



THE EFFECT OF MEDIA PROVISION ON KNOWLEDGE ABOUT “ISI PIRINGKU” IN ADOLESCENTS

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Abstract

Due to rapid globalization, poor diet and lifestyle, especially in adolescents, can greatly affect their health. Ignorance about nutrition in adolescents can lead to irregularities in nutrient intake and energy expenditure, which will likely lead to undernutrition and overnutrition problems. This study aims to determine the effect of media provision on students of SMPN 2 East Karawang. The research method used quasy experiment method with purposive sampling technique. Knowledge was assessed using a questionnaire then descriptive analysis was carried out using SPSS if the data was normally distributed using the paired sample test if the data was not normally distributed then using the Wilcoxon test. The results of the study showed that there was an effect of media provision on knowledge about “Isi Piringku” with a value of $p < 0.05$. The conclusion of this study shows that there is an effect of media provision on knowledge about “Isi Piringku” in students of SMPN 2 East Karawang.

Keyword: Educational Media, Isi Piringku, Adolescents

Introduction

Due to rapid globalization, poor diet and lifestyle, especially in adolescents, can greatly affect their health. This can lead to health problems in adolescents, which can cause their productivity and learning achievements to decline. If adolescents are well-nourished and balanced according to their needs, they will be able to achieve their best level of growth and development. Some of the impacts of adolescent nutrition problems can have a negative impact on the level of public health, including a decrease in learning concentration, the risk of giving birth to low birth weight babies, or a decrease in physical performance, which will ultimately impact their performance and productivity ⁽¹⁾.

It is important for children to understand nutrition because ignorance about nutrition can lead to them not eating a balanced diet. School age is an age where children experience rapid growth. Physical activity continues to increase at this age, such as playing, playing sports, or helping parents with chores. Having the wrong eating habits in school children can lead to serious nutritional problems, such as stunting for those who are undernourished or obesity for those who are overweight ⁽²⁾.

The Ministry of Health launched My Dinner Plate, which was later refined into “Isi Piringku” Contents. The purpose of “Isi Piringku” is to show the proportion of food from each food group in one plate. Filling half (50%) of the plate with vegetables and fruits is suggested by the Visual “Isi Piringku”. Many vitamins, minerals and dietary fiber can be found in vegetables and fruits. In obese people, reducing vegetable and fruit consumption can increase the risk of chronic and degenerative diseases such as hypertension, hyperlipidemia, and type 2 diabetes mellitus ⁽³⁾. Therefore, following the Fill “Isi Piringku” guidelines and increasing vegetable and fruit consumption to increase fiber intake can be an effective method to prevent and manage obesity. It can also reduce the risk of developing chronic diseases associated with being overweight.

Ignorance about nutrition in adolescents can lead to irregularities in nutrient intake and energy expenditure, which is likely to cause problems of undernutrition and overnutrition. Children who are malnourished will be hampered in growth and development and experience a decrease in thinking ability due to altered brain metabolism ⁽⁴⁾. Thus, it is necessary to increase the knowledge of adolescents through education

Nutrition education in adolescents must be provided in an appropriate way and media to attract attention and help make it easier to understand nutrition. based on the results of the study Agustin et al. (2023) showed that there was an effect of education about the contents of “Isi Piringku” using posters, videos and podcasts on the knowledge and attitudes of non-health students. This proves that media is an important aspect of nutrition education. ⁽⁵⁾

Based on observations made at SMPN 2 East Karawang, the main informant does not know what the contents of “Isi Piringku” are and has not fully implemented an attitude that describes consumption in accordance with the contents of “Isi Piringku”. Based on this, the author aims to analyze the effectiveness of video media, brochures and digital scrapbooks on the knowledge and attitudes of SMPN 2 East Karawang students regarding the contents of “Isi Piringku”.

Method

This study used a Quasy Experiment research design designed with One Group Pretest Posttest without Control. The research was conducted at SMPN 2 East Karawang. Before the intervention, researchers conducted In Depth Interviews with 3 main informants and 1 supporting informant. After that, a message trial was conducted with 2 main informants. The results of the message trial were evaluated and used to develop the media. The intervention was conducted for 2 weeks in October 2024 with details in the first week a pretest was conducted to find out how knowledge about the contents of “Isi Piringku” was in grade 7J students. Media brochures, animated videos and digital scrapbooks were given after the pretest. The following week, a posttest was conducted to measure knowledge again after the intervention.

The subjects of this study were junior high school students aged 12-15 years in Karawang district. The study population was all grade 7J students of SMPN 2 East Karawang totaling 45 people. Sampling was carried out using purposive sampling technique in accordance with the inclusion criteria that have been determined. The total sample of this study was 39 people consisting of 13 respondents given brochure media, 13 respondents given animated video media, and 13 respondents given digital scrapbook media. Primary data collection was carried out directly, namely characteristics (age and gender), knowledge before (pretest) and after (posttest) giving intervention. The media used in this study were brochures, animated videos and digital scrapbooks.

The research variables consisted of independent variables and dependent variables. The independent variables are brochure media, animated videos and digital scrapbooks. Meanwhile, the dependent variable is knowledge and attitude about the contents of “Isi Piringku”. Data collection was carried out using a knowledge questionnaire using a questionnaire⁽⁶⁾ with 10 questions about the contents of “Isi Piringku”. The instruments used in data analysis are Microsoft Excel 2019 and IBM SPSS Statistics 25. Data will be tabulated first in Excel and then processed using SPSS. If the data is normal, then a paired sample t-test is conducted to see the comparison of knowledge before and after data intervention using a paired t-test on the knowledge variable, namely on brochure and video media. If the normality test results were not normal, the Wilcoxon Signed-Rank Test was used. Data using the Wilcoxon Signed-Rank Test on knowledge variables are on digital scrapbook media.



Picture 1. The media brochure contains information about the contents of “Isi Piringku” and discusses 3 balanced nutrition messages



Picture 2. Media Video Animation contains the contents of “Isi Piringku”

The amount that must be consumed at each meal, discusses protein and the function of protein for adolescents, the nutritional adequacy rate (AKG) of protein in adolescents and discusses 3 balanced nutrition messages.



Picture 3. Digital scrapbook media contains material about the contents of “Isi Piringku”

The function of consuming these food sources, the amount of food that must be consumed in one plate, food examples and 3 balanced nutrition messages along with the benefits of applying 3 balanced nutrition messages.

Result

The univariate analysis of this study describes the frequency distribution of the respondents' characteristics.

3.1 Table

Table 1. Frequency Distribution

Characteristic	(n)	(%)
Gender		
Male	18	46,2
Female	21	53,8
Age		
12 years old	20	51,3
13 years old	17	43,6
14 years old	2	5,1
Total	39	100

Table 1 shows that most respondents have female gender with a percentage of 53.8%, the age characteristics of respondents are mostly 12 years old with a percentage of 51.3%

The bivariate analysis of this study illustrates the effect of media on knowledge and attitudes regarding the contents of “Isi Piringku”.

Table 2 Effect of Media on Respondents' Knowledge

Knowledge	pre-test		post-test		p-Value
	Min-Max	Mean ± SD	Min-Max	Mean ± SD	
Brochure	2-7	4,0± 1,73	4-10	7,69± 1,84	0,00 ^a
Video	2-6	4,38±1,19	5-10	8,23±1,59	0.00 ^a
Digital Scrapbook	3-8	4,92±1,49	4-10	6,23±1,79	0,027 ^b

^aPaired T-test, ^bWilcoxon Test

*significance at $p < 0,05$

Table 2 shows that the three media provided all have an effect on students' knowledge of the contents of “Isi Piringku” at SMPN 2 East Karawang.

Discussion

Knowledge is the result of information received and created after identifying certain objects. Good knowledge is based on a good understanding of the material studied. At the end of the study, respondents who have good knowledge tend to have a positive attitude, while respondents who have a negative attitude can be caused by incorrect knowledge or interpretation ⁽⁷⁾. 2D media significantly influenced adolescents' knowledge about the contents of “Isi Piringku” with ($p < 0.05$). This is in line with research conducted by Islam et al. (2024) with the results of leaflet media affecting knowledge about the contents of “Isi Piringku”. ⁽⁸⁾. This is also in line with research conducted by Siswati & Nabilah (2023) which states that leaflet media has an effect on increasing student knowledge about the contents of “Isi Piringku” ⁽⁹⁾. In contrast, research conducted by Hartanti & Kurniasari (2024) states that there is no significant relationship to knowledge about vegetable and fruit consumption with a p-value (> 0.05) ⁽¹⁰⁾. According to Andriyani & Kurniasari (2019) school-age children like new things. Therefore, nutrition education should be provided through interesting media so that children can easily learn about a balanced diet. This will be especially prominent for elementary school children ⁽¹¹⁾.

Animated video media also significantly affects the knowledge of the contents of “Isi Piringku” with a value of ($p < 0.05$). This is in line with research conducted by Agustin et al. (2023) which states that video media has an effect on knowledge of the contents of “Isi Piringku” ⁽⁵⁾. This is also in line

with research conducted by Hartanti & Kurniasari (2024) which states that there is an effect of video media on knowledge about vegetable and fruit consumption with a p-value (<0.05)⁽¹⁰⁾. According to Hartanti & Kurniasari (2022), the advantages of video media are easy to understand because it involves all aspects, is more interesting because it includes sound and images, is face-to-face, can be controlled, is wider, and can be repeated. Animated video media can also increase imagination, attention, and concentration on the material⁽¹⁰⁾.

Innovative media also has a significant influence on adolescents' knowledge about the contents of “Isi Piringku” with a p-value (<0.05). This is in line with research conducted by Marisa (2014) which states that there is an influence on knowledge about balanced nutrition with a value of ($p < 0.05$)⁽¹²⁾. This is also in line with research conducted by Mustikaningsih et al. (2019) which states that there is a significant relationship between knowledge before and after intervention with a p-value (<0.05)⁽¹³⁾. According to Mustikaningsih et al. (2019) media consisting of striking images and colors attract students as respondents to see and pay attention to the material provided. One of the additional benefits of using pictorial media in improving knowledge about welfare is the familiarity of students with their daily lives⁽¹³⁾. According to Selaindong et al. (2020) a lack of knowledge about nutritional needs can affect how a person meets their nutritional needs through the food they consume. It is expected that someone with good knowledge will be able to pay attention to the type and quality of food they eat⁽¹⁴⁾.

Conclusion

Based on the results of the research that has been conducted, it can be concluded that there is an influence of brochure, video and digital scrapbook media on students' knowledge about the contents of “Isi Piringku”. Researchers suggest that the results of this study can be input for schools to provide counseling and nutrition education regarding the importance of consumption in accordance with the contents of “Isi Piringku”.

References

- [1] Kusumawardani H, Rakhma Lr, Laili Na, Putri Am, Anggraini D, Rosida Sm, Et Al. Peningkatan Pengetahuan Remaja Mengenai Pemenuhan Gizi Seimbang Melalui Isi Piringku Di Man 1 Surakarta. *Jurnal Abdi Insani*. 2022 Sep 27;9(3):1200–8.
- [2] Intan Saraswati. Efektivitas Penggunaan Media Edukasi Gizi Terhadap Peningkatan Pengetahuan Dan Sikap Tentang Gizi Seimbang Pada Siswa Sekolah Dasar. *Jurnal Ilmiah Wahana Pendidikan*. 2022;8(18):571–6.
- [3] Widuri Anwar M, Do Toka W. Penyuluhan Tentang “Isi Piringku” Sebagai Acuan Pola Hidup Sehat Di Puskesmas Gambesi Kota Ternate [Internet]. Vol. 1, Meambo. 2022. Available From: [Https://Pengabmas.Nchat.Id](https://Pengabmas.Nchat.Id)
- [4] Devy Maharani S, Majid Ya, Rini Ps. Citra Delima : Jurnal Ilmiah Stikes Citra Delima Bangka Belitung Pengaruh Edukasi Quartet Card Terhadap Pengetahuan Anak Sekolah Tentang Isi Piringku. *Urnal Ilmiah Stikes Citra Delima Bangka Belitung* [Internet]. 2023;6(2):132–7. Available From: <http://jurnalilmiah.stikescitradelima.ac.id/index.php/>
- [5] Agustin S, Kurniasari R, Perihatini T. Pengaruhmedia Poster, Video, Dan Podcastterhadap Pengetahuan Dan Sikap Tentang Isi Piringku Pada Mahasiswa Non Kesehatan. *Jurnal Pengabdian Masyarakat Berkemajuan*. 2023;7(4):2518–24.
- [6] Wati L. Pengaruh Pendidikan Gizi Dan Dukungan Teman Sebaya Terhadap Peningkatan Pengetahuan Dan Asupan Zat Gizi Remaja Overweight. 2021.
- [7] Kirana Murti Dewi P, Srimiati M. Pengaruh Pendidikan Gizi (Audio-Visual) Terhadap Perilaku Dan Asupan Gizi Pada Siswa Sekolah Dasar. 2019;1(1).

- [8] Islam M, Mb Ar, Yusuf K, Masithah St, Syafruddin S. Pengaruh Edukasi Gizi Menggunakan Leaflet Dan Video Kementerian Kesehatan Terhadap Pengetahuan Tentang Isi Piringku Pada Anak Usia Sekolah Di Sdn 21 Sanggalea Kabupaten Maros. Ghidza: Jurnal Gizi Dan Kesehatan. 2024 Jun 5;8(1):113–7.
- [9] Siswati T, Nabilah K. Pengaruh Penyuluhan Gizi Dengan Media Explosion Box Dan Leaflet Terhadap Pengetahuan Isi Piringku Pada Anak Sd Di Aceh. Journal Of Health Technology [Internet]. 2023;19(2):54–9. Available From: <http://e-journal.poltekkesjogja.ac.id/index.php/jtk>
- [10] Hartanti N, Kurniasari R. The Influence Of Poster And Animated Video Media On Fruit And Vegetable Consumption On Children’s Knowledge At Sdn Karawang Kulon Ii. Hearty, Jurnal Kesehatan Masyarakat [Internet]. 2024;12(3):578–85. Available From: <Http://Ejournal.Uika-Bogor.Ac.Id/Index.Php/Hearty/Issue/Archive>
- [11] Andriyani S, Kurniasari R. Pengaruh Edukasi Melalui Media Audiovisual (Animasi) Terhadap Pengetahuan Gizi Seimbang Pada Anak Sekolah Dasar. Prepotif Jurnal Kesehatan Masyarakat. 2022;1686–90.
- [12] Marisa. Pengaruh Pendidikan Gizi Melalui Komik Gizi Seimbang. 2014.
- [13] Mustikaningsih D, Supadi J, Jaelani M, Mintarsih N, Tursilowati S. Efektivitas Pendidikan Gizi Menggunakan Media Edutainment Card Terhadap Peningkatan Pengetahuan Tentang Pedoman Gizi Seimbang Pada Siswa Sekolah Dasar Effectiveness Of Nutrition Education With Edutainment Card On Enhancement Of Knowledge About Balance Nutrition Guideline At Elementary School. Jurnal Riset Gizi. 2019;7(1):63–8.
- [14] Selaindoong Sj, Amisi Md, Kalesaran Afc. Gambaran Pengetahuan Gizi Mahasiswa Semester Iv Fakultas Kesehatan Masyarakat Universitas Sam Ratulangi Saat Pembatasan Sosial Masa Pandemi Covid-19. Jurnal Kesmas. 2020;9(6).