

The Effect Of Video-Based Education On Adolescents' Knowledge About Anemia At SMP Negeri Satap 11 Mesuji In 2024

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Article Info	ABSTRACT
<p>Keywords: Anemia Video education Knowledge Adolescents or teenagers</p>	<p>The incidence of anemia is the most common problem found in adolescent girls. According to the World Health Organization (WHO), the prevalence of anemia among adolescent girls worldwide is still quite high, ranging from 40-88%, while in Indonesia, it is 21.7%. One of the factors causing anemia in adolescents is that adolescent girls with insufficient knowledge have a 4.998 times greater risk of not consuming iron supplement tablets compared to adolescent girls with adequate or good knowledge. To address adolescents' knowledge about anemia in adolescent girls, one action that can be taken is to provide education using videos. The use of video is a form of innovation in the development of educational media, especially by utilizing advanced technology such as animated videos. The purpose of this study is to determine the effect of video-based education on adolescents' knowledge about anemia. The research method is a pre-experiment with a one-group pre-post test design approach. The population in this study consists of all 184 female students at SMP Negeri Satap 11 Mesuji. The sampling technique uses purposive sampling with a total sample size of 65. This research was conducted at SMP Negeri Satap 11 Mesuji in September 2024. Data analysis uses the Wilcoxon test. The results of the study show that the average knowledge before being given education using video was 45.05 (less category), and the average after being given education was 79.08 (moderate category) with a p-value of 0.000 ($p < 0.05$), meaning that there is an effect of video-based education on adolescents' knowledge about anemia at SMP Negeri Satap 11 Mesuji in 2024. The suggestion in this study is that adolescent girls can utilize educational videos about anemia to increase their knowledge, especially about anemia. By increasing knowledge about anemia, it is hoped that adolescent girls can prevent and treat anemia from an early age.</p>
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INTRODUCTION

The incidence of anemia is the most common problem found in adolescent girls. This problem will continue into adulthood because they will continue to experience menstruation, followed by the process of childbirth, pregnancy, and postpartum. However, adolescents often receive

less attention in health service programs. Many health cases in adulthood are determined by healthy living habits from adolescence. Optimal nutritional status during adolescence can prevent diet-related diseases in adulthood. Nutritional deficiencies during adolescence, such as being too thin or short due to chronic energy deficiency, can lead to an inability to learn and work optimally, increasing the risk if pregnancy occurs in adolescence (Briawan, 2018).

According to the World Health Organization (WHO), the prevalence of anemia in adolescent girls worldwide is still quite high, ranging from 40-88%. The incidence of anemia in adolescent girls in developing countries is around 53.7% of all adolescent girls, and anemia often occurs in adolescent girls due to stress, menstruation, and delayed eating. According to data from the 2020 Riskesdas, the prevalence of anemia in Indonesia is 21.7%, with 26.4% of sufferers aged 5-14 years and 18.4% of sufferers aged 15-24 years (Ministry of Health RI, 2021).

Based on the Health Profile of Lampung Province in 2022, the prevalence of anemia in Lampung Province is 27.3% in females and 21.9% in males. The coverage of adolescent girls who receive iron supplement tablets has decreased from 2019 to 2022, from 90.30% to 48.21% (Lampung Provincial Health Office, 2023). In Mesuji Regency in 2021, the prevalence of anemia was 25.8% in females and 15.2% in males. Then in 2022, anemia in adolescents increased to 27.4% in females and 17.1% in males, with the coverage of adolescent girls receiving iron supplement tablets at 80.1% (Mesuji Regency Health Office, 2023).

Anemia, or often referred to as a lack of blood, is a condition with a reduced number of red blood cells, resulting in insufficient oxygen-carrying capacity to meet the body's physiological needs. Anemia during pregnancy occurs, among other reasons, because anemia during adolescence is not treated or handled properly. The increased risk of anemia in adolescent girls occurs because women experience menstruation, coupled with low dietary iron intake (Hapsah and Mey, 2023).

To address this, the government has made various efforts through balanced nutrition education, food fortification, and Iron Supplement Tablet (TTD) supplementation. TTD supplementation started in 2015 with taking 1 tablet per week throughout the year for adolescent girls aged 12-18 years who are at the junior high school/equivalent and high school/equivalent level of education. Although the provision of TTD to adolescent girls has been carried out, the prevalence of anemia is still quite high. Many factors influence this, one of which is the lack of compliance of adolescent girls in consuming TTD (Ministry of Health RI, 2022).

One of the factors causing anemia in adolescents is education and knowledge. Lack of knowledge will reduce a person's ability to apply nutritional information in daily life. One way to increase a person's knowledge is by providing education as early as possible. Education can be obtained through counseling, providing posters, leaflets or booklets, and animated videos for school children. Education can increase a person's knowledge, and with increased knowledge, it is hoped that better behavior changes will occur (I Made et al, 2022).

Adolescent girls who have insufficient knowledge will be at risk of not consuming 1 iron supplement tablet/week 4,998 times greater than adolescent girls who have sufficient or good knowledge (Noviazahra, 2019). Respondents' compliance is influenced by the

knowledge factor possessed by the respondents themselves. This knowledge is one of the predisposing factors that can influence a person's behavior in consuming iron supplement tablets, because knowledge itself is the dominant factor in individual action decisions (Putra et al, 2020).

To overcome anemia in adolescent girls, one action that can be taken is to provide education using videos. The use of video is a form of innovation in the development of educational media, especially by utilizing advanced technology such as animated videos. Animated videos display interesting images that help increase memory of the information conveyed and provide satisfaction and joy to respondents (Goad et al, 2018).

Research conducted by Tri et al (2021) entitled the influence of educational video media on increasing the knowledge of adolescent girls showed a significant increase in the knowledge of adolescent girls with an average value before being given education of 16.6 and an average value after being given education of 18.8 with a p-value < 0.05, so it can be concluded that there is an effect of increasing adolescent knowledge between before and after being given education using animated videos.

METHODS

This is a quantitative research with a quasi-experimental research design using a one-group pre-posttest design approach. The sampling technique uses purposive sampling with a total sample of 65 adolescent girls. Data analysis uses the Wilcoxon test to determine the effect of video-based education on adolescents' knowledge about anemia at SMP Negeri Satap 11 Mesuji in 2024.

RESULTS AND DISCUSSION

Univariate Analysis

Table 1. Average knowledge of adolescents about anemia before being given education using video

Adolescent Knowledge	N	Mean	SD	Min	Max
Before Intervention	65	45,05	11,276	32	68

Based on table 1, it can be seen that from 65 adolescent girls before being given education about anemia using video, the average knowledge value was 45.05 (poor), the standard deviation value was 11.276, the minimum value was 32 (poor), and the maximum value was 68 (moderate).

Table 2. Average knowledge of adolescents about anemia after being given education using video

Adolescent Knowledge	N	Mean	SD	Min	Max
After Intervention	65	79,08	8,086	60	90

Based on table 2, it can be seen that from 65 adolescent girls after being given education about anemia using video, the average knowledge value was 79.08 (moderate), the standard deviation value was 8.086, the minimum value was 60 (moderate), and the maximum value was 92 (good).

Bivariate Analysis

Table 3. The Effect of Video-Based Education on Adolescents' Knowledge About Anemia

Adolescent Knowledge	N	Mean	Mean Increase	SD	<i>P-value</i>
Before	65	45,05		11,276	
After	65	79,08	34,03	8,086	0,000

The analysis results from table 4.4 show that from 65 adolescent girls before being given education about anemia through video, the average knowledge of adolescents was 45.05 (poor), and after being given education about anemia through video, the average knowledge of adolescents was 79.08 (moderate), meaning there was an increase in the average knowledge value of adolescent girls by 34.03. Then, the standard deviation before was 11.276, and after was 8.086, meaning the data distribution before was further than the data distribution after the intervention. The results of the bivariate analysis with the Wilcoxon test obtained a p-value of 0.000 (<0.05), meaning there is an effect of video-based education on adolescents' knowledge about anemia at SMP Negeri Satap 11 Mesuji in 2024.

Discussion

Average adolescent knowledge about anemia before being given education using video

Based on the research results, it can be seen that from 65 adolescent girls before being given education about anemia using video, the average knowledge value was 45.05 (poor), the standard deviation value was 11.276, the minimum value was 32 (poor), and the maximum value was 68 (moderate).

Anemia, or often referred to as a lack of blood, is a condition with a reduced number of red blood cells, resulting in insufficient oxygen-carrying capacity to meet the body's physiological needs. Anemia during pregnancy occurs, among other reasons, because anemia during adolescence is not treated or handled properly. The increased risk of anemia in adolescent girls occurs because women experience menstruation, coupled with low dietary iron intake (Hapsah and Mey, 2023).

To address this, the government has made various efforts through balanced nutrition education, food fortification, and Iron Supplement Tablet (TTD) supplementation. TTD supplementation started in 2015 with taking 1 tablet per week throughout the year for adolescent girls aged 12-18 years who are at the junior high school/equivalent and high school/equivalent level of education. Although the provision of TTD to adolescent girls has been carried out, the prevalence of anemia is still quite high. Many factors influence this, one of which is the lack of compliance of adolescent girls in consuming TTD (Ministry of Health RI, 2022).

Adolescent girls who have insufficient knowledge will be at risk of not consuming 1 iron supplement tablet/week 4.998 times greater than adolescent girls who have sufficient or good knowledge (Noviazahra, 2019). Respondents' compliance is influenced by the knowledge factor possessed by the respondents themselves. This knowledge is one of the predisposing factors that can influence a person's behavior in consuming iron supplement tablets, because knowledge itself is the dominant factor in individual action decisions (Putra et al, 2020).

This research is in line with research conducted by Fitriani (2020). The research results showed that the average knowledge value before being given education about anemia using video was 51 (poor), then research conducted by Nur et al (2021) showed that the average knowledge value before being given education was 62.38 (moderate).

According to the researchers' assumptions, the knowledge factor is one of the causes of anemia in adolescents. Ignorance about the importance of consuming iron and food sources containing iron is one of the causes of anemia in adolescents, so education is needed that can increase adolescent knowledge, especially about anemia in adolescents.

Average adolescent knowledge about anemia after being given education using video

Based on the research results, it can be seen that from 65 adolescent girls after being given education about anemia using video, the average knowledge value was 79.08 (moderate), the standard deviation value was 8.086, the minimum value was 60 (moderate), and the maximum value was 92 (good).

Knowledge is the result of human sensing, or the result of someone knowing about an object through their senses (eyes, nose, ears, and so on). By itself, at the time of sensing until it produces that knowledge, it is strongly influenced by the intensity of attention and perception of the object (Notoatmodjo in Nispi et al, 2023).

Food consumption patterns are strongly influenced by local customs, including knowledge about food, attitudes towards food, and eating habits. The level of education and knowledge will affect food consumption through the way of selecting foodstuffs. Someone with higher education and high knowledge tends to choose foods that are better in quantity and quality compared to those with lower education.

One of the factors that affect a person's nutrition that causes anemia is a lack of knowledge about nutrition related to anemia. This lack of knowledge will also reduce a person's ability to apply nutritional information in daily life. One way to increase a person's knowledge is by providing nutrition education, especially about anemia, as early as possible. This nutrition education can be provided through counseling, providing posters, leaflets or booklets to school children (I Made et al, 2022).

Education can increase a person's knowledge, with increased knowledge it is expected that better behavior changes will occur towards nutrition and health. Health and nutrition education programs for school children are one way to implement simple and effective global health interventions to obtain broader education (I Made et al, 2022).

Efforts to increase knowledge in adolescents require a learning media that can describe physical concepts in a real way. One of the media that can be used is video. Video is an audio-visual media that can express objects and events as they really are. Through video media, students are able to understand learning messages more meaningfully so that the information conveyed through the video can be fully understood (Fechera et al, 2017).

To overcome anemia in adolescent girls, one action that can be taken is to provide education using videos. The use of video is a form of innovation in the development of educational media, especially by utilizing advanced technology such as animated videos. Animated videos display interesting images that help increase memory of the information conveyed and provide satisfaction and joy to respondents (Goad et al, 2018).

This research is in line with research conducted by Fitriani (2020) where the average knowledge value before being given education was 51 (poor) and increased after being given education to 87.1, then research conducted by Nur et al (2021) showed an increase in the average knowledge value before being given education from 62.38 (moderate) to 83.30 (good) after being given education.

According to the researchers' assumptions, the increase in the average value of adolescent knowledge is due to adolescents' interest in increasing knowledge using video media. With easy-to-understand images and language, it makes adolescents more quickly grasp and understand the material provided so that it can increase adolescent knowledge before and after being given education.

The Effect of Video-Based Education on Adolescents' Knowledge About Anemia

The analysis results from table 4.4 show that from 65 adolescent girls before being given education about anemia through video, the average knowledge of adolescents was 45.05 (poor), and after being given education about anemia through video, the average knowledge of adolescents was 79.08 (moderate), meaning there was an increase in the average knowledge value of adolescent girls by 34.03. Then, the standard deviation before was 11.276, and after was 8.086, meaning the data distribution before was further than the data distribution after the intervention.

Before being given the intervention, 11 adolescent girls obtained a score of 60-79 (moderate category) and 54 obtained a score of < 60 (poor category). After being given the intervention, all students experienced increased knowledge, which can be seen from the number of adolescents who obtained a score of 60-79 (moderate category) being 28, those who obtained a score of 80-100 (good category) being 37, and no adolescents obtaining a score of <60 (poor category). The results of the bivariate analysis with the Wilcoxon test obtained a p-value of 0.000 (<0.05), meaning there is an effect of video-based education on adolescents' knowledge about anemia at SMP Negeri Satap 11 Mesuji in 2024.

One of the factors causing anemia in adolescents is education and knowledge. Lack of knowledge will reduce a person's ability to apply nutritional information in daily life. One way to increase a person's knowledge is by providing education as early as possible. Education can be obtained through counseling, providing posters, leaflets or booklets, and animated videos for school children. Education can increase a person's knowledge, and with increased knowledge, it is hoped that better behavior changes will occur (I Made et al, 2022).

Adolescent girls who have insufficient knowledge will be at risk of not consuming 1 iron supplement tablet/week 4.998 times greater than adolescent girls who have sufficient or good knowledge (Noviazahra, 2019). Respondents' compliance is influenced by the knowledge factor possessed by the respondents themselves. This knowledge is one of the predisposing factors that can influence a person's behavior in consuming iron supplement tablets, because knowledge itself is the dominant factor in individual action decisions (Putra et al, 2020).

Efforts to increase knowledge in adolescents require a learning media that can describe physical concepts in a real way. One of the media that can be used is video. Video is an audio-visual media that can express objects and events as they really are. Through video media,

students are able to understand learning messages more meaningfully so that the information conveyed through the video can be fully understood (Fechera et al, 2017). To overcome anemia in adolescent girls, one action that can be taken is to provide education using videos. The use of video is a form of innovation in the development of educational media, especially by utilizing advanced technology such as animated videos. Animated videos display interesting images that help increase memory of the information conveyed and provide satisfaction and joy to respondents (Goad et al, 2018).

Video can help students understand material that is difficult for teachers to convey. Students' positive views on video related to understanding the material can be seen from their learning outcomes. Learning outcomes using video are more effective than those not using video. Effective in this case means being able to improve learning outcomes compared to learning without using video (Firdaus, 2016).

This research is in line with research conducted by Tri et al (2021) entitled the influence of educational video media on increasing the knowledge of adolescent girls. The results showed a significant increase in the knowledge of adolescent girls with an average value before being given education of 16.6 and an average value after being given education of 18.8 with a p-value < 0.05, so it can be concluded that there is an effect of increasing adolescent knowledge between before and after being given education using animated videos. Then, research conducted by Nur et al (2021) showed that the average knowledge before being given education was 62.38 and after being given education was 83.30 with a p-value of 0.000, meaning that there is an effect of providing education about anemia on adolescent knowledge.

According to the researchers' assumptions, the use of educational media through video is very helpful for adolescents in obtaining information. Education through video can be played repeatedly by adolescents, with easy-to-understand language and attractive images, enabling adolescents to understand the content conveyed through video education.

CONCLUSION

The conclusion of this study is that the average knowledge before being given education using video was 45.05 (poor category), and the average after being given education was 79.08 (moderate category) with a p-value of 0.000 ($p < 0.05$), meaning that there is an effect of video-based education on adolescents' knowledge about anemia at SMP Negeri Satap 11 Mesuji in 2024. The suggestion in this study is that adolescent girls can utilize educational videos about anemia to increase their knowledge, especially about anemia. By increasing knowledge about anemia, it is hoped that adolescent girls can prevent and treat anemia from an early age.

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