

Original Research Article

THE EFFECT OF HEALTH EDUCATION ON ADOLESCENT KNOWLEDGE ABOUT ANEMIA

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Abstract

Background: Anemia experienced by young women often occurs when they are menstruating. Young women must have knowledge about these conditions, so that they can overcome these problems properly.

Objectives: The purpose of this study was to determine the effect of health education on the level of knowledge of adolescents about anemia.

Methods: The research design used in this study was pre-experimental with a one-group pre-post test design approach. This research was conducted at the Islamic Boarding School of Tahfizh Putri Alfirmidus Hidayatullah, Sekardangan, Sidoarjo on February 28, 2021. The sampling technique used in this study was total sampling. The number of samples in this study were 24 respondents. This study uses health education materials about anemia for the treatment given and a modified questionnaire from Zulaekah's (2007) knowledge level questionnaire with a Cronbach Alpha value of .594. This research was conducted by providing health education to respondents about anemia. Before the health education was carried out, the researcher conducted a pre-test to measure the respondent's level of knowledge. After the health education was carried out, the researcher conducted a post-test to evaluate the respondents' level of knowledge about anemia. The statistical test carried out in this study is the Wilcoxon Signed Rank Test with significant level $\alpha < 0.05$.

Results: Based on data analysis using the Wilcoxon Signed Rank Test, it was found that there was an effect of health education on the level of adolescent knowledge about anemia (p -value = .011).

Conclusion: It is important to provide health education about anemia to young women, so that they can find out what conditions they experience when they are anemic due to menstruation. Health workers are expected to provide this health education through health counseling or education.

Keywords: *The effect of health education, anemia, knowledge level, adolescent girls.*

INTRODUCTION

Adolescence is a period of transition from children to adulthood, where many changes

occur in him, both physically, physiologically, psychologically, psychosocial, etc. (Laura, 2012; Sofia & Adiyanti, 2014; Firdaus et al.,

2018). The physiological changes experienced by a teenage girl are menstruation every month. Menstrual conditions are often the cause of anemia (Basith et al., 2017). This is often exacerbated by adolescents who still do not know about the relationship between menstruation and anemia. The impact of the anemia caused teenage girls to experience difficulty in concentrating, weakness, and a lack of desire to do activities (Indartanti & Kartini, 2014). This is the basis for researchers to conduct research with the title: The effect of health education on adolescent knowledge about anemia.

METHODS

Study Design

This study used a pre-experimental research design with a one-group pre-post test design approach.

Setting

This research was conducted at the Islamic Boarding School of Tahfizh Putri Alfirmas Hidayatullah, Sekardangan, Sidoarjo on February 28, 2021.

Research Subject

The research target population was all female students at the Islamic Boarding School of Tahfizh Putri Alfirmas Hidayatullah, Sekardangan, Sidoarjo, with 48 adolescent girls. Previously, researchers conducted a reliability test related to the questionnaire used. Researchers used 24 adolescent girls from the entire target population. For the implementation of this research, the respondents used by the researcher were 24 adolescent girls from the rest of the target population. The sampling technique used in this study was total sampling, so that the entire population of the research target was used as the research sample.

Instruments

The research instrument used was health education material about anemia for the implementation of health education given to

adolescent girls. Meanwhile, to measure the level of knowledge of adolescent girls related to anemia, researchers used a modified questionnaire from Zulaekah (2007). The Cronbach Alpha value of the modified questionnaire was .594 (Putra, Riesmiyatiningdyah, & Sulistyowati, 2021). This knowledge level questionnaire contains definitions, signs and symptoms, and how to prevent anemia. The number of items from the questionnaire is 8 items with a multiple-choice model, provided that a value of 0 is given when the answer from the respondent is wrong and a value of 1 is given if the answer from the respondent is correct. The level of knowledge is divided into 3 categories, namely the level of good knowledge (6-8), the level of knowledge is sufficient (4-5), and the level of knowledge is low (≤ 3).

Intervention

In this study, there is a treatment given to one treatment group. The treatment given was in the form of providing health education related to anemia. Before and after giving the treatment, the researchers measured the level of knowledge of the adolescent girls about anemia. In measuring the level of knowledge after the implementation of health education, researchers carried out data collection at 45 minutes after health education was given and discussions were held. In the implementation of measuring the level of respondent's knowledge after the implementation of health education, respondents were not obtained to see the media of information provided during the implementation of health education.

Data Analysis

The Wilcoxon Signed Rank Test with significant level $\alpha < 0.05$ was used in this study to determine the effect of health education on anemia given to adolescent girls.

Ethical Consideration

The research permit was granted by the Institute for Research and Community Service of Health Polytechnic of Kerta Cendekia,

Sidoarjo with the number: 032/SPPD/D/II/2021. Apart from obtaining permission from the Institute for Research and Community Service of Health Polytechnic of Kerta Cendekia, this research has also received

permission from the Islamic Boarding School of Tahfizh Putri Alfirmidus Hidayatullah with the number: 007/BMH/024/02/2021.

RESULTS

Characteristics of Respondents

Table 1. Description of respondents in the Islamic Boarding School of Tahfizh Putri Alfirmidus Hidayatullah, Sekardangan, Sidoarjo on February 28, 2021.

Characteristic of Respondents	Number (n)	Percentage (%)
Age (M = 13.25, SD = 1.073, Min = 12, Max = 16)		
12 years old	5	20.8
13 years old	13	54.2
14 years old	2	8.3
15 years old	3	12.5
16 years old	1	4.2
Getting Information Before (M = .71, SD = .464)		
Never	7	29.2
Ever	17	70.8
Source of Information (M = 3.50, SD = 3.107)		
Never	7	29.2
Teacher	3	12.5
Friends	1	4.2
Media Online	2	8.3
Magazine	2	8.3
Health Workers	0	0.0
Others	9	37.5

Sources: Primary Data of Questionnaire, 2021.

Based on the data presented in table 1, it is found that most of the respondents were 13 years old as many as 13 respondents (54.2%). The majority of respondents in this study had received information related to anemia as many as 17 respondents (70.8%). The respondents who had received information, all of them never received information from health workers.

The Effect of Health Education on Adolescent Knowledge about Anemia

Based on the data in table 2, it is found that the majority of respondents had a good level of knowledge as many as 19 respondents (89.2%) at the time before being given the treatment. After being given treatment, all respondents had good knowledge. Based on data analysis using the Wilcoxon Signed Rank Test, it was

found that there was an effect of health education on the level of knowledge of adolescents about anemia (p -value = .011).

Table 2. Analysis of the Effect of Health Education on Adolescent Knowledge about Anemia using the Wilcoxon Signed Rank Test at the Islamic Boarding School of Tahfizh Putri Alfirdaus Hidayatullah, Sekardangan, Sidoarjo on February 28, 2021.

Knowledge Level	Before being given treatment		After being given the treatment	
	Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
Good	19	89.2	24	100.0
Sufficient	3	12.5	0	0.0
Less	2	8.3	0	0.0
Total	24	100.0	24	100.0

Asymp. Sig. (2-tailed) = .011

Sources: Primary Data of Questionnaire, 2021.

DISCUSSION

Based on the results of the study, it was found that health education could increase adolescent knowledge about anemia (p -value = .001). One of the efforts to increase someone's knowledge is by providing information according to their needs. In this case, young women really need information provided by health workers that is tailored to the developmental needs they experience. Information delivery to adolescents can be done through various means and media, such as youth health counseling, health education using health education video media, comic media, audio visual, etc. (Aminah, Purwati, & Anisa, 2019; Anifah, 2020; Haryono, 2015; Mariyaningsih, Tanjung Anitasari, & Izzatu Arifah, 2018; Putri, Neherta, & Fajria, 2020). According to research conducted by Anifah (2020), the implementation of health education for adolescents using video media is more effective than the use of leaflet media. This is because in adolescence they are more interested in receiving information through audio-visual media (video media). Increasing knowledge about the condition of anemia caused by menstruation experienced by young girls will help them to act to prevent anemia (Kusuma & Kartini, 2014). Prevention of anemia in adolescence is an effort to improve the quality

of being a mother later (Fadila & Kurniawati, 2018).

CONCLUSION

Health education about anemia can increase the knowledge of young women regarding anemia experienced during menstruation and help them to prevent anemia.

SUGGESTIONS

Based on the results of the above research, health education should be given to young women in relation to the conditions they are experiencing. Health workers as health educators are expected to provide health education to young women related to the information needed by them in accordance with the developments they are experiencing. Young women must also get adequate nutrition to prevent them from developing anemia.

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DECLARATION OF CONFLICTING INTEREST

There was no conflict of interest in the implementation of this research.

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AUTHOR CONTRIBUTION

Riesmiyatiningdyah Riesmiyatiningdyah: Collected literature, collected data, tabulated the data and coding, and compiled manuscripts.

Kusuma Wijaya Ridi Putra: Collected literature, searched for the questionnaire, compiled manuscripts, and conducted data analysis.

Agus Sulistyowati: Compiled health education materials, collected data, and compiled manuscripts.

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