



The Effect of Nutrition Education Through Animated Video and Poster Towards Body Image, Knowledge, and Attitudes of Balanced Nutrition in Students of SMAN 10 Tangerang

Karina Ariella Pratiwi^{1*}, Iin Fatmawati¹, Dian Luthfiana Sufyan¹, Utami Wahyuningsih¹

¹ Nutrition Study Program, Universitas Pembangunan Nasional Veteran Jakarta, Jakarta, Indonesia

* Email corresponding author: ariella.karina@gmail.com

DOI: 10.52023/ijns.v2i1.4556

Abstract: Nutritional problems can be caused by a person's lack of information related to nutrition. Nutrition education can be one way to overcome nutritional problems that can change a person's knowledge. Education using posters and animated videos is a preventive way because it can facilitate the delivery of health. This research was conducted to determine the effect of nutrition education through animated video and poster towards body image, knowledge, and attitudes of balanced nutrition in students of SMAN 10 Tangerang. The method used in this research is Quasi Experimental with two group pre-test post-test designs. The sample in this study was 40 respondents who were divided into 2 groups, namely the poster group and the animated video group. The statistical test used is the Wilcoxon test and the Mann-Whitney test. The results showed that there was an effect of nutrition education using posters and animated videos on body image knowledge (p-value <0.05). The value of body image knowledge in the video animation group was higher than the poster group (p-value=0.019). So, it can be concluded that animated video media is more effective in increasing body image knowledge compared to poster media.

Key Words: Animated Video, Balanced Nutrition, Body Image, Nutrition Education, Poster

1. INTRODUCTION

The stage of transition experienced by children to the adult stage is known as adolescence. Adolescents experience a lot of physical, cognitive, social, and emotional growth (Widya and Palu, 2019). Changes in body shape and social maturity have an influence on the mental life of adolescents. In addition, teenagers are very concerned about appearance so that they feel worried about a body shape that is less proportional. If adolescents are not given early preparation and lack of education regarding these changes, it will cause anxiety and other negative reactions (Panjaitan, Angelia and Apriani, 2020).

One of the psychological factors found in adolescence is body image. Body image is a visualization made by individuals on body shape and appearance and also can affect individual confidence. Body image and self-confidence have a positive correlation, so the more positive the body image, the higher the level of self-confidence of the individual (Handayani, Muslim and Medan, 2018).



Adolescents are also prone to nutritional problems such as underweight or overweight. Body image and imbalance between food intake and body needs is one aspect that can determine nutritional status in adolescents. This is also usually caused by a lack of understanding of nutrition which makes teenagers think that eating a little can make the body thin and slim and produce a good body image.

The 2018 Riskesdas data on adolescents aged 16-18 years, shows the prevalence of underweight nutritional status is 8.1%, while the prevalence of adolescent obesity nutritional status is 13.5%. According to the 2018 Riskesdas data in Banten province, adolescents aged 16-18 years showed the prevalence of underweight nutritional status was 9.1% and the prevalence of obesity nutritional status was 13.3% (Kementerian Kesehatan RI, 2019).

In Widiyanti's (2012) research, it is known that there is a prevalence of 40.3% of adolescents who are dissatisfied with their body shape. This does not only occur in adolescents who have obesity nutritional status, but also occurs in underweight and normal nutrition status. Teenagers with a thin body assume that the ideal body posture is a slim body posture. So usually teenagers do not pay attention to their nutritional intake and needs in getting the desired body posture.

By increasing the knowledge of adolescents regarding body image and balanced nutrition, they can understand and apply a healthy lifestyle. Because the fulfillment of a balanced nutrition can play an important role in influencing the nutritional state and health of a person. Providing nutrition education can increase awareness and change people's behavior to control health, so that there will be positive behavioral changes related to food and nutrition (Rusdi and Rahmy, 2021). The aim of this study was to determine the effect of nutrition education through animated video and poster towards body image, knowledge, and attitudes of balanced nutrition in students of SMAN 10 Tangerang.

2. METHODS

This type of research is the Quasi Experiment with a two-group pretest-posttest design approach, namely a design by giving pre-test and post-test to both groups with different media. This research was conducted in May 2022 and was carried out at SMAN 10 Tangerang.

The population of this study was taken by determining the quality and special characteristics that have been determined by the researcher, namely all students of class XI SMAN 10 Tangerang, totaling 20 people in each media group. Sampling was done using a random sampling technique, which is a random sample with the aim that every student has the same opportunity to become a respondent in this study.

The data used in this study are primary data and secondary data. Primary data is data obtained directly by researchers who come from the main source through filling out questionnaires in the form of questions. The questionnaire that researchers used was a questionnaire containing the identity of the respondent, Figure Rating Scale (FRS), Body Shape Questionnaire (BSQ), knowledge of Body Image, Knowledge of Balanced Nutrition, and Attitude of Balanced Nutrition. While secondary data is data obtained from data on the number of student populations at SMAN 10 Tangerang from school archives. The analytical test used is the Wilcoxon Test and the Mann-Whitney Test.

This research has been approved by the Health Research Ethics Commission Universitas Pembangunan Nasional Veteran Jakarta under number 147/V/2022/KEPK.

3. RESULTS AND DISCUSSION

Univariate Analysis

Tabel 1. Characteristics of Respondents

Characteristics of Respondents	Poster		Animated Video	
	n	%	n	%
Age				
16	9	45%	7	35%
17	11	55%	13	65%
Total	20	100%	20	100%
Gender				
Male	7	35%	9	45%
Female	13	65%	11	55%
Total	20	100%	20	100%
Nutritional Status				
Extremely Underweight	1	5%	0	0%
Underweight	1	5%	1	5%
Normal	16	80%	19	95%
Obese	2	10%	0	0%
Total	20	100%	20	100%

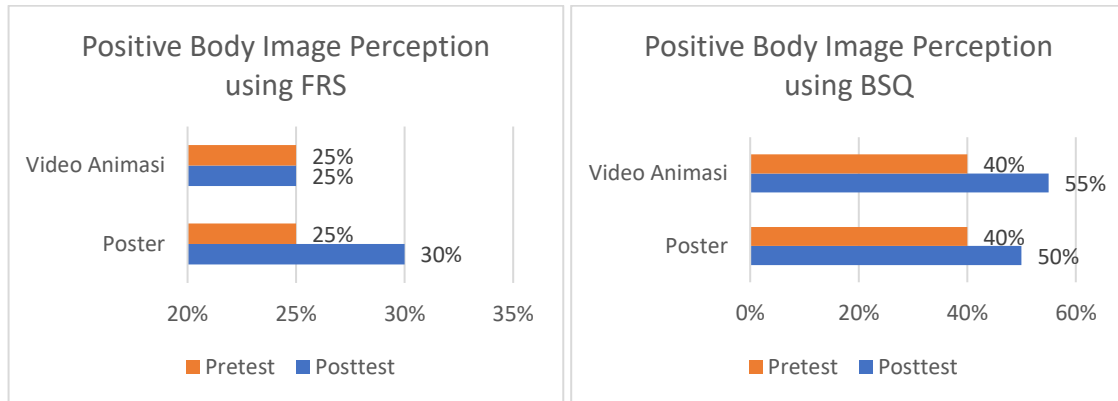
Source: Primary Data 2022

Based on Table 1, the age of the respondents was in the range between 16-17 years in the two intervention groups. The respondents studied were students of class XI MIPA and XI IPS at SMA Negeri 10 Tangerang. In the poster group there are the highest number of respondents aged 17 years, as many as 55% of respondents and in the video animation group there are the highest number of respondents aged 17 years, as many as 65% of respondents.

Gender in this study was divided into two groups, namely male and female. Based on table 1, it was found that most of the sexes in this study were women in the two intervention groups. In the poster group there were 65% female respondents and in the video animation group there were 55% female respondents.

Nutritional status in this study was divided into five groups, namely extremely underweight, underweight normal, obese, and overweight. From the table above, the most nutritional status in this study was in the normal category. In the poster group, there were 80% of respondents who obtained normal nutritional status and in the animated video group there were 95% of respondents who obtained normal nutritional status.

Tabel 2. Frequency Distribution of Body Image Perception using Figure Rating Scale and Body Shape Questionnaire



Source: Primary Data 2022

The results of the statistical test in table 2 show that there is an increase in body image perception in both media groups using the Body Shape Questionnaire method. While the Figure Rating Scale method only increased in the poster group.

This is in line with Sari's (2021) research that there is an increase in body image perceptions in a positive direction using poster media. In this study, it showed that there was an increase of 3.8% of respondents whose perceptions changed to positive body image perceptions with poster media. Meanwhile, in the animated video group, there was no increase in perception.

The results of this study are different from the research of Masitah and Pamungkasari (2017) which states that there is a positive body image change in the animated video group. This could be due to the fact that the study was conducted once a week for a month, while this study was only conducted three times due to the limited time of the study. The length of exposure can affect the success of an education. According to Aisah and Ismail (2021), nutrition education can change attitudes, behavior, and healthy living habits if given within a certain period of time.

Tabel 3. Frequency Distribution of Knowledge of Body Image, Knowledge of Balanced Nutrition, and Attitude of Balanced Nutrition

Variable	Category	Poster				Animated Video			
		Pre-test		Post-test		Pre-test		Post-test	
		n	%	n	%	n	%	n	%
Knowledge of Body Image	Good	0	0%	3	15%	2	10%	5	25%
	Fair	6	30%	12	60%	10	50%	15	75%
	Poor	14	70%	5	25%	8	40%	0	0%
	Total	20	100%	20	100%	20	100%	20	100%
Knowledge of Balanced Nutrition	Good	9	45%	17	85%	15	75%	19	95%
	Fair	9	45%	1	5%	4	20%	1	5%
	Poor	2	10%	2	10%	1	5%	0	0%

	Total	20	100%	20	100%	20	100%	20	100%
Attitude of Balanced Nutrition	Good	10	50%	15	75%	12	60%	13	65%
	Fair	8	40%	5	25%	8	40%	7	35%
	Poor	2	10%	0	0%	0	0%	0	0%
	Total	20	100%	20	100%	20	100%	20	100%

Source: Primary Data 2022

The results of the statistical test in table 3 show that there is an increase in body image knowledge in the both media groups. As in Sari's (2021) research, there is a change in body image knowledge which tends to increase in a positive direction using poster media and also animated videos. In Meidiana, Simbolon and Wahyudi's (2018) research also stated that there was a significant difference in the average value of adolescent knowledge after being given the nutrition education.

The results of statistical tests on knowledge of balanced nutrition also showed that there was an increase in both media groups. As in the research conducted by Rinarto (2021) explaining that education on balanced nutrition knowledge has increased the value of balanced nutrition knowledge after being given education. Research conducted by Ramadhani and Khofifah (2021) also found that after being given counseling related to balanced nutrition guidelines, there was an increase in knowledge of adolescents in Bedingin Wetan Village.

From the research of Riski Sefrina et al., (2018), it is known that the majority of adolescents, 93.3% who have a negative body image perception, do not know the meaning of body image and the notion of an ideal body shape. This proves that teenagers who already have normal nutritional status still feel that their body shape is not ideal. One that can affect the creation of a negative body image is the level of satisfaction with your body shape is low. Usually, teenagers who have a thin body think that the ideal body is a slim body shape. In addition, adolescent girls usually want to lose four times more weight than boys (Salsabilla, Syah and Asna, 2018).

Not a few respondents who still do not know about balanced nutrition because most of them still know the slogan 4 healthy 5 perfect. With the provision of this education, it can help respondents know about the development of nutritional knowledge that has changed. After being given education, respondents can understand if the slogan 4 healthy 5 perfect has been developed and refined into a balanced nutrition guideline. By increasing students' knowledge of balanced nutrition, students are able to understand and apply the messages contained in balanced nutrition guidelines. So that it can help students organize and choose good food for them to consume.

Then the results of statistical tests on balanced nutrition attitude showed that there was an increase in both media groups. This is the same as the research by Ardie and Sunarti (2019) that there was an increase in knowledge and attitudes after being given education through video about balanced nutrition. Then in the study of Tavassoli et al. (2015) there was also an increase in students' knowledge, attitudes, and performance after being given nutrition education on nutritional patterns. Furthermore, in Rusdi and Rahmy's (2021) research, there was also an increase in attitudes after the provision of nutrition education.

In addition to knowledge, attitudes can also be formed from the provision of education. According to Lingga (2015), attitude is a view and a tendency to act towards an object. In

addition, attitudes can be formed due to the influence of several components, such as the cognitive component which is related to beliefs and one's opinion or thoughts about objects. Health nutrition education is a planned and dynamic learning with the aim of modifying behavior by increasing knowledge, changing attitudes, and skills related to improving healthy life in a positive direction (Ramadhani and Khofifah, 2021).

Bivariate Analysis

Tabel 4. Differences in the Effect of Nutrition Education on Body Image Perception, Knowledge of Body Image, Knowledge of Balanced Nutrition, and Attitude of Balanced Nutrition

Body Image Perception (FRS)	Mean	SD	Min-Max	P-value
Poster				
<i>Pre-test</i>	-0,25	1.517	-4-2	1.000
<i>Post-test</i>	-0,25	1.251	-3-2	
Animated Video				
<i>Pre-test</i>	-0,55	1.395	-3-2	0.830
<i>Post-test</i>	-0,45	1.146	-3-2	
Body Image Perception (BSQ)	Mean	SD	Min-Max	P-value
Poster				
<i>Pre-test</i>	41.65	17.358	16-72	0.985
<i>Post-test</i>	40.90	18.519	17-77	
Animated Video				
<i>Pre-test</i>	47.90	20.883	16-84	0.087
<i>Post-test</i>	39.95	17.742	16-83	
Knowledge of Body Image	Mean	SD	Min-Max	P-value
Poster				
<i>Pre-test</i>	46.25	19.186	15-80	0.003
<i>Post-test</i>	66.75	14.804	35-90	
Animated Video				
<i>Pre-test</i>	61.25	15.549	35-90	0.004
<i>Post-test</i>	76.50	8.127	65-90	
Knowledge of Balanced Nutrition	Mean	SD	Min-Max	P-value
Poster				
<i>Pre-test</i>	72.75	18.882	25-100	0.077
<i>Post-test</i>	82.75	20.031	25-100	
Animated Video				
<i>Pre-test</i>	79.75	19.767	5-100	0.001
<i>Post-test</i>	93.25	6.935	75-100	
Attitude of Balanced Nutrition	Mean	SD	Min-Max	P-value

Poster				
<i>Pre-test</i>	74.0845	10.67087	50.00-93.33	0.179
<i>Post-test</i>	77.6670	8.57317	58.33-88.33	
Animated Video				
<i>Pre-test</i>	77.2490	6.56210	65.00-85.00	0.485
<i>Post-test</i>	78.8325	9.95823	58.33-90.00	

Source: Primary Data 2022

In table 4, it is known that there is no significant difference in the average value before and after nutrition education with posters and animated videos using the Figure Rating Scale and Body Shape Questionnaire methods ($p\text{-value} > 0.05$). This is in accordance with Sari's (2021) research which found that in the two intervention groups before and after the provision of nutrition education on body image perceptions, there was no significant difference ($p\text{-value} > 0.05$).

One that affects the creation of a negative body image is the level of satisfaction with the body shape that is owned is low. Usually, teenagers who have a thin body think that the ideal body is a slim body shape. In line with the research of Amar, Puspita and Nasrullah (2018), it is proven that there are many young women who have normal nutritional status but still want a thinner body shape.

In table 4, it is known that there is a significant difference in the average value before and after nutrition education with posters and animated videos on body image knowledge ($p\text{-value} < 0.05$). Like Sari's (2021) research, there is a significant difference in knowledge of body image using poster media and animated video media ($p\text{-value} = 0.000$). In Beatrice's (2021) study there were also Wilcoxon test results with $p\text{-value} < 0.05$ which stated that there was a significant difference between the average value of knowledge before and after giving education using posters and videos.

The existence of a stimulus can affect changes in the increase in knowledge of a subject (Lubis, Lubis and Syahril, 2019). One of the aspects needed to increase understanding related to health and nutrition is the knowledge one has. So that it can provide encouragement and motivation in changing attitudes and behavior to be more positive (Rahmad and Almunadia, 2017).

In table 4, it is known that there is a significant difference in the average value before and after nutrition education with video media on balanced nutrition knowledge ($p\text{-value} < 0.05$). While on the poster media there is no significant difference in the average value before and after nutrition education ($p\text{-value} > 0.05$).

This can happen because the increase in nutritional knowledge in the poster group before and after education is not too significant. Because there are still respondents who have poor knowledge after being given nutrition education. Low knowledge can be caused by a lack of nutritional knowledge due to lack of nutrition socialization. In accordance with Soekirman's (2011) research, people are still unfamiliar with balanced nutrition because there is still a lack of socialization related to balanced nutrition. Everyone has different knowledge, including nutrition knowledge. This can be caused by individual internal and external factors (Arimurti, 2012).

In addition, the poster media only presents images and text, thus allowing for respondents who do not read the whole and do not mean it, and cause the delivery of material to respondents to be incomplete. Meanwhile, the animated video group presents

sound, images, and text, so that the respondent's message is received better. By involving all senses, the use of video media makes information easier to receive and understand and the use of media should stimulate information. Because the more information that is stimulated, the easier it is for information to enter (Mahmud, Mifta Rahayu et al., 2020).

In table 4, it is known that there is no significant difference in the average value before and after nutrition education with posters and animated videos on balanced nutrition attitudes (p -value > 0.05). According to Parapat et al. (2021), attitudes and behavior have a direct relationship because individual attitudes are an important component of health behavior. Positive behavior is not directly caused by the individual's positive attitude, but negative behavior is usually caused by the individual's negative attitude.

This proves that not always good knowledge can produce good attitudes. Because having good nutritional knowledge does not necessarily guarantee that we agree with what we know. Usually nutritional knowledge only reaches the "know" stage, so it can be different if we are faced with the choice of "agree" and "disagree" attitudes. We may know what is right, but it can be a different matter when faced with "agree" and "disagree". In the research of Parapat et al. (2021), this can happen because attitudes are included in personal statements and cannot be separated from personal support. So that attitudes can be formed based on development and when it is formed it will be difficult to shift.

Tabel 5. Media Effectiveness Test Results using Mann Whitney

Variable	Effectiveness	Mean	N	P
Body Image Perception (FRS)	Poster	21.50	20	0.571
	Video Animasi	19.50	20	
Body Image Perception (BSQ)	Poster	20.80	20	0.871
	Video Animasi	20.20	20	
Knowledge of Body Image	Poster	16.23	20	0.019
	Video Animasi	24.78	20	
Knowledge of Balanced Nutrition	Poster	17.13	20	0.062
	Video Animasi	23.88	20	
Attitude of Balanced Nutrition	Poster	19.65	20	0.644
	Video Animasi	21.35	20	

Source: Primary Data 2022

This study shows the results of the Mann-Whitney analysis that there is no significant change in the perception of body image using the Figure Rating Scale (p -value = 0.571), body image perception using the Body Shape Questionnaire (p -value = 0.871), knowledge of balanced nutrition (p -value = 0.062), and attitude of balanced nutrition (p -value = 0.644). Meanwhile, the results of the Mann-Whitney analysis on knowledge of body image showed a significant change with p -value = 0.019 with a higher average in the animated video group. Although both groups showed an increase in body image knowledge, the results of this analysis showed that animated video media was more effective than poster media in increasing body image knowledge.

As in Nurmaria's (2016) research, it was shown that there is the most effective media in increasing students' knowledge of washing hands using soap, namely video media with an average of 62.60. In addition, in Indah's (2021) research, it was found that compared to poster media, video media was more effective in increasing students' knowledge. In

accordance with Yulinda and Fitriyah's (2018) research, it is known that there is an effect of health education using animated video media because respondents can receive the message well, which means that the success of counseling is strongly influenced by the media because it can affect knowledge, attitudes, and also emotions.

Education or providing education becomes more effective when using media compared to conventional methods. The advantage of using media is that the delivery of information becomes more systematic and simple, and also can make individuals more interested (Eliana and Solikhah, 2012). The function of animated media can be entertainment, advertising, and also education (Cingi, 2013). According to (Sukiyasa and Sukoco, 2013), the use of animation media is very effective in learning because it can attract the attention of students. In addition, animated video media can also cause an increase in concentration, imagination, and individual understanding of the information conveyed. So that it can make viewers start to apply what is conveyed in the video into their daily lives (Masitah and Pamungkasari, 2017).

In video media, there are moving images, so that they can convey messages quickly, real, and more comprehensively. In accordance with Indah's (2021) research, it is known that video media is able to provide a stimulus that makes information acceptable to respondents maximally with the senses of hearing (ears) and sight (eyes). Another advantage of video media is that it presents images and sound simultaneously and can display a more real picture because it becomes more interesting and easier to remember, resulting in an increase in memory retention (Mahmud, et al., 2020).

4. CONCLUSION

In this study, the characteristics of the respondents were 17 years old, most of them were female, and most of the respondents had normal BMI. The result of this research analysis is that there is a significant change in body image knowledge in SMAN 10 Tangerang students by providing nutrition education using posters and animated videos. Meanwhile, in the knowledge of balanced nutrition, there were only significant changes in the animated video media, but not in the poster media group. Then it is known that providing education using animated video media is more effective in increasing body image knowledge compared to poster media.

CONFLICT OF INTEREST

The authors declare that there were no conflicts of interest in this study.

ACKNOWLEDGEMENT

The author would like to thank the principals and teachers of SMAN 10 Tangerang, students of SMAN 10 Tangerang, and the Nutrition Studies Program, Faculty of Health Sciences, Pembangunan Nasional Veteran Jakarta University, who have helped this research activity so that it can be carried out well and smoothly, as well as all parties who have helped in this research.

REFERENCES

- Amar, M. I., Puspita, I. D., & Nasrullah, N. (2018). Implementasi Program Bimbingan Persepsi Positive Body Image Terhadap Pengetahuan Gizi Remaja dan Status Gizi Remaja Putri. *Public Health Science Journal*, 10(1), 1–11. <https://journal3.uin-alauddin.ac.id/index.php/Al-Sihah/article/view/4911/4385>
- Ardie, H. F., & Sunarti, S. (2019). Pengaruh Media Video Terhadap Pengetahuan Dan Sikap Tentang Gizi Seimbang Pada Siswa Kelas V Di SDN 016 Samarinda Seberang. *Borneo Student Research (BSR)*, 1(1), 284–289. <https://journals.umkt.ac.id/index.php/bsr/article/view/663>
- Arimurti, D. I. (2012). *Pengaruh Pemberian Komik Pendidikan Gizi Seimbang Terhadap Pengetahuan Gizi Siswa Kelas V Sdn Sukasari 4 Kota Tangerang Tahun 2012*. 171. [http://lib.ui.ac.id/file?file=digital/20320244-S-PDF-Ditta Irma Arimurti.pdf](http://lib.ui.ac.id/file?file=digital/20320244-S-PDF-Ditta%20Irma%20Arimurti.pdf)
- Beatrice, G. (2021). *Pengaruh Pemberian Edukasi Label Informasi Gizi Dengan Video Dan Poster Terhadap Pengetahuan Dan Sikap Ibu Rumah Tangga Di Kelurahan Tanah Tinggi*.
- Cingi, C. C. (2013). Computer Animation in Teaching Surgical Procedures. *Procedia - Social and Behavioral Sciences*, 103, 230–237. <https://doi.org/10.1016/j.sbspro.2013.10.330>
- Eliana, D., & Solikhah, . (2012). Pengaruh Buku Saku Gizi Terhadap Tingkat Pengetahuan Gizi Pada Anak Kelas 5. *Kes Mas*, 6(2), 162–232.
- Faza Yasira Rusdi, Hafifatul Auliya Rahmy, H. (2021). *Pengaruh edukasi gizi menggunakan instagram terhadap perubahan perilaku gizi seimbang untuk pencegahan anemia pada remaja putri di sman 2 padang*. 10(April), 31–38.
- Handayani, A. T., Muslim, U., & Medan, N. A. (2018). *HUBUNGAN BODY IMAGE DAN IMAGINARY AUDIENCE DENGAN KEPERCAYAAN DIRI PADA REMAJA DI SMA Setiap manusia terlahir dengan memiliki rasa percaya diri , namun tidak semua orang bisa memiliki rasa percaya diri yang tinggi . Demikian juga dengan rasa percaya diri .* 3(1), 319–324.
- Indah, J. (2021). Efektivitas penggunaan poster dan video dalam meningkatkan pengetahuan dan sikap tentang buah dan sayur pada siswa Dayah Terpadu Inshafuddin. *Jurnal SAGO Gizi Dan Kesehatan*, 2(2), 129–135.
- Kementerian Kesehatan RI. (2019). Laporan Provinsi Jawa Barat, Riskesdas 2018. In *Lembaga Penerbit Badan Penelitian dan Pengembangan Kesehatan*.
- Lingga, N. L. (2015). *PENGARUH PEMBERIAN MEDIA ANIMASI TERHADAP PERUBAHAN PENGETAHUAN DAN SIKAP GIZI SEIMBANG PADA SISWA KELAS VI SEKOLAH DASAR NEGERI TANJUNG DUREN UTARA 01 PAGI JAKARTA BARAT*.
- Lubis, Z. S., Lubis, N. L., & Syahrial, E. (2019). *Pengaruh penyuluhan dengan metode ceramah dan diskusi terhadap peningkatan pengetahuan dan sikap anak tentang PHBS*. 3(2252), 58–66.
- Masitah, R., & Pamungkasari, E. T. I. P. (2017). Body Image Remaja Effect of Nutrition Education With Animated Video on Perception of Teen Body Image. *Journal of Nursing and Public Health*, 5(1), 88–94.
- Meidiana, R., Simbolon, D., & Wahyudi, A. (2018). Pengaruh Edukasi melalui Media Audio Visual terhadap Pengetahuan dan Sikap Remaja Overweight. *Jurnal Kesehatan*, 9(3), 478. <https://doi.org/10.26630/jk.v9i3.961>
- Mifta Rahayu Mahmud, Ria Ambarwati, Sri Noor Mintarsih, Setyo Prihatin, and M. J. (2020). *EFEKTIFITAS EDUKASI DENGAN MEDIA AUDIOVISUAL TERHADAP PENGETAHUAN*

- DAN SIKAP TENTANG GIZI SEIMBANG. *Jurnal Online Politeknik Kesehatan Kemenkes Semarang*.
- Nur Widiati, A. C. K. (2012). *of Nutrition College , Volume Nomor Tahun Halaman of HUBUNGAN ANTARA BODY IMAGE DAN PERILAKU MAKAN DENGAN STATUS GIZI REMAJA PUTRI DI SMA THERESIANA SEMARANG. 1.*
- Nurmaria, Y. and. (2016). Pengaruh Pendidikan Kesehatan Menggunakan Media Poster, Video Dan Leaflet Terhadap Pengetahuan Siswa Dalam Mencuci Tangan Menggunakan Sabun. *Jurnal Ilmiah Kesehatan, 5(9)*. <https://doi.org/10.35952/jik.v5i9.27>
- Panjaitan, A. A., Angelia, S., & Apriani, N. (2020). Sikap Remaja Putri Dalam Menghadapi Perubahan Fisik Saat Pubertas. *Jurnal Vokasi Kesehatan, 6(1)*, 42. <https://doi.org/10.30602/jvk.v6i1.213>
- Parapat, R. G. D. V., Melani, V., Wahyuni, Y., Nuzrina, R., & Sitoayu, L. (2021). Perbedaan Pengetahuan Gizi, Sikap Dan Perilaku Tentang Visual Gizi Seimbang Antara Dua Generasi Di Gereja GSKI Rehobot Kebon Jeruk Jakarta. *Journal of Nutrition College, 10(2)*, 120–129. <https://doi.org/10.14710/jnc.v10i2.29140>
- Rahmad, A. H. Al, & Almunadia, A. (2017). Pemanfaatan Media Flipchart Dalam Meningkatkan Pengetahuan Ibu Tentang Konsumsi Sayur Dan Buah. *Jurnal Kedokteran Syiah Kuala, 17(3)*, 140–146. <https://doi.org/10.24815/jks.v17i3.9062>
- Ramadhani, K., & Khofifah, H. (2021). Edukasi Gizi Seimbang sebagai Upaya Meningkatkan Pengetahuan pada Remaja di Desa Bedingin Wetan pada Masa Pandemi COVID-19. *Jurnal Kesehatan Global, 4(2)*, 66–74. <https://doi.org/10.33085/jkg.v4i2.4853>
- Rinarito, D. L. (2021). *Pengaruh Edukasi Dengan Media Sosial Instagram Dan Youtube Terhadap Pengetahuan Gizi Seimbang Pada Siswa Sma Negeri 1 Cikarang Utara.*
- Riski Sefrina, L., Elvandari, M., Rahmatunisa, R., & Ronggowaluyo, J. H. (2018). Faktor-Faktor yang Berhubungan dengan Body Image pada Remaja di Karawang. *Nutrire Diaita, 10*, 35.
- Salsabilla, H., Syah, M. N. H., & Asna, A. F. (2018). Hubungan Citra Tubuh dengan Status Gizi pada Remaja di STIKes Mitra Keluarga. *Nutrire Diaita, 10(1)*, 66–74.
- Sari, B. R. (2021). *Pengaruh Edukasi Gizi Dengan Media Video Animasi Terhadap Body Image Di Sma Laboratorium Percontohan Upi Bandung Tahun 2020.*
- Siti Aisah, Suhartini Ismail, A. M. (2021). *Edukasi Kesehatan dengan Media Video Animasi : Scoping Review. 5(1)*, 641–655.
- Soekirman. (2011). Taking the Indonesian nutrition history to leap into betterment of the future generation: Development of the Indonesian Nutrition Guidelines. *Asia Pacific Journal of Clinical Nutrition, 20(3)*, 447–451.
- Sukiyasa, K., & Sukoco, S. (2013). Pengaruh media animasi terhadap hasil belajar dan motivasi belajar siswa materi sistem kelistrikan otomotif. *Jurnal Pendidikan Vokasi, 3(1)*, 126–137. <https://doi.org/10.21831/jpv.v3i1.1588>
- Tavassoli, E., Vardanjani, A., Reisi, M., Javadzade, H., & Pour, Z. (2015). The Effect of nutrition education on knowledge, attitude, and performance about junk food consumption among students of female primary schools. *Journal of Education and Health Promotion, 4(1)*, 53. <https://doi.org/10.4103/2277-9531.162349>
- Widya, S., & Palu, N. (2019). HUBUNGAN CITRA TUBUH, AKTIVITAS FISIK, DAN PENGETAHUAN GIZI SEIMBANG DENGAN STATUS GIZI REMAJA PUTRI Hepti Mulyati,

- Ahmil, Lastri Mandola. *Chmk Midwifery Scientific Journal*, 2(1), 22–32.
- Yulinda, A., & Fitriyah, N. (2018). Efektivitas Penyuluhan Metode Ceramah Dan Audiovisual Dalam Meningkatkan Pengetahuan Dan Sikap Tentang sadari di SMKN 5 Surabaya. *Jurnal Promkes*. <https://e-journal.unair.ac.id/PROMKES/article/viewFile/6439/5917>