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THE EFFECT OF VIDEO MEDIA PROVIDING INFORMATION ABOUT BLOOD ENHANCER TABLETS ON KNOWLEDGE IN FEMALE ADOLESCENTS

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ABSTRACT

Background: Based on the result of basic health research Riskesdas in 2018, as many as 23,7% of women aged 14-25 years nationally suffer from anaemia. About three to four out of ten adolescent girls, or about 32% of adolescent girls have anaemia. This study aims to determine the effect of providing video content about iron tablets on the understanding of adolescent girls at SMP N 1 Sragi.
Methods: This research is quantitative with a quasi-experimental design consisting of two groups, namely experimental and control. The experimental group was given an educational video about blood enhancer tablets, while the control group was given a lecture. The research instrument used a questionnaire. The age of the respondents was 13 to 15 years old. The research sample consisted of 67 students. The T-test is used to test data.
Results: The average score in the experimental group was 8.76, while in the control group it was 6,45. There was an increase of 2.31, with a p-value of <0.005, which means that there is a significant influence on average before and after treatment.
Conclusion: To reduce the prevalence of anaemia, especially in adolescent girls, it is expected that this study will improve the understanding of teenage girls, especially about blood tablets.
Keywords: blood supplement tablet, knowledge, video media

INTRODUCTION

According to the World Health Organisation (WHO), the prevalence of anaemia in women of childbearing age worldwide ranges from 29.9% at the age of 15-49 years (Aulya, Siauta, and Nizmadilla 2022). Based on the findings of the basic health research Riskesdas 2018, it was found that the national prevalence of anaemia in women reached 23.7% of all women aged 15-24 years who suffered from anaemia (Hamzah 2020). According to some estimates, around 32 per cent of adolescents, or approximately three to four out of every ten adolescents, suffer from anaemia Ministry of Health, 2018 (Aulya, Siauta, and Nizmadilla 2022).

Based on the health profile data of South Lampung Regency in 2023, it was found that the prevalence of anaemia in the area was as follows: 27.9% in women and 19.4% in men (Suharmanto, Mutmainnah, and Zuraida 2023). Adolescent females in the Women of Childbearing Age (WCA) group who suffer from anaemia may find it difficult to focus during class, which will negatively affect their academic performance. Support from the media aids will increase the effectiveness of health education (Wardhani, Purnamasari, and Navelia 2024). Video media is one type of health education medium that can supplement or represent information that the information provider cannot adequately transmit, such as specific phrases or sentences. Video media is a psychic/mental learning process (Sari 2024). Interactive learning with specific steps

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will result in discussions that make an impression on the individual. This learning process aligns the subject's internal learning process with the current trend of teens who enjoy watching videos (Astuti, Syukur, and Lathifah 2025).

Subsequently, the author carried out a preliminary investigation. Out of the fifteen female students she questioned, three reported taking iron supplements regularly, four reported taking them occasionally, and eight reported not taking them because they tasted bad and made them feel queasy (Khaira Maulina Khaira et al. 2025). Additionally, there have not been any unique school-sponsored initiatives to promote health education regarding the value of iron supplements. This is what motivates the researcher to carry out research. This study set out to find out how young women at SMP N 1 Sragi, Sragi District, South Lampung Regency, knew about iron pills after watching a film about them.

RESEARCH METHOD

Pretest-posttest control group design is the type of design employed in this study, which combines quantitative research with a quasi-experimental research methodology. There were 67 female students at SMP N 1 Sragi who made up the population of this study. Two groups participated in this study: 34 students in the experimental group and 33 students in the control group. The two groups were separated using a shuffling technique and basic random sampling. The researcher employed audiovisual media and a questionnaire as a tool. The research instrument used was a questionnaire. In this study, the researcher did not conduct a validity and reliability test on the instrument because it was adopted from a previous study conducted by Ni Komang Nia G, 2019 Title: The Effect of Health Education on the Knowledge and Attitudes of Adolescent Girls About the Consumption of Blood Supplement Tablets at SMK Negeri 1 Tabanan. After conducting homogeneity and normality tests and confirming that the data was normally distributed, a paired sample t-test was used to compare knowledge before and after treatment in each group. Next, an independent t-test was used to compare knowledge after treatment between the two groups. Submitting an ethical clearance is the next step. Universitas Kusuma Husada Surakarta's ethics commission approved this study with permission number 2656 / UKH.L02 / EC / II / 2025.

RESULTS

The subjects in this study were all female adolescents at SMP N 1 Sragi in grades VII, VIII and IX, totalling 67 female students. The characteristics of the respondents in this study include age and grade.

Table 1. Respondent Characteristics

Characteristics	Experiment Group		Control Group	
	n	%	n	%
Age				
13 Year	7	20,6	6	18,2
14 Year	15	44,1	14	42,4
15 Year	12	35,3	13	39,4
Class				
VII	9	26,5	8	24,2
VIII	16	47,0	15	45,5
IX	9	26,5	10	30,3
Total	34	100	33	100

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Characteristics of Adolescent Girls at SMP N 1 Sragi show that the majority of adolescent girls are taken from the age of 14 years, namely 29 (43.3%) students, and the majority of classes are in class VIII, 31 (46.2%) students. Then, data analysis was carried out based on the level of knowledge of adolescent girls about iron tablets, which was measured using a questionnaire, and a pretest-posttest was carried out on the control and experimental groups. Then, a homogeneity test was carried out to determine whether the sample from the population had the same variance distribution.

Table 2. Uji Homogenitas

Indicator	Group	F_{hitung}	F_{tabel}	Information
Pretest	Experimen-Control	1,64	1,84	Homogen
Posttest	Experimen-Control	1,11	1,84	Homogen

Based on the homogeneity test, it can be concluded that the values in the experimental group and the control group are declared homogeneous. The next stage of data analysis is univariate analysis of each research variable. This study is the knowledge of female adolescents about iron tablets before being given health education about iron tablets after being given health education about iron tablets.

The study results are presented in a table format as follows:
Table 3. Average Value

Variabel		Min	Max	Mean	Beda Mean	Std. Deviation
Pre test Eksperimen	34	8	15	10.71	8,76	1.643
Post test eksperimen	34	17	20	19.47		1.961
Pre test Kontrol	33	7	15	10.52	6.45	1.970
Post test Kontrol	33	15	20	16.97		1.262

The results showed the average knowledge of female adolescents regarding iron tablets in the experimental group before receiving education was 10.71. After education using video media, this increased to 19.47. In the control group, the average knowledge before receiving education was 10.52, which rose to 16.79 after education using lecture media. The mean difference in scores before and after education in the experimental group was 8.76, while in the control group it was 6.45. This indicates an increase in knowledge of 2.31 for female adolescents who received education through video media. Data analysis was conducted using the Paired Sample T-test to assess the changes in pretest and posttest scores for both the experimental and control groups.

Table 4. Uji Paired T-test

		N	Correlation	Sig
Pair 1	Pretest Video & Posttest Video	34	,597	,000
Pair 2	Pretest Lecture & Posttest Lecture	33	,497	,002

Based on the table of significance. Values obtained by the experimental group, namely 0.000. At the same time, the value obtained by the control group is 0.002. Because the sig. The experimental and control groups' values are <0.005, it means that there was an educational influence before and after treatment in each group.

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A test of the difference between the two groups was conducted to determine the difference in the effect of education between the control group and the treatment group. The results of the difference test between the two groups are shown in the following table.

Table 5. Uji Independent T-Test

Variabel		Mean	p
Post test eksperimen	34	19.47	<0,005
Post test Kontrol	33	16.97	

Table 5 shows that there was a significant difference in knowledge before and after treatment between the two groups ($p<0.05$). The experimental group showed a higher mean value (19.47) than the control group (16.97).

DISCUSSION

Knowledge about preventing anaemia is essential for adolescent girls because this understanding is the first step to preventing anaemia. Anaemia can be prevented by consuming foods that are high in iron and folic acid, as well as by consuming TTD. The low interest of adolescent girls in taking iron pills during menstruation is one of the factors that influences their behaviour and understanding regarding the use of iron tablets. With this knowledge, they are more active in preventing anemia.(Lismiana and Indarjo 2021) The lack of knowledge about iron tablets can contribute to the high incidence of disease, so that adolescent girls are more susceptible to anaemia. Overall, the pre-test and post-test results showed that using animated video media as an educational medium increased students' knowledge about preventing anaemia through iron tablets, both in terms of understanding information about iron tablets (Rani Safitri, Mohammed Saifulaman Mohammed Said, and Tut Rayani Aksohini Wijayanti 2024). This shows that animated video media can increase students' understanding of various aspects of iron tablets. This increase can be seen in students' understanding of iron tablets, the purpose of consuming them, the time to consume them, and the side effects of consuming them. The FGD stage was conducted before and after watching the animated video, to dig deeper into the students' understanding of iron tablets. Some students did not yet know the meaning of iron tablets, and they did not know how to avoid side effects when consuming iron (Simbolon, Anggraini, and Sari 2023).

A study showed that most participants' knowledge was sufficient before providing education using video. After the educational intervention, most participants' knowledge increased to the good category (Zuleha et al. 2025). The Paired Simple T-test in Table 4 shows a p-value of 0.000. The value obtained by the experimental group was 0.000. Meanwhile, the value obtained by the control group was 0.002. This indicates a significant difference in participants' knowledge before and after receiving education in each group. No respondents experienced a decrease in pretest to posttest scores, and no respondents had the same scores from pretest to posttest. This aligns with previous studies showing a significant increase in knowledge before and after counselling using video media among young women, as well as research conducted (Safitri et al. 2024).

The difference test between the two groups yielded a p-value of <0.05, indicating that the mean knowledge score in the experimental group was higher than that in the control group. This proves that video-based education is more effective than lecture-based education in the control group. Videos can increase knowledge because they can optimise the reception of information. There are several steps in receiving information from videos, including the perception stage, the first stage where we recognise and pay attention to the

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information presented in the video. Perception involves the use of the senses, such as sight and hearing (Salsa Andriyani et al. 2025). After paying attention, we process the information (information processing stage), which involves understanding the words, images, and concepts presented in the video. The information received needs to be organised so that it is easy to understand (Sandela et al. 2024). We group concepts and relate them to existing knowledge. Next, we enter the interpretation stage. At this stage, we give meaning to the information received. (Handayani et al. 2024). We relate it to previous knowledge and dig deeper. Next is the integration stage, which connects new information with existing knowledge. We see how this information is relevant to the broader context. After receiving information, we reflect and evaluate our understanding.(Ernawati et al. 2023).

The use of media video in health education has several advantages over conventional methods, such as lectures or discussions. According to the theory, that stated multimedia learning using images, text, and sound simultaneously can improve understanding and retention of information (Ridwan, Al-Aqsha, and Rahmadini 2020). Video allows the presentation of complex information in a way that is easier to understand because it involves many senses, namely sight and hearing. These results align with research which shows that educational methods using videos are more effective in improving student understanding than leaflet media (Yulianti et al. 2025). Videos combine visual and audio elements, allowing information to be delivered more interestingly and memorably. Messages conveyed through images, animations, and sounds are more embedded in memory (Hairil et al. 2025). Videos can create an interactive experience. Users can pause, rewind, or fast-forward the video as needed, allowing for better understanding. Videos can evoke emotions and tell stories better than text. This helps respondents connect emotionally with the presented material (Nurjanna et al. 2024). Overall, video as a health education medium offers greater advantages in capturing attention, visualising complex information, influencing emotions, and accessibility. This makes video a more effective tool than leaflets in increasing knowledge and changing health behaviours.

CONCLUSION

This research concludes that the frequency distribution of respondent characteristics in this study is based on age and class. Namely, the majority of 14-year-olds were 29 (43.3%) students, and the majority were 31 (46.2%) students in class VIII. Before being given health education, the mean value of the Experimental group was 10.71, while the mean value of the Control group was 10.51. A significant increase was obtained after being given health education: the experimental group's value was 19.47, and the control group was 16.97. From the average value results, there was an increase in the knowledge of adolescent girls using video media by 2.31. There was a significant influence on knowledge in adolescent girls. The increase was tested statistically with the results of the Sig. 0.000 <0.05, so it can be concluded that video media is more effective than lecture media.

RECOMMENDATIONS

Schools and health workers need to carry out routine monitoring and assistance for young women in consuming TTD, as well as provide solutions if side effects occur. Meanwhile, further research needs to be conducted to explore the factors that affect adolescent girls' adherence to taking TTD and seek innovative solutions to improve program effectiveness.

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