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## Research Article

# Comparison of the Effectiveness of Video Based Learning Methods and Peer Group Methods on Increasing Knowledge of Young Women Consuming Blood Supplement Tablets at SMPN 4 Kota Baru Cikampek Karawang

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### Abstract

**Aims:** Blood supplement tablets are tablets to prevent anemia in adolescents, but in reality there are still many adolescents who do not know about these supplements. One of the efforts made to increase knowledge is to provide health education or education using media such as video based learning and peer group methods.

**Methods:** A pre-experimental demham one-group pretest-posttest design was employed in this investigation. To collect knowledge data before and after the intervention, a one-group pre-post test design was used. In this study, 58 young women who met the inclusion criteria were sampled. A questionnaire was utilized to collect data, and the results were analyzed using a paired test.

**Results:** The average score of knowledge after being given Video Based Learning was 15.91 and after being given the Peer group method was 12.98. The results of the test using the paired T test showed that there was an effect of the Video Based Learning Method and the peer group method on the knowledge of young women in taking iron supplement tablets (each p value 0.000). The Video Based Learning Method and the Peer Group Method are more effective in increasing the knowledge of young women in consuming iron supplement tablets with a p value of 0.000

**Conclusions:** Video Based learning and the Peer group method can affect youth knowledge, but Video Based learning is more effective in increasing knowledge about TTD. Therefore midwives are advised to provide health education to adolescents using video media.

### Keywords:

**Knowledge, Blood Supplement Tablets, young women**

## INTRODUCTION

Anemia is a condition in which the hemoglobin level or red blood cell count or hemoglobin concentration does not match the physiological needs of the body, usually at 11 gr/dl. Anemia in young women has negative impacts such as decreased immunity so that they are more susceptible to exposure to various infectious diseases, decreased concentration in class, decreased achievement at school and decreased fitness and work productivity (1)

One of the efforts that can be made to prevent and treat anemia in young women includes consumption of food sources of iron, fortification of foodstuffs with iron, consumption of iron supplements. The Indonesian government has established a policy of administering Blood Supplement Tablets (TTD) to young women once a week. The administration of iron tablets is given in a blanket approach where all young women are required to take iron tablets to prevent anemia and increase iron reserves in the body without prior initial screening (2,3).

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Efforts made to increase knowledge are providing health education or education as an effort to convey health messages to the target, so that the target knows and receives better knowledge about health. (4). Providing education can use various methods, including the Video Based Learning method and the peer group method. Several studies using the peer group method or Video Based Learning have been carried out in previous studies. Sari's research found that the results of the Wilcoxon test on the audio-visual method obtained a p-value of 0.009, indicating that there was a significant difference in the pre-test and post-test, whereas the peer group obtained a p-value of 0.024, indicating that there was a significant difference in the pre-test and post-test. The amount of knowledge differs significantly between audio-visual approaches and peer groups (5,6).

According to (7,8), there was no significant difference in changes in the value of junior high school girls' knowledge of preventing anemia problems in the lecture method group and the peer education method group with a value of  $P = 0.881$  ( $P > 0.005$ ), but there was a significant difference in changes in the value of junior high school girls' attitude value towards preventing anemia in the lecture method group and the peer education method group with a value of  $P = 0.881$  ( $P > 0.005$ ). SMPN 4 Kotabaru is one of the high schools in Cikampek Karawang, with 139 students split across six classes, according to school data. According to data from the School Health Unit (UKS) SMPN 14

Kotabaru, 31 female adolescents experienced anemia in 2021, increasing to 37 cases in 2022. The authors are interested in conducting study on the "Comparison of the Effectiveness of the Video Based Learning Method and the Peer Group Method on Increasing Knowledge of Young Girls in Consuming Blood Supplement Tablets at SMPN 4 Kotabaru Cikampek Karawang."

## METHODS

This study employed a quantitative approach, analyzed the data analytically, and used a quasi-experimental, single-group design. The research method employed was a post-intervention design in which the outcomes of the intervention group receiving based learning and peer groups were monitored. During the 2021–2022 school year, 139 young women from SMPN 4 Kotabaru Cikampek Karawang participated in the research. Using a proportional random sampling method, 58 participants were selected from each class and split into 2 groups: group A, consisting of 29 responders who received education via Video Based Learning, and group B, consisting of 29 participants who received education via a peer group. Primary data were collected by administering questionnaires to participants; the results of these questionnaires were used to evaluate the extent to which adolescents understood the concepts of iron tablets. After that, we used measures of central tendency, paired, and independent samples to draw conclusions.

## RESULTS

### 1. Knowledge of young women about consumption of iron tablets before and after being given education using Video Based Learning

**Table 1. Knowledge of young women about consumption of iron tablets before and after being given education using Video Based Learning**

Knowledge	Min-Max	Mean	SD
Pre Video	6-16	10,95	2,32
Post Video	12-19	15,81	1,61

Prior to receiving education via video-based learning, the respondent's knowledge score ranged from 6 to 16, with an average of 10.95 points and a standard deviation of 2.32 points. Following the intervention, the lowest score was 12 and the highest was 19, with an average of 15.91 points and a standard deviation of 1.61 points.

## 2. Knowledge of young women about consumption of iron supplement tablets before and after being given education using the Peer group method

**Table 2. Knowledge of young women about consumption of iron tablets before and after being given education using the Peer group method**

Knowledge	Min-Max	Mean	SD
Pre Peer Grup	6-16	11,14	2,15
Post Peer Grup	8-17	12,98	2,21

The respondent's knowledge score before receiving instruction via the peer group technique ranges from 6 to 16, with an average of 11.14 points and a standard deviation of 2.15 points. The lowest score following the intervention was 8 points, and the highest was 17, with an average of 12.98 points and a standard deviation of 2.21 points.

## 3. The effect of the Video Based Learning Method on the knowledge of young women in consuming iron tablets

**Table 3. The effect of the Video Based Learning Method on the knowledge of young women in consuming iron tablets**

	Mean	Difference	T count	P value
Pre_Video	10.95	4,86	21.139	0,000
Pos_Video	15.81			

The average knowledge score before the educational intervention using video-based learning was 10.95 points, and the average knowledge score after the intervention was 15.81 points, representing a 4.86 point increase. The paired test yielded a tcount of 21.139 and a p value of 0.000 (0.05), indicating that the video-based learning strategy had an influence on young women's understanding about consuming blood-boosting tablets at SMPN 4 Kotabaru Cikampek Karawang.

## 4. The effect of the peer group method on the knowledge of young women in consuming iron tablets

**Table 5. The effect of the peer group method on the knowledge of young women in consuming iron tablets**

	Mean	Difference	T count	P value
Pre_Video	11.14	1.845	10.226	0,000
Pos_Video	12.98			

The average knowledge score before the educational intervention using the peer group reached 11.14 points, and after the intervention was 12.98 points resulting in an increase of 1.845 points. The results of the paired test obtained a tcount of 10.226 and a p value of 0.000 (<0.05), meaning that there is an influence of the peer group method on the knowledge of young women in consuming iron supplement tablets at SMPN 4 Kotabaru Cikampek Karawang.

## 5. The Effectiveness of the Video Based Learning Method and the Peer Group Method for increasing the knowledge of young women in consuming iron tablets

**Table 6. The Effectiveness of the Video Based Learning Method and the Peer Group Method for increasing the knowledge of young women in consuming iron tablets**

Intervention	Mean	Difference	T count	P value
Video	15.81	2,84	7.860	0,000
Peer Group	12.98			

## DISCUSSION

### 1. Knowledge of young women about taking blood-added tablets before and after being given education using Video Based Learning and the Peer Group Method

According to the study's findings, the average score of respondents' knowledge before being given education through video-based learning was 10.95 (bad category) and climbed to 15.91 points (good category) after the intervention. The respondents were then educated utilizing the peer group method, and their scores improved to 12.98 points (enough) following the intervention. Based on these findings, it may be concluded that respondents' prior knowledge in both the case and control groups was weak or low. The questionnaire results revealed that respondents knew little about the significance of iron tablets, the benefits and functions of iron tablets, the impact of iron tablets, and even anemia and how to prevent it. This shows that the respondent's understanding is due to a lack of tablet information plus instruction.

Based on this description, it can be claimed that respondents' knowledge in both the case and control groups was still weak, but both groups improved after being educated utilizing both video-based learning and the peer group approach. The middle adolescent period is distinguished by the development of the ability to think abstractly, implying that by the age of adolescence, students

have begun to be able to increase knowledge in tandem with the development of psychology and the mass media (9,10).

### 2. The effect of the Video Based Learning Method on the knowledge of young women in consuming iron tablets

According to the findings of the study to examine the influence of video-based learning on knowledge, the knowledge score before the educational intervention was 10.95 points, and the knowledge score after the intervention was 15.81 points, representing a 4.86 point gain. The paired test yielded a tcount of 21.139 and a p value of 0.000 (0.05), indicating that the video-based learning strategy had an influence on young women's understanding about consuming blood-boosting tablets at SMPN 4 Kotabaru Cikampek Karawang. The findings of this study are consistent with the findings (11), who found that  $z = -5.100$  and  $p\text{-value} = 0.000$  before and after the video media post-test. Video media has been demonstrated to be successful in influencing health counseling to young women about anemia at SMAN 10 Bengkulu City. Similar to the findings of (11), there is a considerable gain in knowledge for young women at SMA Negeri 3 Kendari before and after counseling utilizing video media. Based on these findings, knowledge or cognitive is a critical domain for the creation of one's behaviors. Audio-visual media, which can deliver genuine stimulation comprising motion pictures and sound elements with a relatively short amount

of time exhibited in video form, is one of the media utilized as a support and tool for counseling approaches.

### 3. The effect of the peer group method on the knowledge of young women in consuming iron tablets

According to the study's findings, the average knowledge score before the educational intervention using the peer group was 11.14 points, and after the intervention was 12.98 points, resulting in a 1.845 point gain. This indicates that providing information through peers from selected respondents can increase knowledge about TTD, which is supported by the paired test results of tcount 10.226 and p value 0.000 (0.05), indicating that the peer group method has an influence on adolescent knowledge daughter in consuming blood-boosting tablets at SMPN 4 Kotabaru Cikampek Karawang. This is backed by (12) opinion in (13), who claims that through peer association, kids learn suitable social attitudes. Furthermore, with the association of peers, students might bring emotional gratification through friendships formed with their peers. Individuals in peer groups (peer groups) perceive commonalities with one another, such as age, needs, and aspirations, which might strengthen the group. Based on this description, it can be stated that peer education health education can raise awareness about iron and white blood pressure since peer educators' approaches to their peers are geared towards their peers' wants and are also informal in character. This condition encourages the development of a fun learning process between peer educators and their peers in an informal setting, which makes the learning environment less boring and encourages free inquiries.

### 4. The Effectiveness of the Video Based Learning Method and the Peer Group Method for increasing the knowledge

### of young women in consuming iron tablets

According to the research findings, the average knowledge score after using the video-based learning technique was 15.81 points, whereas the average knowledge score after using the peer group method was 12.98 points, a difference of 2.84 points. This demonstrates that the case group's knowledge score is greater than the control group's, implying that the video-based learning approach can improve knowledge more effectively than the peer group method. This is supported by the independent sample T test results, which were 7.860 and a p value of 0.000 (0.05), indicating that the Video Based Learning Method is more effective than the Peer Group Method in increasing knowledge of young women in consuming iron supplement tablets at SMPN 4 Kotabaru Cikampek Karawang. Both of these strategies can be useful in increasing knowledge, however video-based education is more effective at increasing young knowledge about iron tablets.

This is consistent with (14) research, which found that the Asymp. Sig (2-tailed) 0.05, namely 0.015, that  $H_a$  is accepted and  $H_o$  is rejected, implying that there is an increase in knowledge with counseling using video media and leaflets, with the video media group outperforming the leaflet group. This study was strengthened by the research findings of (15), who obtained  $p = 0.003$  for the statistical Wilcoxon rank test at the pretest and posttest, indicating that there is an influence of teaching through audiovisual media on knowledge. According to this assessment, the researcher believes that the average worth of knowledge gained through video media is higher than that of the peer group. This is due to the fact that by using videos, teenagers can engage in a broader range of sensing, such as through their senses (eyes, nose, ears, and so on).

The degree of attention and perception of objects is highly controlled by the intensity of sensing to produce knowledge.

## CONCLUSION

Before adopting Video Based Learning, young women's knowledge of iron pill consumption was 10.95, and after it was 15.91. Before the intervention, the average in the Peer Group Method group was 11.14, and after it was 12.98. With a p value of 0.000, the Video Based Learning Method had an effect on young women's knowledge about consuming blood-supplementing tablets. The peer group strategy has a p-value of 0.000 affect on young women's understanding of consuming blood-supplementing medications. With a p value of 0.000, the Video Based Learning Method and the Peer Group Method are more successful in enhancing young women's awareness about consuming iron supplement tablets.

## REFERENCES

1. Fitria A, Aisyah S, Tarigan JS. Upaya Pencegahan Anemia Pada Remaja Putri Melalui Konsumsi Tablet Tambah Darah. *RAMBIDEUN: Jurnal Pengabdian Kepada Masyarakat*. 2021;4(2):91–9.
2. Juffrie M, Helmyati S, Hakimi M. Nutritional anemia in Indonesia children and adolescents: Diagnostic reliability for appropriate management. *Asia Pac J Clin Nutr*. 2020;29.
3. Tengco LW, Rayco-Solon P, Solon JA, Sarol Jr JN, Solon FS. Determinants of anemia among preschool children in the Philippines. *J Am Coll Nutr*. 2008;27(2):229–43.
4. Notoatmodjo. *Health Research Methods*. Jakarta: Rineka Cipta; 2018.
5. Vamos S, Okan O, Sentell T, Rootman I. Making a case for “Education for health literacy”: An international perspective. *Int J Environ Res Public Health*. 2020;17(4):1436.
6. Nutbeam D, Levin-Zamir D, Rowlands G. Health literacy and health promotion in context. Vol. 25, *Global Health Promotion*. SAGE Publications Sage UK: London, England; 2018. p. 3–5.
7. Kusumawati E. PENGARUH PENDIDIKAN GIZI TERHADAP PENINGKATAN PENGETAHUAN DAN SIKAP PEER EDUCATOR DALAM UPAYA PENDIDIKAN SEBAYA MENGENAI PENCEGAHAN KEJADIAN ANEMIA. In: *Prosiding Seminar Nasional LPPM Unsoed*. 2019.
8. Nahak MPM, Naibili MJE, Isu YK, Loe MG. PENDIDIKAN KESEHATAN TENTANG PENCEGAHAN ANEMIA MELALUI KOMBINASI METODE CERAMAH DAN LEAFLET PADA REMAJA PUTRI DI SMAN 3 ATAMBUA. *Abdimas Galuh*. 2022;4(1):554–62.
9. Aydin A, Sarier Y, Uysal S. The Effect of School Principals' Leadership Styles on Teachers' Organizational Commitment and Job Satisfaction. *Educational sciences: Theory and practice*. 2013;13(2):806–11.
10. Cogaltay N, Karadag E. The Effect of Educational Leadership on Organizational Variables: A Meta-Analysis Study in the Sample of Turkey. *Educational Sciences: Theory and Practice*. 2016;16(2):603–46.
11. Sari RP. Application of Problem-Based Learning with Video Assistance to The Learning Outcomes of Science from Students in Class V Elementary. *JOURNAL OF DIGITAL LEARNING AND DISTANCE EDUCATION*. 2023;1(12):387–94.
12. Hurlock EB. *Perkembangan anak jilid 1*. 2020;
13. Palmonari A, Pombeni ML, Kirchler E. Adolescents and their peer groups: a study on the significance of peers, social categorization processes and

- coping with developmental tasks. Soc Behav. 1990;
14. Handayani A, Mitra M, Devis Y, Leonita E, Marlina H. Efektivitas Pendidikan Kesehatan Reproduksi dengan Media Audio Visual terhadap Pengetahuan Remaja tentang Sexual Harassment di SMKN 1 Kota Dumai. *Jurnal Kesehatan Terpadu (Integrated Health Journal)*. 2022;13(1):66-74.
  15. Dusra E, Suneth J, Wael M, Trilla J. Pengaruh Penyuluhan Tentang Kesehatan Reproduksi Berbasis Audio Visual Terhadap Tingkat Pengetahuan Siswi Sma Negeri 7 Kecamatan Leihitu Kabupaten Maluku Tengah Tahun 2019. *GLOBAL HEALTH SCIENCE*. 2020;5(4):207-11.