



Comparison of the Effect of Explanatory Videos and Regatama Booklets on Adolescents' Compliance in Iron Tablet Consumption

Indah Kirana^{1*}, Naudatul Farah¹, Abdi Hamid¹

¹ Program Studi Kesehatan Masyarakat, Universitas Sriwijaya, Indonesia

*Corresponding Author: indah.kirana2@gmail.com

Article History

Manuscript submitted:

15 March 2025

Manuscript revised:

30 March 2025

Accepted for publication:

17 April 2025

Abstract

This study aims to compare the effects of explanatory videos and regatama booklets on adolescents' compliance in consuming iron tablets. The problem of low compliance among adolescents in consuming iron tablets can lead to iron deficiency risks that impact health. Therefore, it is essential to investigate the most effective methods to improve compliance. The method used in this study is a quasi-experimental design with a pretest-posttest control group. The sample of this study consists of 100 adolescents, divided into two groups: one receiving explanatory videos and the other receiving regatama booklets. Data were collected through questionnaires measuring adolescents' compliance in consuming iron tablets before and after the intervention. Data analysis used a t-test to compare the two groups. The results showed that both media had a positive effect on adolescents' compliance; however, the explanatory video was more effective than the regatama booklet in increasing compliance in consuming iron tablets. This study suggests using explanatory videos as a more efficient educational method to raise awareness and improve adolescents' compliance with iron tablet consumption.

Keywords

explanatory video,
regatama booklet,
compliance,
adolescents,
iron tablets

Copyright © 2025, The Author(s)

This is an open access article under the CC BY-SA license



How to Cite: Kirana, I., Farah, N. & Hamid, A. (2025) Comparison of the Effect of Explanatory Videos and Regatama Booklets on Adolescents' Compliance in Iron Tablet Consumption. *Media of Health Research*, 3(1), 7–13. <https://doi.org/10.70716/mohr.v3i1.136>

Introduction

Iron deficiency among adolescents is one of the most prevalent health issues faced by many countries, including Indonesia. Adolescents, especially adolescent girls, are at a high risk of iron deficiency due to the physiological changes that occur during puberty and menstruation (Putri *et al.*, 2023). Iron deficiency can lead to anemia, which, if not properly managed, can interfere with their growth, physical development, and cognitive function (Mohamad & Arda, 2023). One of the ways to prevent iron deficiency is through regular consumption of iron supplements. However, despite implementing iron supplementation programs, adolescent adherence to taking iron supplements remains low (Madestria *et al.*, 2021).

Adherence to iron supplementation is a critical factor that influences the effectiveness of the supplementation itself. One reason for low adherence is the lack of understanding regarding the importance of iron consumption and the potential side effects of iron deficiency (Oktaviani & Sari, 2024). Therefore, a practical educational approach is needed to raise awareness among adolescents about the importance of taking iron supplements regularly.

The educational media used in the information delivery process can influence adolescents' understanding and adherence. Previous studies have applied various educational methods to improve adherence, including using technology-based media such as videos and booklets (Sari, 2023). Explanatory videos are more engaging and easier to understand than print media such as booklets (Ramadhani *et al.*, 2024). Additionally, explanatory videos allow for more interactive and dynamic delivery of messages, enhancing adolescents' motivation to participate in health programs (Dwistika *et al.*, 2023).

Meanwhile, the Regatama booklet, a printed medium containing information about the importance of iron supplementation, is still widely used in health education programs. This booklet provides more structured and detailed information, although it is less interactive than videos (Alves *et al.*, 2023). Nonetheless, the Regatama booklet still delivers complete and easily readable information to adolescents (Sahertian & Latumenasse, 2017). Therefore, it is important to compare the effectiveness of explanatory videos and Regatama booklets in increasing adolescents' adherence to iron supplementation.

This study examines the impact of explanatory videos and Regatama booklets on adolescent adherence to iron supplementation. Through this research, it is hoped that a more effective educational medium can be identified for use in programs to increase adolescents' adherence to iron consumption. The proper use of media can improve adherence, reducing the incidence of iron deficiency among adolescents.

The Health Belief Model, proposed by Rosenstock *et al.* (1988), serves as the theoretical foundation for this research. This model explains how perceptions of health threats and the benefits of preventive actions (in this case, iron supplementation) can influence an individual's decision to follow health recommendations. According to the model, individuals are more likely to follow health recommendations if they feel threatened by a health condition and believe preventive action will provide significant benefits.

Furthermore, motivation theory is also relevant to this study, as adolescents often face challenges maintaining motivation for actions that do not appear to offer immediate rewards or benefits. Therefore, the educational media used should be able to motivate and attract adolescents' attention, encouraging them to take iron supplements regularly (Kristianti & Metere, 2021).

Additionally, this study is aligned with the rapid development of communication technologies, which opens opportunities for the use of digital media in health education. Previous research has shown that digital media, such as videos, has a greater influence on adolescent behavior, particularly in health education (Anggraeni *et al.*, 2020). By utilizing digital media, adolescents can easily access and understand the conveyed messages.

This study employs a quasi-experimental method with a pretest-posttest control group design. This design allows the researcher to measure adolescent adherence changes after receiving different educational media treatments. The study sample consists of 100 adolescents divided into two treatment groups: one receiving explanatory videos and the other receiving Regatama booklets. Adherence levels are measured using a questionnaire administered before and after the intervention.

This study is expected to reveal significant differences between the two media regarding their influence on adolescent adherence to iron supplementation. If one medium proves to be more effective than the other, the findings could contribute significantly to developing more effective health education methods, particularly in preventing iron deficiency among adolescents.

Research Methods

This study employs a quasi-experimental design with a pretest-posttest control group approach to evaluate the impact of explanatory videos and a Regatama booklet on adolescent adherence to iron tablet consumption. This design was chosen because it allows the researcher to measure changes in adherence levels before and after the intervention with two different educational media. The method also facilitates a comparison between the two treatment groups, which is expected to provide more comprehensive and objective information regarding the effectiveness of these two media.

Population and Research Sample

The population of this study consists of adolescents aged between 13 and 18 years residing in urban areas. The selection of this age group is based on the adolescent's increased need for iron supplementation to prevent anemia, particularly for adolescent girls who experience menstruation. The research sample comprises 100 adolescents, randomly divided into two groups of 50 individuals each. The first group provided a video explanation regarding the importance of iron tablet consumption, while the second group was given a booklet containing similar information. These groups were selected based on age, gender, and relevant health status, which align with the research objectives.

Research Instrument

The primary instrument used in this study is a questionnaire designed to measure adolescents' adherence to iron tablet consumption. The questionnaire includes questions on the frequency and consistency of iron tablet consumption over the past two weeks, knowledge about the importance of iron, and attitudes and motivations regarding iron tablet consumption. The questionnaire was constructed using a 5-point Likert scale, which allows the researcher to measure adolescents' adherence across various dimensions. Furthermore, this measurement instrument was validated and tested for reliability before data collection.

Research Procedure

The research procedure begins with administering a pretest to all participants to assess their adherence to iron tablet consumption before the intervention. After the pretest, participants were randomly assigned to one of two treatment groups. The first group received a video explanation containing visual and narrative information about the importance of consuming iron tablets, including long-term health benefits and proper consumption methods. The video also featured testimonials from adolescents who had experienced the benefits of iron tablet consumption. The second group received a printed booklet containing similar information, which participants could read and study in greater detail.

After two weeks of intervention, all participants were administered a posttest to measure any changes in their adherence levels. In addition to measuring adherence, demographic data and additional information regarding external factors that might influence adherence, such as parental support and eating habits, were also collected via an additional questionnaire. The collected data were then analyzed to determine the differences between the group receiving the video explanation and the group receiving the printed booklet.

Data Analysis

The data obtained from the pretest and posttest questionnaires were analyzed using t-test statistical analysis to examine differences between the two groups regarding adherence levels. The t-test was used to determine whether significant differences existed between the group receiving the video explanation and the group receiving the printed booklet. Before performing the t-test, a normality test was conducted to ensure the data followed a normal distribution. Descriptive analysis

was also performed to describe the participants' characteristics and adherence levels in the pretest and posttest.

Research Ethics

This research was conducted with high ethical considerations. All participants were provided with clear information regarding the study's purpose and procedures, and their personal data confidentiality was assured. Participants were also allowed to voluntarily consent (informed consent) before participating in the study. Furthermore, participants involved in this research were not forced to consume iron tablets but were simply provided with information to enhance their understanding of the importance of iron tablet consumption. The decision to consume iron tablets remained entirely at the discretion of the participants while ensuring adherence to ethical principles in research.

Results and Discussion

Results

This study compares the impact of explanatory videos and Regatama booklets on adolescent compliance with iron tablet consumption. Data collected through pretest and posttest questionnaires indicate that educational media positively impact adolescent compliance levels. However, statistical analysis found that the group receiving the explanatory video showed a significantly higher compliance improvement than the group given the Regatama booklet.

The Compliance Levels of Pretest and Posttest

In the pretest, the average compliance level of adolescents consuming iron tablets before the intervention was 2.4 (on a 1-5 scale), indicating a low level of compliance in both groups. This suggests that many adolescents were unaware of the importance of regularly consuming iron tablets. However, after the two-week intervention, the posttest results showed a significant increase in compliance in both groups. The group that received the explanatory video had an average posttest compliance score of 4.2, while the group receiving the Regatama booklet showed a compliance level of 3.6. This difference highlights that explanatory videos are more effective in increasing adolescent compliance than Regatama booklets.

Statistical Testing

A t-test assuming equal variances was conducted to test the significance of the difference between the two groups. The t-test results revealed that the p-value for the comparison between the explanatory video group and the Regatama booklet group was 0.001, which is less than 0.05, indicating that the difference between the two groups is statistically significant. Thus, it can be concluded that the explanatory video has a greater impact on adolescent compliance with iron tablet consumption than the Regatama booklet.

The Impact of Explanatory Videos on Compliance

The group receiving the explanatory video demonstrated a more significant increase in compliance. Explanatory videos have several advantages over booklets. Firstly, videos are more interactive and engaging, which helps adolescents better understand the message. A study by Dwistika *et al.* (2023) shows that audiovisual media, such as videos, can enhance understanding and motivate individuals to follow health recommendations. Moreover, videos allow visualizations, such as images or animations, which clarify the impact of iron deficiency on the body.

Furthermore, the explanatory video in this study combined narrative elements that appeal to emotions, potentially increasing adolescents' awareness of the importance of consuming iron tablets. This aligns with findings from Oktaviani & Sari (2021), who noted that media that engage individuals emotionally more effectively influence health behavior changes. The video also provided real-life

examples and testimonials from other adolescents who had experienced the benefits of consuming iron tablets, thus increasing adolescents' connection and motivation to follow their example.

The Impact of the Regatama Booklet on Compliance

On the other hand, although the Regatama booklet showed a significant increase in compliance, it was not as substantial as the video group. The Regatama booklet, being a printed medium, presents more detailed and structured information. While the information provided was comprehensive, print media tends to be less engaging for adolescents, who prefer media with visual and interactive elements. According to Alves *et al.* (2019), booklets can offer more detailed information but are less effective at attracting and maintaining adolescents' interest than digital media.

However, this study's findings align with previous research, indicating that booklets still enhance adolescents' knowledge and understanding of health topics. This is reflected in the improvement in compliance in the group receiving the Regatama booklet, albeit not as much as the video group. Sahertian & Latumenasse (2017) reported that booklets can provide more in-depth information that adolescents can read at their own pace.

Causes of Result Differences

The differences in compliance levels between the two groups may be attributed to several factors. Firstly, video media are more capable of capturing adolescents' attention through technology, which has become an integral part of their daily lives. This is supported by research from Ramadhani *et al.* (2024), which suggests that adolescents are more responsive to technology-based media. Secondly, the duration and type of message delivered in videos are more straightforward to comprehend quickly and can directly impact adolescents, whereas booklets require more time to read and fully understand.

Moreover, the explanatory video used in this study provided information and encouraged adolescents to engage emotionally with the topic discussed. This aligns with motivation theories proposed by Kristianti & Metere (2021), which state that media that can increase emotional involvement tend to be more effective in changing health behavior.

External Factors Affecting Compliance

Although the explanatory video proved more effective in increasing compliance, external factors, such as parental support and daily dietary habits, also play a crucial role in adolescent compliance. A study by Mohamad & Arda (2023) shows that parental support can enhance the success of health programs, including iron tablet consumption. Therefore, while the explanatory video may improve adolescents' understanding, parental involvement in reminding and guiding adolescents to consume iron tablets regularly remains essential.

Practical Implications

Based on the findings of this study, it is recommended to use explanatory videos as the primary educational media in programs aimed at improving adolescent compliance with iron tablet consumption. This media is more effective in capturing adolescents' attention and increasing their motivation to follow health recommendations. Videos can also be expanded to cover other relevant adolescent health topics, such as healthy eating and active lifestyles. On the other hand, the Regatama booklet can still be used as supplementary material to provide more detailed information on the importance of iron tablet consumption.

Conclusion

Based on the research results, it can be concluded that educational media plays a crucial role in improving adolescents' adherence to iron tablet consumption. Both media used in this study,

explanatory videos and Regatama booklets, positively impacted compliance improvement. However, the explanatory video proved more effective than the Regatama booklet. This is evident from the statistical test results, which show a significant increase in adherence levels in the group that received the video explanation treatment. The advantage of video is its visual and narrative appeal, which can evoke emotions and increase adolescent motivation, making it easier to accept and internalize the health messages conveyed.

This finding aligns with previous research that states that technology-based media, such as videos, are more effective in delivering health messages to a younger generation that is more familiar with digital media. The explanatory video can deliver information concisely yet meaningfully and directly visualize iron deficiency's consequences. On the other hand, while the Regatama booklet can also enhance adolescents' understanding, its limitations in interactivity and emotional engagement make it less optimal in increasing adherence compared to audiovisual media. Nonetheless, the booklet still plays a role as a supporting material that can be used as a written reference and reviewed at any time.

Considering the results of this research, it is recommended that health education programs for adolescents in schools, public health centers, and other related institutions prioritize using video media as a tool for iron tablet consumption counseling. The use of video is not only effective educationally but also efficient in reaching many targets in a short period. Nevertheless, a multimodal educational approach—combining video, booklets, and direct interaction—should still be considered to cater to various learning preferences of adolescents and to strengthen the overall effectiveness of the educational intervention.

References

- Alves, S. A. A., Silva, K. N. D., Machado, M. D. F. A. S., Cavalcante, E. G. R., Albuquerque, G. A., Bezerra, I. M. P., & Lopes, M. D. S. V. (2023). Digital booklet on sustainable practices for promoting adolescent health. *Ciência & Saúde Coletiva*, 28, 2215-2226.
- Anggraeni, Y., Tresno, N. R. I. A., Susanti, I. H., & Mangkunegara, I. S. (2020, February). The Effectiveness of Health Education Using Leaflet and Video on Students' Knowledge About the Dangers of Smoking in Vocational High School 2 Purwokerto. In *1st International Conference on Community Health (ICCH 2019)* (pp. 369-375). Atlantis Press.
- Dwistika, W. F., Utami, K. D., & Anshory, J. (2023). Pengaruh Edukasi Anemia Dengan Video Animasi Terhadap Kepatuhan Konsumsi Tablet Tambah Darah dan Kadar Hemoglobin Remaja Putri di SMPN 17 Samarinda. *Advances In Social Humanities Research*, 1(8), 112-124.
- Kristianti, Y. D., & Metere, S. (2021). Hubungan pengetahuan remaja putri tentang anemia dan sikap remaja terhadap konsumsi suplemen zat besi di SMAN wilayah Jakarta Timur. *Jurnal Ilmiah Gizi Kesehatan*, 9(1), 30-35.
- Madestria, N. P. O., Moedjiono, A. I., Tahir, M., Suarayasa, K., Nur, R., & Syam, A. (2021). Effect of education through video and packaging modifications of iron tablets on female adolescent behavior in the iron supplementation intake in SMPN 2 and SMPN 1 Parigi. *Gaceta Sanitaria*, 35, S127-S130.
- Mohamad, S. N., & Arda, Z. A. (2023). Hubungan Tingkat Pengetahuan Anemia Terhadap Kepatuhan Konsumsi Tablet Fe Pada Remaja Putri. *Journal of Health Quality Development*, 3(2), 74-81.
- Oktaviani, O., & Sari, D. K. (2024). HUBUNGAN SIKAP REMAJA PUTRI DENGAN KEPATUHAN KONSUMSI TABLET TAMBAH DARAH DI WILAYAH KERJA PUSKESMAS SETABELAN KOTA SURAKARTA. *Indonesian Journal of Public Health*, 2(4), 734-745.
- Putri, H. Y., Djuari, L., & Dwilda, E. (2023). The relationship between knowledge and compliance with iron supplement in adolescent women. *Indonesian Midwifery and Health Sciences Journal*, 7(2), 123-128.

- Ramadhani, N., Adilah, P., Oktora, M. Z., & Anggraini, D. (2024). SYSTEMATIC LITERATURE REVIEW: HUBUNGAN MEDIA SOSIAL TERHADAP KESEHATAN MENTAL REMAJA. *Journal of Public Health Science*, 1(3), 178-190.
- Rosenstock, I. M., Strecher, V. J., & Becker, M. H. (1988). Social learning theory and the health belief model. *Health Education Quarterly*, 15(2), 175-183.
- Sahertian, B., & Latumenasse, R. (2017). Booklet kesehatan reproduksi remaja, solusi mengatasi kompleksitas masalah kesehatan reproduksi remaja di Sekolah Menengah Pertama Negeri 20 Kecamatan Baguala Kota Ambon. *Global Health Science*, 2(3), 309-318.
- Sari, I. P. (2023). THE EFFECTIVE METHODS AND MEDIAS USED IN HEALTH PROMOTION ABOUT ADOLESCENT HEALTH PRODUCTION. *The Indonesian Journal Of Public Health*, 18(3), 505.