenage girls, how to overcome anemia, the number of grams in consuming Fe tablets, the duration of treatment if Hb shows a minimum of 1 g/dl or hematocrit 3%, foods containing iron, foods containing vitamin C, the term iron derived from plants, the content found in coffee and tea, which predominantly suffers from anemia. Meanwhile, questions that decreased in number were answered correctly compared to incorrect answers, namely questions about the definition of anemia, signs of anemia, causes of anemia, impacts of anemia, Hb levels of pregnant women, the term iron from animals, the percentage of iron absorption rate from plants, and the percentage of iron absorption rate from animals. In addition, there were questions that when answered before the counseling could be answered by teenage female students but after the counseling could not be answered by teenage female students.

Therefore, one way to increase a person's knowledge is by providing education through counseling using lecture methods and poster media. Health counseling is a health education activity, that is carried out by spreading messages, and instilling beliefs so that people are not only aware, know, and understand, but are willing and able to carry out recommendations related to health (Al Rahmad & Almunadia, 2017).

In addition, research was conducted by Riski Lidiya Putri (2019) on "the effectiveness of health education about dysmenorrhea on the level of knowledge of female adolescents using the lecture method at SMK Taman Siswa Kapanjen". Based on the results of the study, a significant value of P value 0.00 <0.05 was obtained. So it can be



concluded that Ha is accepted, which shows that there is an influence of health education on the level of knowledge of female students.

This study is supported by research conducted by Nur Pratiwi Hartono, Catur Saptaning Wilujeng, and Sri Andarini (2015) on "nutrition education on knowledge of healthy snack selection between lecture methods and comic media" with the results of the study in the lecture group showing that there was a significant difference in knowledge of healthy snack selection before and after being given nutrition education with the lecture method. This study is in line with Wulandari's research, namely that the nutritional knowledge score in school children who received nutrition education with the lecture method increased significantly ($p < 0.005$). In nutrition education provided with the lecture method, two-way communication occurs which is carried out face to face so that the instructor can directly find out the response of students who are given nutrition education, in addition, there is interaction between teachers and students. Nutrition education with the lecture method lasts 20-30 minutes and is carried out continuously, namely 3 meetings. Therefore, the material presented during the intervention can be remembered in the long term by the students.

Also supported Linasari's research (2017) on "the effect of using poster and leaflet media on the knowledge of high school students in Bandar Lampung about dental caries" proves with the results of further statistical analysis concluding that there is a difference in student knowledge before and after being given counseling, $Z = -7.123$; $P < 0.05$. Posttest data (Mean = 14.07; SD = 1.79) has a higher average than pretest data (Mean = 8.22; SD = 2.065). This means that counseling using poster media increases the knowledge of students at SMA Negeri 10 Bandar Lampung about dental caries. It can be concluded that counseling using lecture methods and poster media about anemia is a planned increase in knowledge in individuals, groups, and communities from not knowing about health values, especially about anemia to knowing, and from not knowing how to overcome health problems themselves to being independent. Changes in knowledge after being given counseling using lecture methods and poster media about anemia in adolescent female students are very significant. This change occurred due to factors including: Providing counseling using lecture methods and poster media about anemia, delivered clearly and without hesitation so that female students receive clearer information, counseling interventions using lecture methods and poster media about anemia where these methods and media clarify the ideas or messages conveyed, in addition, they can also recall what has been conveyed or can be read again through the poster media that has been attached. In the poster media, there are not only pictures but there is writing that explains the pictures on the media. The material delivered through lecture method counseling is the same as the pretest and posttest questionnaire questions so that female students can immediately understand and answer the posttest questions correctly, the information provided is to the needs of adolescent female students so that during the intervention of providing counseling using lecture methods and poster media, adolescent female students are enthusiastic about hearing, seeing and reading the information conveyed by the researcher.

CONCLUSION

From the results of the study of the Effectiveness of Counseling Methods Lectures and Poster Media on Increasing Knowledge of Anemia in Female Students of Dayah Pasantren Darulwustha, West Labuhanhaji District, South Aceh Regency, it can be concluded that: Counseling with the lecture method and poster media on increasing knowledge of anemia in female students at Dayah Pasantren Darulwustha, West Labuhanhaji District, South Aceh Regency is considered effective, as seen from their knowledge after being given counseling which has greatly increased, where the lecture method and poster media involve many of the five senses and the author feels that this counseling is effective.

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