

ISSN 2597- 6052DOI: <https://doi.org/10.56338/mppki.v7i7.5379>**MPPKI****Media Publikasi Promosi Kesehatan Indonesia**
*The Indonesian Journal of Health Promotion***Research Article****Open Access**

The Effect of Providing Brochure Media, Educational Video, and Power point on Knowledge Food Processing Sanitation Hygiene (Studi on Roadside Traders in East Telukjambe District, Karawang)

Latifah Wardayanto^{1*}, Ratih Kurniasari²¹Program Studi Gizi, Fakultas Ilmu Kesehatan, Universitas Sinagperbangsa Karawang²Program Studi Gizi, Fakultas Ilmu Kesehatan, Universitas Sinagperbangsa Karawang* Corresponding Author: latifahwrdynt0@gmail.com

ABSTRACT

Introduction: Fulfillment of nutrients to obtain energy to support life and daily activities can be done through food consumption. Food should have a good impact on the body because the nutritional content can be dangerous if it is contaminated with harmful substances, one of which is snack food. To increase understanding of sanitary hygiene in food processing among traders, promotive efforts are therefore made through increasing knowledge in educational activities

Objective: This research aims to determine the effect of providing educational media, namely Brochures, Educational Videos, Powerpoint regarding knowledge and practices of food hygiene and sanitation to traders in Teluk Jambe Timur Karawang District.

Method: The method used in this paper is quasi-experimental with pre-test and post-test group design. The total sample of respondents in this study was 45 respondents who were selected by purposive sampling including three groups with educational treatment using brochure media, educational video media, and Powerpoint media. Statistical test data analysis was carried out with the Wilcoxon.

Result: The results of the Wilcoxon test showed differences in knowledge regarding food processing hygiene and sanitation before and after education using brochure media (p-value = 0.001), video media (p-value = 0.004) and Powerpoint media (p-value = 0.001).

Conclusion: The three media education, video media gave higher results compared to the other two media on the effect of increasing knowledge about food processing hygiene and sanitation

Keywords: Education; Hygiene; Sanitary; Knowledge; Traders

INTRODUCTION

Humans need food and drink to fulfill their nutritional needs for survival (1). Nutrients are an important part needed by the body to obtain energy to support life and daily activities. Consumption efforts can be made in order to fulfill nutrients. Food that should have a good impact on the body because of its nutrient content can be harmful if it is contaminated with harmful substances.

Food contamination by other foreign materials such as chemicals, dust, hair and other residues can have adverse health effects. In addition, food that spoils easily can become a breeding medium for microbes or germs. Food contaminated with microbes carries pathogens that can cause foodborne disease (2). A person who consumes such food can cause mild or severe illness or poisoning to cause death (3).

Snacks are food or drinks that can be consumed directly and are sold in public places such as markets and on the roadside at stands, carts, or trucks. Packaging that is commonly used for food that is sold to make it look attractive to consumers is usually packaged in attractive shapes, colors, and aromas (4).

However, in this case, it is necessary to pay attention to hygiene and sanitation standards in the food being peddled. Health problems can occur if the food derived from these snacks is made in less hygienic conditions or uses hazardous ingredients. Hygiene sanitation is an effort to control risk factors in hazardous activities or actions in the food production process, until it is served to customers, as well as the place of equipment (5).

One way to improve knowledge by providing information about the importance of hygiene and sanitation to traders can be done with nutrition education. In addition, individual knowledge can also be obtained from theories and experiences that have been done (6). According to Notoatmodjo (2007), experience and learning can shape knowledge. Good knowledge influences good attitudes and behavior in preparing snacks that maintain sanitary hygiene so that they remain safe and nutritious.

To increase understanding of hygiene sanitation in food processing in traders, therefore, promotive efforts are made through increasing knowledge in educational activities in the form of interventions using media, namely Brochures, Educational Videos, Powerpoint. The purpose of this paper is to determine the effect of providing educational media, namely Brochures, Educational Videos, Powerpoints related to knowledge and practices of food hygiene and sanitation in traders in Teluk Jambe Timur District, Karawang.

METHOD

The method used in this reseach is quasi experimental with pre test and post test group design. In this study describes the comparison between 3 groups of media treatment used. The population in this study were traders who sell in the TelukJambe Timur sub-district of Karawang. The total sample of respondents in this study amounted to 45 respondents selected by purposive sampling including group 1 with educational treatment using brochure media, group 2 with educational treatment using educational video media, and group 3 with educational treatment using powerpoint media. Treatment with brochure media is carried out at each selling place, treatment in groups with educational video media is given through WhatsApp groups, and treatment in groups with powerpoint media through online zoom meetings. The provision of education using the three media was carried out on May 1-6, 2023. In the initial stage, a search for respondents was carried out in the TelukJambe Timur sub-district area of Karawang, then before the intervention the respondents were given a pre-test and then an educational intervention was carried out according to each control group. After that the respondents were given a post test to determine the results or effect of the intervention that had been given. The respondents also calculated body mass index (BMI) measurements by measuring body weight (BB) and height (TB). Calculation of BMI to assess nutritional status is obtained from the division of body weight (in kilograms) by the square of height (in meters) (7). Based on the classification of IMT nutritional status according to PGN (2014) a person is classified to have a nutritional status of thin with a heavy category if their IMT is less than 17 and a light category with IMT 17.0-18.4, normal nutritional status with IMT 18.5-25, and fat with a light category if their IMT 25.1-27 and a heavy category of IMT>27. The data on the results of the study in the form of knowledge is data obtained from filling out questionnaires before and after educational interventions, in data analysis using the Paired t test if the data is normally distributed or the Wilcoxon Nonparametric test if the data is not normally distributed with the help of the IBM SPSS version 25.0 application.

RESULTS

Sample characteristics in this study are a description of the sample identity of the research sample that has been determined. The characteristics of this sample aim to provide an overview of the description of the sample of each respondent. In sampling this study, sample characteristics were grouped according to gender, age, latest education, monthly income, length of time selling and nutritional status of respondents. The results of the respondents' characteristics are shown in table 1 below.

Table 1. Distribution of Respondent Characteristic

Category	Brochur		Video		Powerpoint	
	n	%	n	%	n	%
Gender						
Man	11	73,3	11	73,3	14	93,3
Woman	4	26,7	4	26,7	1	6,7
Totals	15	100,0%	15	100,0%	15	100,0%
Age						
19-38 years	9	60	13	86,7	14	93,3
39-58 years	5	33,3	1	6,7	1	6,7
>58 years	1	6,7	1	6,7	-	-
Total	15	100,0%	15	100,0%	15	100,0%
Latest Education						
SD	-	-	2	13,3	1	6,7
SMP	2	13,3	2	13,3	1	6,7
SMA	12	80	10	66,7	11	73,3
Lainnya	1	6,7	1	6,7	2	13,3
Totals	15	100,0%	15	100,0%	15	100,0%
Monthly Income						
<300.000	2	13,3	2	13,3	-	-
300.000-500.000	2	13,3	1	6,7	-	-
>500.000	11	73,3	12	80	15	100
Totals	15	100,0%	15	100,0%	15	100,0%
Length of Time Selling						
<3 years	9	60	2	13,3	5	33,3
3-5 years	-	-	5	33,3	2	13,3
>5 years	6	40	8	53,3	8	53,3
Totals	15	100,0%	15	100,0%	15	100,0%
Nutritional Status (IMT/U)						
Underweight	1	6,7	-	-	-	-
Normal	9	60	9	60	12	80
Obese	5	33,3	6	40	3	20
Totals	15	100,0%	15	100,0%	15	100,0%

Based on the distribution of table 1 shows that in the brochure and video intervention groups with a percentage of male gender as much as 73.3% and female 26.7%, while in the Powerpoint group the percentage of men was 93.3% and women 6.7%. The highest percentage of age was in the range of 19-38 years in the brochure group as much as 60%, video group 86.7%, and powerpoint group 93.3%. Most respondents had a high school education history in the brochure group with a percentage of 80%, the video group as much as 66.7, and the powerpoint group 73.3%. Based on the monthly income earned by respondents, most of them were in the >500,000 category as much as 73.3% in the brochure group, 80% in the video group and 100% in the powerpoint group. In the brochure group, 60% of respondents have been selling for >3 years, while in the video and powerpoint groups, 53.3% of respondents have been selling for >5 years. Based on the nutritional status of respondents, most of them have normal nutritional status in the brochure and video groups as much as 60%, while the powerpoint group is 80%.

Table 2. Frequency Distribution of Respondents' Knowledge

Media	Before		After	
	n	%	n	%
Brochur				
Fair	5	33,3	1	6,7
Good	10	66,7	14	93,3
Total	15	100,0	15	100,0
Video				
Fair	6	40,0	1	6,7
Good	9	60,0	14	93,3
Total	15	100,0	15	100,0
Powerpoint				
Fair	4	26,7	-	-
Good	11	73,3	15	100,0
Total	15	100,0	15	100,0

Based on the results of the knowledge frequency distribution in Table 2, it shows that there is an increase in the knowledge of most respondents after the intervention of the three media uses. A total of 15 respondents from each media studied, in the use of brochure media after the intervention obtained an increase of 26.6%, in respondents with video media obtained an increase of 33.3% and with powerpoint media an increase of 26.7%.

Table 3. The Influence of Medias of Respondent' Knowledge

Pengetahuan	Pre-Test		Post-Test		p-value
	Min-Max	Mean \pm SD	Min-Max	Mean \pm SD	
Brochure	9-14	12.67 \pm 1.345	12-15	14.00 \pm 0.926	0.001
Video	11-15	12.87 \pm 1.470	12-15	14.20 \pm 0.775	0.004
Powerpoint	11-15	13.27 \pm 1.163	13-15	14.47 \pm 0.640	0.001

Table 3 shows that the group with brochure media before being given a brochure hygiene sanitation knowledge of respondents with an average value or mean of 12.67 with a standard deviation of 1.345 and increased to 14.00 with a standard deviation of 0.926 after being given a brochure media. The results of the Wilcoxon statistical test on knowledge obtained p-value (0.001) or p-value <0.05 which means that there is a significant difference between the knowledge of respondents before and after being given media in a brochure.

In the group with video media, the average or mean value of 12.87 with a standard deviation of 1.470 increased to 14.20 with a standard deviation of 0.775 after being given media in the form of videos. The results of the Wilcoxon statistical test on knowledge obtained p-value (0.004) or p-value <0.05, which means that there is a difference between the knowledge of respondents before and after being given media in the form of videos.

In the group with powerpoint media, the average or mean value of 13.27 with a standard deviation of 1.163 increased to 14.47 with a standard deviation of 0.640 after being given media in the form of powerpoint. The results of the Wilcoxon statistical test on knowledge obtained p-value (0.001) or p-value <0.05, which means that there is a difference between the knowledge of respondents before and after being given media in a video.

DISCUSSION

Data from each respondent is obtained through the results of filling out a questionnaire. The questionnaire given to respondents is a questionnaire that has been tested for validity and reliability beforehand with the number of questions according to the material on the researcher's media totaling 15 questions.

The Influence of Brochure Media of Knowledge about hygiene sanitation



Picture 1. Providing Brochur Media

The results showed that respondents' knowledge increased after being given a brochure, seen from the average value after being given a brochure increased compared to the average value before being given media in the form of a brochure. The provision of brochures was carried out once where the knowledge variable was measured once before being given a brochure media and 1 week after being given a poster.

During the process of providing education, respondents were directed to fill out a questionnaire given before and after being given the brochure media. Each respondent was given a brochure as reading material and media when conducting educational interventions. The brochure given to respondents contains information accompanied by illustrative images regarding the definition of sanitary hygiene, principles in sanitary hygiene and food processing,

and explanations related to things that need to be considered when processing food. After analyzing the Wilcoxon statistical test on knowledge, the p-value (0.001) or p-value <0.05 means that there is a significant difference between respondents' knowledge before and after being given media in the form of brochures. According to Atikah, D., et al (2018) research, the improvement of personal hygiene practices is significantly impacted by the distribution of visual media on sanitation hygiene. The distribution of visual media in this study is thought to have the potential to improve food handlers' knowledge, which could have an impact on enhancing personal hygiene practices ($p = 0.001$) (8). Medeiros., et al (2011) states there is research correlating sanitation hygiene training and the provision of visual media to changes in health-related behaviors and practices (9).

The Influence of Video Media of Knowledge about hygiene sanitation



Picture 2. Providing Video Media

The results showed that respondents' knowledge increased after being given a video, it can be seen from the average value after being given a video increased compared to the average value before being given media in the form of a video. The video was given 1 time where the knowledge variable was measured 1 time before being given video media and 1 week after being given the video. The video provided as educational media was made using Canva software with voice filling by researchers and the video is 3 minutes long.

During the process of providing education, respondents were directed to fill out a questionnaire given before and after being given a media brochure. The sample that has been selected in the group with video media intervention is made a whatsapp group and each respondent is directed to view the video provided through the whatsapp chat group. The video given to respondents contains information accompanied by illustrative images regarding the definition of sanitary hygiene, principles in sanitary hygiene and food processing, and explanations related to things that need to be considered when processing food. After analyzing the Wilcoxon statistical test on knowledge, the p-value (0.004) or p-value <0.05 means that there is a significant difference between the knowledge of respondents before and after being given media in the form of videos. This education showed the highest effect compared to providing education using brochures and powerpoints.

This is consistent with Meidiana, R., et al (2018) research that the provision of video media in the form of audio-visual media has increased respondents' knowledge as seen from the results of a higher average value after being given video media than the average value before being given video media (10). The results of this study are consistent with Kristiania research (2020), which indicates that there has been an increase in the average attitude score following education through video media or food handler sanitation hygiene videos, with the highest increase reaching 26.6% (11). This research is also supported by Rahayu, A. I., Munifa, M., & Ramadhani, J. research (2022), that the use of video media has proven effective, there is a significant effect with the results of a knowledge p-value of 0.002 (p-value <0.005) and an attitude p-value of 0.003 (pvalue <0.005) about sanitary hygiene in food processing on the level of knowledge and attitude of food handlers at Aulia Catering Service in Palangka Raya City (5).

The Influence of powerpoint Media of Knowledge about hygiene sanitation



Picture 3. Providing powerpoint media

In the results of the research, it was found that the knowledge of respondents increased after being given education with powerpoint media, it can be seen from the average value after being given a powerpoint increased compared to the average value before being given media in the form of powerpoints. The provision of powerpoints was carried out once where the knowledge variable was measured once by filling out a questionnaire before being given the powerpoint media and 1 week after being given the powerpoint.

During the process of providing education, the samples that have been selected in the group with powerpoint media intervention are created in a WhatsApp group and online meetings are held through zoom meetings to provide powerpoint media education. The powerpoint media given to respondents contains information accompanied by illustrative images that are no different from the information contained in brochures and videos. After analyzing the Wilcoxon statistical test on knowledge, the p-value (0.001) or p-value <0.05 is obtained, which means that there is a significant difference between the knowledge of respondents before and after being given media in the form of powerpoints. This study is also according with Arizka and Handajani research (2017) that the results of providing media with power points provide a real increase in knowledge as a tool for conveying hygiene and sanitation information and a significant change in attitude towards food handlers. According to Ababio, et al., (2015) that there was a significant difference in the hygiene practices of food handlers in university canteens after receiving training on good hygiene practices through Powerpoint presentations and video presentations on "Safer Food Better Business"(p=0.001) (12). The research of Wijayanti, et al., (2016), that found counseling combined with PowerPoint on LCD media can improve understanding, supports this study (13). According to Putri, et al., (2023) research, the intervention group that received health education by powerpoint, motion movie, and demonstration had higher knowledge both before and after (p value = 0.000) (14). Power point in this case as a medium that can include several points of information with image design or animation that supports the content of the power point delivery (15). In addition to functioning as an information medium such as a slide show, the media also functions as a source of knowledge, both through conversation and other learning activities (16).

CONCLUSION

This research concludes that the provision of educational media in the form of brochures, videos and powerpoints has an effect on increasing knowledge for traders regarding sanitary hygiene in food processing. However, in the results of this research, the provision of education using video media provides higher results compared to the other two media.

SUGGESTION

In addition to the use of media for further research, education using other media can be carried out to improve knowledge and attitudes for traders. In addition, it is necessary to increase awareness of the application of hygiene sanitation in food processing such as the use of equipment when processing food such as aprons, gloves and masks and clean processing equipment to maintain hygiene and sanitation and avoid foodborne disease.

REFERENCES

1. Rahmayani. Hubungan Pengetahuan, Sikap dan Tindakan Hygiene Sanitasi Pedagang Makanan Jajanan di Pinggir Jalan. *J AcTion Aceh Nutr J.* 2018;3(2):172–8.
2. Syahrizal. Escherichia Coli Diperalatan Makan Pada Warung Makan (Hygiene sanitation food handlers to the content of escherichia coli on cutlery at food stalls). *J AcTion Aceh Nutr J.* 2017;2(2):132–6.
3. Ismainar H, Harnani Y, Sari NP, Zaman K, Studi P, Ilmu S, et al. Hygiene dan Sanitasi Pada Pedagang Makanan Jajanan Murid Sekolah Dasar di Kota Pekanbaru , Riau. 2022;21(1):27–33.
4. Susilowati RP, Hartono B, Stephen BR, Biologi D, Kedokteran F, Kristen U, et al. Literature Review : Pengaruh Kebiasaan Jajan dan Higienitas Jajanan terhadap Kejadian Diare pada Anak SD Literature Review :

- Influence of Street Food Consumption Habits and Street Food Hygiene on Diarrhea Incidents among Primary Students. *J MedScientiae*. 2022;1(1):28–39.
5. Rahayu AI, Munifa, Ramadhani J. Pengaruh Pemberian Penyuluhan Gizi Menggunakan Media Video Tentang Higiene Sanitasi dalam Pengolahan Makanan pada Aulia Catering Service di Kota Palangkaraya. *J Surya Med*. 2022;8(3):210 – 217.
 6. Junaedi H, Wahyuningsih T. Tingkat Pengetahuan Dan Praktik Penjamah Makanan Tentang Hygiene Dan Sanitasi Makanan Pada Warung Makan Di Tembalang Kota Semarang Tahun 2008. *J Promosi Kesehat Indones*. 2008;4(1):50–60.
 7. Abineno AP, Malinti E. Hubungan Indeks Massa Tubuh dengan Tekanan Darah pada Orang Dewasa. *Indones J Nurs Heal Sci*. 2022;3(1):35–40.
 8. Khairina AD, Palupi IR, Prawiningdyah Y. Pengaruh Media Visual Higiene Sanitasi Makanan Terhadap Praktik Higiene Penjamah Makanan di Kantin Kampus. *J Heal Educ*. 2018;3(2):65–74.
 9. Medeiros CO, Cavalli SB, Salay E, Proença RPC. Assessment of the methodological strategies adopted by food safety training programmes for food service workers: A systematic review. *Food Control*. 2011;22(8).
 10. Meidiana R, Simbolon D, Wahyudi A. Pengaruh Edukasi melalui Media Audio Visual terhadap Pengetahuan dan Sikap Remaja Overweight. *J Kesehat*. 2018;9(3):478–84.
 11. Kristiania E. Penggunaan Media Video Terhadap Perubahan Pengetahuan, Sikap, dan praktik higiene sanitasi penjamah makanan. Semarang: Prodi DIV Gizi Semarang Poltekkes Kemenkes Semarang. 2020.
 12. Ababio P, Taylor KD, Swainsom M, Daramola B. Effect of Good Hygiene Practices Intervention on Food Safety in Senior Secondary Schools in Ghana. *Food Control*. 2015;60:18–24.
 13. Wijayanti T, Isnani T, Kesuma AP. Pengaruh Penyuluhan (Ceramah dengan Power Point) terhadap Pengetahuan tentang Leptospirosis di Kecamatan Tembalang, Kota Semarang Jawa Tengah. *Balaba J Litbang Pengendali Penyakit Bersumber Binatang Banjarnegara*. 2016;12(1):39–46.
 14. Putri SA, Neherta M, Fajria L. Pendidikan kesehatan dengan mixed media education intervention program berpengaruh terhadap pengetahuan dan sikap remaja putri tentang anemia gizi besi. *J Ners Indones*. 2023;14(1):47–60.
 15. Anggraini N, Handajani S, Nurlaela L, Pangesti LT. Keefektifan Perangkat Pelatihan untuk Meningkatkan Pengetahuan dan Sikap Higiene dan Sanitasi Penjamah Makanan. *J Tata Boga*. 2020;9(2):838–48.
 16. Indiranatha, Tri, Handajani S, Purwidiani N. Keefektifan Penggunaan Perangkat Pelatihan Sebagai Upaya Meningkatkan Pengetahuan Hygiene Sanitasi Penjamah Makanan Di Pabrik Tahu Randegan Kota Mojokerto. *J Tata Boga*. 2022;11(1):33–40.