

## UTILIZATION OF PRINT MEDIA AND VISUAL MEDIA ON ADOLESCENT KNOWLEDGE ABOUT ANEMIA

Ratna Hamidah<sup>1\*</sup>, and Ratih Kurniasari<sup>1</sup>

<sup>1</sup> Program Studi S1 Gizi, Universitas Singaperbangsa Karawang,  
Jl. HS.Ronggo Waluyo Po Box 41361, Karawang-Jawa Barat, Indonesia  
Telp/Fax. (026)7641177/ (026)7641367  
\*Email : hamidahratna28@gmail.com

---

### Article Info

#### Article history:

Received January 15th, 2022

Revised February 20th, 2022

Accepte March 25th, 2022

#### Keyword:

Anemia; Audio-visual media;  
Knowledge; Print media;  
Teenager

### ABSTRACT

**Background:** Anemia decreases hemoglobin levels, hematocrit, and red blood cell counts below the average values set for individuals. Anemia is more common in young women because young women experience menstruation, and blood loss during menstruation can cause anemia. Adolescent boys and girls in their growth period need more energy, protein, and other nutrients than other age groups. Anemia in adolescents will impact decreased concentration in learning, decreased physical fitness, and impaired growth so that height and weight are not average. The common knowledge of adolescents about health information, especially about anemia, requires efforts to overcome the problem of anemia. This study aims to present an overview of the use of print media and audio-visual media for knowledge of adolescents about anemia.

**Research Methods:** The method used by the author in this study is to use some of the existing literature related to the title of this study.

**Research Result:** The results and discussion of this study will help readers and health workers understand the planning steps in education using print media and audio-visual media to adolescents about anemia.

**Conclusion:** Using audio-visual media in animation and media in the form of guidebooks and flashcards is considered adequate for increasing knowledge of anemic adolescents, and flashcard media are still rarely used for learning media.

---

### BACKGROUND

In Indonesia, anemia is still a health problem that is relatively high in prevalence, especially in adolescents. Based on Riskesdas data in 2018, most anemias in adolescents aged 15-24 years was 84.6%. According to Arisman (2004), anemia decreases the number of hemoglobin, hematocrit, and red blood cells below the average value limit. Therefore, adolescent boys and young women still in their infancy need more nutrient intake than other age groups.

Adolescent girls are more susceptible to anemia because adolescent girls menstruate every month, and blood loss during menstruation can be one of the causes of anemia (Anifah, 2020). Anemia in adolescents will impact the occurrence of impaired growth periods and decreased learning achievement. The main factors causing anemia are lack of iron intake. Other factors that cause anemia include low education and knowledge (Wirawati et al., 2017). Insufficient knowledge of adolescents about anemia, the need for preventive efforts so that more and more adolescent girls are affected by anemia, namely by counseling. Counseling, in this case, is an effort to make changes in knowledge or attitudes in adolescents, especially young women (Syakir, 2018). How to counseling can be done in various ways, one of which is by using media, including providing learning through print and audio-visual media. Media is used in learning activities because it can present more specific knowledge, increase motivation in adolescents, and improve the learning process (Noverina et al., 2020).

Print media and audio visual media are nutritional counseling media that facilitate the delivery of information and receiving messages for extension targets; print media can be leaflets, flashcards, pocketbooks, magazines, newspapers, booklets, and many others. Meanwhile, for audio-visual media, it can be animated videos. There is a good influence regarding knowledge extension with print and audio-visual media, and there is a change in attitude after counseling. This literature review aims to present an overview of the use of print media and audio-visual media to knowledge in adolescents about anemia. This literature review is carried out based on existing studies to determine the potential for further research development.

## MATERIAL AND METHODS

The method used by the authors in this study is to compare the existing literature. Literature that supports this study and by existing titles. Some references are cited and reviewed. The author collects data or journal sources related to print media and audio-visual media to understand adolescents about anemia with the keywords anemia, animation media, attitude, knowledge, flashcard, learning media, adolescents, iron anemia, nursing, and school. Obtained through Sinta 3, Sinta 4, and Sinta 5. Published from November 2017 to August 2019.

## RESULT

The research search resulted in 3 studies included in this review consisting of the use of audio visual media, print media, and the development of print media, namely flashcards. In addition, two studies focused on the influence of counseling on knowledge and attitudes, and one focused on the development of flashcard media summary results of 3 studies included in the study (Table 1).

**Table 1. Summary Of Studies On Anemia In Adolescents**

Researchers	Method	Population	Intervention	Research Results
Sutrio Syakir (2018)	Pre-experimental with design one-group pretest-posttest design.	High school students in Bandar Lampung City in 2017 which amounted to 27,487 people. With a sample size of 300 people.	Providing nutritional counseling with animated media against changes in knowledge and attitudes about anemia in adolescent girls.	<ul style="list-style-type: none"> <li>• Age characteristics are subjects with the most age of 17 years and the least age of 14 years with results.</li> <li>• The pre-test grade of knowledge is a minimum value of 40 and a maximum value of 90 with an average of 69,88.</li> <li>• The post-test knowledge score is a minimum value of 60 and a maximum value of 95 with an average of 77,70.</li> <li>• The attitude value before the counseling is a minimum value of 25 and a maximum value of 40 with an average of 34,50.</li> <li>• The attitude value after counseling there was an increase in the average value of 1,57 to 36,07.</li> </ul>
Diana Wahyuni & Dahlia Indah Amareta (2019)	<i>Research and Development.</i>	Muhammadiyah High School Students 3 Jember, With a total of 37 students.	Development of health education media flashcard anemia and provision of nutritional counseling with flashcard.	The results showed that learning media through flashcards belonged to the category of worthy. The results of the field test showed that 91.9% of students' learning results had reached the level of material mastery and fulfilled the completion of learning or in other words 80% of the 37 students had reached a score of 75, so it can be said that this flashcard learning media has been effective.
Desmon Wirawati, Astuti Yuni Nursasi, Sigit Mulyono (2017)	The method used is the provision of nursing care to individuals, families, groups and communities.	Young women in Junior High School X. data collection was carried out on students of grades X and XI with a total of 103 people	Providing nutritional counseling with a Guide to Faithful Adolescents (healthy without anemia)	<ul style="list-style-type: none"> <li>• There is an increase in adolescent knowledge about anemia from the early to the end.</li> <li>• There is an increase in adolescent skills from the early to middle and late days.</li> <li>• Increased adolescent attitudes about anemia from the early to the late period.</li> <li>• Increased family support perceived</li> </ul>

---

by adolescents from the early to the late days.

- Changes in adolescent haemoglobin (Hb) levels are values in the early 11.42 and middle period 11.28. Meanwhile, for the value at the end of 15.15 there is an increase in Hb from the middle to the end.
  - Changes in the level of family independence change before the provision of nursing care and after nursing care.
- 

## DISCUSSION

In the first study was Sutrio Syakir (2018), in his journal entitled "Pengaruh Intervensi Penyuluhan Gizi Dengan Media Animasi Terhadap Perubahan Pengetahuan Dan Sikap Tentang Anemia Pada Remaja Putri," explaining one of the efforts to overcome the problem of anemia is through counseling with animation media so that the message will be longer and better in the memory of adolescents because it involves more five senses not only the sense of sight but the sense of hearing is also used. Furthermore, it gives the impression that knowledge is more substantial and more interesting because it makes teenage students respond with the presence of color, Music, and graphics. Therefore, this sutrio syakir study significantly influences ( $p < 0.05$ ) knowledge and attitudes about anemia in adolescent girls with nutritional counseling using animation media. However, the shortcomings in this study are that there is no blood pressure and Hb check before and after counseling.

In the second study, Diana Wahyuni & Dahlia Indah Amareta (2019), In their journal entitled "Pengembangan Media Pendidikan Kesehatan Flashcard Anemia," explaining the common knowledge of students about health information, especially about anemia, requires innovation in learning. One of the innovations to increase knowledge about anemia is to use flashcard media. Flashcard is a learning medium in the form of picture cards measuring 8 x 12 cm by attaching photos or pictures on card sheets. However, Flashcard media is still not commonly used as a learning medium in schools. Diana and Dahlia's research results showed that flashcards could be used as a medium of learning knowledge of adolescent anemia because it has enough practical value for adolescent knowledge. After all, flashcards have advantages of attractiveness regarding image characteristics, design, and color. Therefore, they can be used to learn nutritional knowledge about anemia in adolescents. The shortcomings in this study include focusing too much on the results of flashcard product development because it is still developing flashcard media and not explaining the results of adolescents' knowledge and attitudes towards anemia using flashcard media.

In the previous study by Desmon Wirawati, Astuti Yuni Nursasi, and Sigit Mulyono (2017), in his journal entitled "Gerakan Remaja SETIA (Sehat Tanpa Anemia) Dapat Pencegah Anemia Pada Remaja," explained that adolescent anemia generally occurs due to lack of consumption of iron-containing foods because it maintains the body image to look ideal. The problem of anemia that is not addressed will impact learning achievement in school, and for adolescent girls, anemia will affect their reproductive function. Therefore, anemia problems found in adolescent girls need severe treatment. Therefore, the need for preventive interventions and solving the problem of anemia in adolescents by providing nursing care to individuals, families, and playgroups using guidebooks SETIA. This guidebook contains worksheets and knowledge, attitudes, and skills, and this book will be collected and evaluated every week to see the development of teenage students. The study results from Desmon et al. increased adolescent knowledge, skills, and attitudes to prevent anemia and family support, family independence, and HB levels of adolescent students also increased. However, the shortcomings are not spelled out in the results regarding changes in the level of family independence and not explained how nursing care and how the support provided by family, peers, and teachers to the subject.

## CONCLUSION

In the use of print media and audio-visual media to knowledge in adolescents about anemia, in the first journal using audio visual media in the form of animation and the third journal using print media in the form of guidebooks, both journals resulted in changes in attitudes, skills and increased adolescent knowledge about anemia. Meanwhile, for the second journal, using print media in flashcards is considered adequate for

innovations in learning new nutritional knowledge about anemia because flashcards are still rarely used for learning media.

#### **RECOMMENDATION**

It is hoped that further research for print media in flashcards can be further developed for knowledge learning media in schools. The results are increased adolescents' knowledge and attitudes about anemia through flashcard media.

#### **REFERENCES**

- Anifah F. Pengaruh Pendidikan Kesehatan Melalui Media Video Terhadap Pengetahuan Tentang Anemia Pada Remaja Putri. *Jurnal Keperawatan Muhammadiyah*. 2020; 5(1):296-300.
- Arisman. 2004. *Gizi Dalam Daur Kehidupan*; Buku Ajar Ilmu Gizi. EGC, Jakarta
- Kemkes RI. 2018. *Riset Kesehatan Dasar 2018* Balitbangkes. Jakarta: Kementerian Kesehatan Republik Indonesia.
- Noverina D., et al. Pengaruh Explanation Video Terhadap Pengetahuan Dan Kepatuhan Konsumsi Tablet Tambah Darah Di SMPN 65 Jakarta Utara. *Darussalam Nutrition Journal*. 2020; 4(1):35-43.
- Syakir S. Pengaruh Intervensi Penyuluhan Gizi Dengan Media Animasi Terhadap Perubahan Pengetahuan Dan Sikap Tentang Anemia Pada Remaja Putri. *Jurnal Arsip Gizi dan Pangan*. 2018; 3(1):18-25.
- Wahyuni D dan Dahlia Indah A. Pengembangan Media Pendidikan Kesehatan Flashcard Anemia. *Jurnal Kesehatan*. 2019; 7(2):69-74.
- Wirawati D., et al. Gerakan Remaja SETIA (Sehat Tanpa Anemia) Dapat Pencegah Anemia Pada Remaja. *Jurnal Medikes*. 2017; 4(2):185-194.