

ARTICLE INFORMATION

Received: May, 3, 2024

Revised: August, 30, 2024

Available online: August, 31, 2024

at : <https://ejournal.malahayati.ac.id/index.php/minh>

Knowledge and practicing behavior related to personal hygiene among mobile street food vendors around schools in Kartasura

Dirnanda Sukmawati*, Rezania Asyfiradayati

Fakultas Ilmu Kesehatan, Universitas Muhammadiyah Surakarta

Corresponding Author: *E-mail: dirnandasukmawati@gmail.com

Abstract

Background: Elementary school is a level of education that consists of 6 levels and is one of the mandatory education programs for Indonesian society. If during the teaching and learning process, illness occurs due to infectious diseases or food poisoning, this can cause learning achievement to drop. This research was conducted at Kartasura District Elementary Schools, which consists of 48 elementary schools, both private and public. The total population of traders in Kartasura District Elementary Schools is 71 traders. The snacks sold around elementary schools contain food additives, so it is necessary to conduct research related to knowledge and personal hygiene behavior when selling their wares to better ensure food quality and maintain cleanliness to avoid various diseases.

Purpose: To determine the relationship between knowledge and personal hygiene behavior of food traders.

Method: This research was conducted quantitatively with a cross-sectional research design to determine the relationship between knowledge and behavior related to personal hygiene among mobile street food vendors around elementary schools in Kartasura sub-district. The variables in this research consist of the independent variable, knowledge and the dependent variable, personal hygiene behavior. Data collection was carried out by interviews using questionnaires and research sheets with a total of 69 respondents as mobile street food vendors around elementary schools which was carried out in February 2024 with the number of schools where research was conducted, namely 25 elementary schools.

Results: Based on the Chi-square statistical test with a value of $p = 0.000$ or ($p < 0.05$) it can be concluded that H_0 is rejected so that there is a relationship between knowledge and personal hygiene behavior of mobile street food vendors around elementary schools.

Conclusion: The level of knowledge of some traders is classified as poor. The implementation of personal hygiene behavior for some traders is classified as poor. There is a relationship between knowledge and personal hygiene behavior of food traders.

Keywords: Knowledge; Personal Hygiene; Traders.

INTRODUCTION

Elementary school is a level of education that consists of 6 levels and is one of the mandatory education programs for Indonesian society. If during the teaching and learning process, illness occurs due to infectious diseases or food poisoning, this can cause learning achievement to drop. Snack culture is

part of the daily lives of almost all age groups and social classes, including school children. Apart from being practical and easy to obtain, this type of food is generally affordable, varied, quite delicious, served quickly according to needs, and is able to provide the calories and nutrients the body needs. Snack food

Knowledge and practicing behavior related to personal hygiene among mobile street food vendors around schools in Kartasura

contains many risks, dust and flies that land on uncovered food can cause disease in the digestive system. Not to mention that if water supplies are limited, the utensils used such as spoons, forks, glasses and plates are not washed cleanly. This can cause people who consume it to develop diseases in the digestive tract (Hikma, Amin, & Navianti, 2023).

Data from the World Health Organization (WHO) states that foodborne diseases *and* diarrhea due to water contamination kill around 2 million people per year, including children. Unsafe food is characterized by contamination with dangerous bacteria, viruses, parasites or chemical compounds that cause more than 200 diseases, ranging from food poisoning, diarrhea to cancer. Meanwhile, access to sufficient nutritious and safe food is an important key to supporting life and supporting good health, so that food security, nutrition and food security are inseparable (Sari, 2017). Cases of food poisoning in Indonesia quite a lot. In 2014, the Food and Drug Supervisory Agency, reported 43 cases of food poisoning in various regions of Indonesia. One incident of food poisoning from street food were 15 incidents of poisoning involve a total of 468 people and 1 incident of poisoning from a catering service involve total 748 victims (Indonesian Food and Drug Authority, 2014).

Healthy food is nutritious food found in staple foods, vegetables, side dishes and fruit. Staple foods are foods that contain lots of carbohydrates or starches such as rice, cassava, sago and corn. Carbohydrates are substances that the body really needs as a source of energy. By getting sufficient carbohydrate intake and being able to carry out various activities. Food handlers have an important role in food processing because they can transmit disease. Food contaminated by bacteria after consumption can usually cause symptoms such as vomiting, fever, stomach ache, symptoms occur 4-12 hours in the intestinal lining and cause inflammation (Tarigan, Syaputri, Tanjung, Manalu, & Ginting, 2022). Elementary School is an elementary school that is in great demand and is favored with a fairly strict selection process so that their learning achievements are also above average. If during the teaching and learning process, illness occurs due to infectious diseases or food poisoning, this can cause learning achievement to drop (Ningsih, 2014).

Many health problems have been encountered related to food safety that does not meet health requirements and are related to the personal hygiene of traders in various places in Indonesia in the last few decades, one of which is food poisoning due to snacks sold in schools. In 2014 there was a decrease in PJAS (school children's snacks) that met the requirements compared to 2013, namely 76.18% from the 90% target (Indonesian Food and Drug Authority, 2014).

Knowledge and Hygiene Practices of Handlers at Snack Food Vendors Around Tasikmalaya City Elementary Schools. It is known that the results of statistical tests concluded that there is a significant relationship between the level of knowledge and the hygiene practices of snack food handlers (Hidayanti, & Lina, 2019). This is also in line with research (Aprivia & Yulianti, 2021) regarding the relationship between the level of knowledge and behavior and the implementation of personal hygiene for food handlers in 2021 which was carried out at Senggol Market, Batubulan with Fisher test results showing a significance value (p) of 0.006. The results show that the value $p < \alpha$ (0.05) means that it can be concluded that there is a relationship between the level of knowledge and the application of personal hygiene. If school children's healthy snack consumption patterns are maintained, their growth and development will be optimal, which will affect the quality of children in the future. Diarrhea as a result of consuming snacks can be transmitted through unclean water. Poor water supply conditions can expose school children to drinking water contaminated by diarrheal disease bacteria (Ismainar, Harnani, Sari, Zaman, Hayana, & Hasmainsi, 2022).

Respondents' lack of knowledge regarding good personal hygiene of traders, the unavailability of supporting facilities, and the absence of supervision or special regulations from schools regarding hygiene practices are the causes of the low implementation of personal hygiene among food handlers. Food handlers' personal hygiene practices can be influenced by the level of education and knowledge food handlers (Arifin, & Wijayanti, 2019). Based on the results of a survey that has been carried out, there are several traders who do not wear head protection equipment such as hats and

Dirmanda Sukmawati*, Rezaniasyfiradayati

Fakultas Ilmu Kesehatan, Universitas Muhammadiyah Surakarta
Corresponding Author: *E-mail: dirmandasukmawati@gmail.com

DOI: <https://doi.org/10.33024/minh.v7i6.342>

Knowledge and practicing behavior related to personal hygiene among mobile street food vendors around schools in Kartasura

headscarves, do not wear masks when selling and there are some traders who leave food uncovered, this can affect the quality of the food. Around 15 schools do not have traders because some schools do not allowing students to have snacks outside the school. Then an interview was also conducted with one of the school guards who found that students rarely snack outside because there is a canteen inside the school. Therefore, researchers are interested in analyzing the relationship between knowledge and personal hygiene behavior of food traders in Elementary Schools Kartasura District. With this research, it is hoped that this research will be able to increase traders' knowledge regarding good personal hygiene and be able to implement good personal hygiene behavior (Serli, Werdyaningsih, Yulis, Mustari, Atika, Kunaryanti, & Yusrianto, 2023).

RESEARCH METHOD

This research was conducted quantitatively with a cross-sectional research design to determine the relationship between knowledge and the personal hygiene behavior of food traders in Kartasura District Elementary School. The variables in this research consist of the independent (free) variable, namely knowledge and the dependent (bound) variable, namely personal behavior. hygiene. Data collection was carried out using interview techniques using questionnaires and research sheets with a total of 69 respondents as traders in Elementary Schools Kartasura District which was carried out in February

2024 with the number of schools where research was carried out, namely 25 elementary schools out of 48 elementary schools in Kartasura district. The results were analyzed using univariate and bivariate methods on questionnaires regarding knowledge with a total of 20 questions and personal hygiene behavior with a total of 20 questions. Prior to data collection, a validity test and reliability test were carried out at Elementary Schools Karangasem 1 and Elementary Schools Karangasem 2 with a sample of 20 respondents. have the same characteristics as the respondents for the research.

Traders' knowledge is said to be good if the number of questions answered correctly is more than 5 questions and the number of respondents who answered correctly is more than 35 respondents. This also applies to the personal hygiene of traders. Data processing was carried out using the Chi Square Test with a significance value of <0.05 to determine the relationship between knowledge and personal hygiene of food traders in Elementary Schools Kartasura District and obtained a p value of $0.000 \leq p (0.05)$ which is meaning H_0 is rejected, indicating that there is a significant relationship between knowledge and personal hygiene behavior of food traders in Elementary Schools Kartasura District. This research has received Ethical Approval from the research ethics committee Universitas Muhammadiyah Surakarta number 251/KEPK-FIK/III/2024.

Dirmanda Sukmawati*, Rezania Asyfiradayati

Fakultas Ilmu Kesehatan, Universitas Muhammadiyah Surakarta
Corresponding Author: *E-mail: dirmandasukmawati@gmail.com

DOI: <https://doi.org/10.33024/minh.v7i6.342>

RESEARCH RESULTS

Table 1. Characteristics of Respondents (N=69)

Variable	Results
Age (Mean±SD) (Range)(Year)	(39.8±10.8)(17-65)
Age (Year) (n/%)	
17-25	4/5.8
26-35	20/29.0
36-45	29/42.0
46-55	8/11.6
56-65	8/11.6
Gender (n/%)	
Male	46/66.7
Female	23/33.3
Education (n/%)	
Elementary School	9/13.0
Junior High School	26/37.7
Senior High School	30/43.5
University	4/5.8
Has Been Street Food Vending (Year)(n/%)	
<1	6/8.7
1-10	52/75.4
11-20	9/13.0
21-30	2/2.9
Knowledge (n/%)	
Good	34/49.3
Poor	35/50.7
Personal Hygiene Behavior (n/%)	
Good	33/47.8
Poor	36/52.2

Based on table 1, the mean age was 39.8 years and the standard deviation was 10.8 years. It shows that of the 69 respondents, 46 respondents were male and 23 respondents were female. Then data was obtained based on age, most of the respondents were 36-45 years old, namely 29 respondents with a percentage of 42.0%. Based on gender, the number There were 46 male respondents and 23 female respondents. Based on their latest education, most of the respondents had graduated from high school/vocational school or equivalent. Most of the respondents had been trading for a period of 1-10 years, namely 52 respondents out of 69 respondents with a percentage of 75.4%. From table 1, it shows that the knowledge of some traders is classified as poor, namely 35 respondents with a presentation of 50.7% of 69 respondents. Then they have poor personal hygiene behavior, namely 36 respondents (52.2%).

Dirmanda Sukmawati*, Rezanias Asyfiradayati

Fakultas Ilmu Kesehatan, Universitas Muhammadiyah Surakarta
Corresponding Author: *E-mail: dirnandasukmawati@gmail.com

DOI: <https://doi.org/10.33024/minh.v7i6.342>

Table 2. Relationship between Knowledge and Personal Hygiene Behavior

Variable	Personal Hygiene Behavior		p-value
	Good (n=33)	Poor (n=36)	
Knowledge (n/%)			
Good	33/100.0	1/2.8	0.000
Poor	0/0.0	35/97.2	

Based on table 2, it is known that 33 respondents have good trader knowledge. Then there are 35 traders who have bad personal hygiene behavior. Based on the test results of the relationship between knowledge and personal hygiene behavior of food traders using the Chi-square statistical test, it produces a value of $p = 0.000$ or ($p < 0.05$) so it can be concluded that H_0 is rejected or there is a relationship between knowledge and personal hygiene.

DISCUSSION

Based on the research results obtained from 69 respondents, it shows that 35 respondents had poor knowledge with a percentage of 50.7%. Then, of the 69 respondents, it showed that 36 respondents had poor personal hygiene behavior. In the results of the Chi Square Test between the relationship between knowledge and personal hygiene behavior, a p value of $0.000 \leq p (0.05)$ was obtained, meaning that H_0 was rejected, indicating that there was a significant relationship between knowledge and personal hygiene behavior of food traders in Elementary Schools Kartasura District. Was a significant relationship between knowledge and the application of personal hygiene for food handlers at street vendors in Taman Jayawijaya Mojosongo with a p-value of 0.031 ($p\text{-value} < 0.05$), so H_0 rejected, which means (Khoirullah & Astuti, 2024).

There is a relationship between trader behavior and personal hygiene knowledge of street food traders around the Unisba Tamansari Campus, Bandung City with the results of the hi-square test obtained p-value 0.014 ($p\text{-value} < 0.05$) (Nugraha, & Respati, 2024). Not in line with research, which shows that there is no correlation between knowledge and personal hygiene behavior with a p-value of 0.094 (≥ 0.05) (Fitrianto & Wulandari, 2023). The relationship between knowledge and personal hygiene behavior of traders is certainly supported by

the questions answered by respondents regarding their knowledge about personal hygiene and from the results of the interviews it was found that someone who works as a food processor must wear clean and polite work clothes (Umar, Sambo, Sabitu, Mande, & Umar, 2019). All 69 respondents answered correctly, then the question regarding washing hands before working to prevent bacterial contamination with food, washing hands with soap is an action to prevent bacterial contamination which can cause diarrhea, then the statement that if you cough or sneeze you should immediately avoid or move away from food if you have to cover it with a handkerchief or tissue and all respondents answered the question correctly. Based on these results, it can be seen that traders' knowledge about personal hygiene is good (Campbell, 2011).

Traders must have good knowledge about personal food hygiene so that it can influence the quality of food served to consumers. Based on the results of interviews that have been conducted, traders' knowledge is classified as poor because there are some traders who think that styrofoam is safe for health. Hair coverings are not needed in the processing process. and serving food because it will not contaminate the food. Food handlers can use long nails when processing food, they can work when they have a cough or cold as long as they wear a mask. A person's knowledge can be influenced by internal and external factors. Internal factors are knowledge within a person himself and external factors are external factors or knowledge obtained from people or reading books or other sources (Nindyasari, & Asyifiradayati, 2024). Good hygiene is very important to prevent the transmission of disease from bacteria or virus (Miranti, Handajani, Pangesthi, Astuti, Bahar, & Widagdo, 2022). Personal hygiene in food traders has a big influence on food safety, so that food is not contaminated. Poor sanitation and hygiene conditions can have an

Dirmanda Sukmawati*, Rezanias Asyifiradayati

Fakultas Ilmu Kesehatan, Universitas Muhammadiyah Surakarta
Corresponding Author: *E-mail: dirmandasukmawati@gmail.com

DOI: <https://doi.org/10.33024/minh.v7i6.342>

Knowledge and practicing behavior related to personal hygiene among mobile street food vendors around schools in Kartasura

impact on the quality of food sent to consumers. Personal hygiene precautions are very important in food sellers. Efforts to monitor the quality of snack food management needs to be increased because it refers to the large potential of snack foods and the high level of vulnerability to poisoning. These efforts must of course pay attention to hygiene, sanitation and health regulations (Selviana, Harmani, & Zainal, 2023).

Behavior is an action carried out by food traders and is obtained by direct observation using a checklist sheet. Based on the results of direct observation, it can be seen that the behavior of food handlers has met standards such as traders covering wounds when trading, avoiding food when coughing or sneezing, and also not smoking when serving customers. However, there are some who have not implemented good personal hygiene behavior, such as traders who do not use clean aprons, there are some traders who do not wear head coverings, there are some traders who leave their nails long, then some traders do not wear masks when trade and do not provide trash bins. The use of masks, gloves or head coverings is considered an important measure to reduce the risk of bacterial contamination of food (Ma, Chen, Yan, Wu, & Zhang, 2019).

Food quality is influenced by various factors, namely food, human and equipment factors. The selection of food ingredients up to the presentation of the food as well as the food handlers and equipment used must all meet the requirements (Trigunarno, 2020). Knowledge does not directly influence food traders' personal hygiene behavior, but there are other factors that influence personal hygiene behavior, such as work experience (Rahman, Tosepu, Karimuna, Yusran, Zainuddin, & Junaid, 2018). Hands are the main part of the body involved in the food handling process, and infectious diseases are generally spread through hand-to-mouth contact. Bacterial contamination is often caused by poor hygiene (Amqam, Manyullei, Wahyuni, Gunawan, & Sari, 2021). Poor hygiene in the workplace is commonplace for more than half of respondents. Most food sellers do not clean their work environment at least once a day, and food is prepared close to waste disposal sites for easy disposal of waste from trading (Lawan, Iliyasu, Abubakar, Gajida, & Abdussalam, 2015).

Dirmanda Sukmawati*, **Rezania Asyfiradayati**

Fakultas Ilmu Kesehatan, Universitas Muhammadiyah Surakarta
Corresponding Author: *E-mail: dirmandasukmawati@gmail.com

DOI: <https://doi.org/10.33024/minh.v7i6.342>

This poor personal hygiene will increase the risk of bacterial contamination of food served or processed so that disease-causing bacteria, such as diarrhea, typhus, and so on, enter the body and infect the digestive tract (Fikrunnisa & Lukmitarani, 2024). Low socio-economic conditions can cause sellers to be unable to implement hygiene even though they know how to maintain food safety. The habit factor of not implementing personal hygiene behavior that has been carried out for a long time by sellers means that the knowledge they already have cannot be applied properly (Irianti, Mufida, Shodikin, Nurdian, Hermansyah, & Raharjo, 2022). Other factors that can influence poor knowledge include the habits of food traders who do not pay attention to hygiene in processing food, an environment that is not supportive, food traders have little experience in the process of processing food (Aprivia, & Yulianti, 2021). To improve knowledge and personal hygiene behavior in good traders, it is best to take part in counseling and training as a provision in processing food that is suitable for sale and meets health requirements (Amiruddin, Taswin, & Putri, 2021).

CONCLUSION

The level of knowledge of some traders is classified as poor, namely 35 respondents with a presentation of 50.7% from 69 respondents and 34 respondents (49.3%) with good knowledge. The implementation of personal hygiene behavior for some traders is classified as poor, namely 36 respondents (52.2%) and 33 respondents (47.8%) have good personal hygiene out of 69 respondents. There is a relationship between knowledge and the personal hygiene behavior of food traders.

REFERENCE

- Arifin, M. H., & Wijayanti, Y. (2019). Higiene dan Sanitasi Makanan di Kantin Sekolah Dasar dan Madrasah Ibtidaiyah. *HIGEIA (Journal of Public Health Research and Development)*, 3(3), 442-453.
- Amiruddin, E. E., Taswin, D., & Putri, A. R. (2021). Faktor Predisposisi dengan Praktik Personal Hygiene Pedagang Makanan Kaki Lima di Kotamara Kota Baubau. *Kampurui Jurnal Kesehatan Masyarakat*, 3(2), 45-52.

Knowledge and practicing behavior related to personal hygiene among mobile street food vendors around schools in Kartasura

- Amqam, H., Manyullei, S., Wahyuni, A., Gunawan, N. A., & Sari, I. Y. (2021). Personal hygiene and bowls sanitation of meatball cart traders. *Gaceta Sanitaria*, 35, S413-S416.
- Aprivia, S. A., & Yulianti, A. E. (2021). Hubungan Tingkat Pengetahuan Dan Perilaku Dengan Penerapan Personal Hygiene Penjamah Makanan Tahun 2021. *Jurnal Kesehatan Lingkungan (JKL)*, 11(2), 79-89.
- Campbell, P. T. (2011). *Assessing the knowledge, attitudes and practices of street food vendors in the city of Johannesburg regarding food hygiene and safety* (Doctoral dissertation, University of the Western Cape).
- Fikrunnisa, M. P., & Lukmitarani, R. (2024). Pengetahuan dan Sikap Penerapan Personal Hygiene Penjamah Makanan Kantin Sekolah Dasar. *Buletin Keslingmas*, 43(1), 41-51.
- Fitrianto, W. C., & Wulandari, W. (2023). Hubungan Pengetahuan dan Sikap Dengan Personal Hygiene Pada Penjamah Makanan Kantin Sekolah Dasar di Kecamatan Banjarsari. *Jurnal Ners*, 7(2), 1241-1246.
- Hikma, N. P., Amin, M., & Navianti, D. (2023). Perilaku Hygiene Sanitasi Pedagang Makanan Jajanan di Sekolah Dasar Kecamatan Tanjung Raja Kabupaten Ogan Ilir. *Jurnal Sanitasi Lingkungan*, 3(2), 36-41.
- Hidayanti, L., & Lina, N. (2019). Pengetahuan dan praktek hygiene penjamah pada pedagang makanan jajanan di sekitar Sekolah Dasar Kota Tasikmalaya. *Journal Health & Science: Gorontalo Journal Health and Science Community*, 3(1), 8-16.
- Indonesian Food and Drug Authority. (2014). Peraturan Kepala Badan Pengawas Obat Dan Makanan Republik Indonesia Nomor 12 Tahun 2014 Tentang Persyaratan Mutu Obat Tradisional. Badan Pengawas Obat dan Makanan, 1-25. Retrieved from: <chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://asrot.pom.go.id/img/Peraturan/Peraturan%20Kepala%20BPOM%20No.%2012%20Tahun%202014%20tentang%20Persyaratan%20Mutu%20Obat%20Tradisional.pdf>
- Irianti, A. J., Mufida, D. C., Shodikin, M. A., Nurdian, Y., Hermansyah, B., & Raharjo, A. M. (2022). Hubungan Pengetahuan Keamanan Pangan dengan Higiene Penjual dan Kontaminasi Salmonella spp Pada Lalapan Mentah di Kecamatan Patrang. *Jurnal Kesehatan Lingkungan Indonesia*, 21(2), 180-187.
- Ismainar, H., Harnani, Y., Sari, N. P., Zaman, K., Hayana, H., & Hasmaini, H. (2022). Hygiene dan sanitasi pada pedagang makanan jajanan murid sekolah dasar di kota pekanbaru, riau. *Jurnal Kesehatan Lingkungan Indonesia*, 21(1), 27-33.
- Khoirullah, M. K., & Astuti, D. (2023). Hubungan Pengetahuan Dan Sikap Dengan Personal Hygiene Penjamah Makanan Pedagang Kaki Lima Di Taman Jayawijaya Mojosoongo. *Ranah Research: Journal of Multidisciplinary Research and Development*, 6(1), 168-175.
- Lawan, U. M., Iliyasa, Z., Abubakar, S., Gajida, A. U., & Abdussalam, A. (2015). Personal and food hygiene practices of subsistence food vendors operating in Kano metropolis, northwestern Nigeria. *International Journal of Medical Science and Public Health*, 4(2), 214.
- Ma, L., Chen, H., Yan, H., Wu, L., & Zhang, W. (2019). Food safety knowledge, attitudes, and behavior of street food vendors and consumers in Handan, a third tier city in China. *BMC public health*, 19, 1-13.
- Miranti, M. G., Handajani, S., Pangesthi, L. T., Astuti, N., Bahar, A., & Widagdo, A. K. (2022). Education on Sanitation and Hygiene Knowledge on Food Vendors in Semolowaru Culinary Tourism Center (CTC) Surabaya. *Jurnal Pemberdayaan Masyarakat Madani (JPMM)*, 6(2), 351-367.
- Nindyasari, J. B., & Asyifiradayati, R. (2024). The Correlation Between The Level of Knowledge of

Dirmanda Sukmawati*, Rezania Asyifiradayati

Fakultas Ilmu Kesehatan, Universitas Muhammadiyah Surakarta
Corresponding Author: *E-mail: dirmandasukmawati@gmail.com

DOI: <https://doi.org/10.33024/minh.v7i6.342>

Knowledge and practicing behavior related to personal hygiene among mobile street food vendors around schools in Kartasura

- Traders With Rhodamine B Content in Snack Sauce Around Muhammadiyah University of Surakarta. *Contagion: Scientific Periodical Journal of Public Health and Coastal Health*, 6(1), 67-77.
- Ningsih, R. (2014). Penyuluhan hygiene sanitasi makanan dan minuman, serta kualitas makanan yang dijual pedagang di lingkungan SDN Kota Samarinda. *Jurnal Kesehatan Masyarakat*, 10(1), 64-72.
- Nugraha, A. B., & Respati, T. (2024). Hubungan Pengetahuan Sanitasi Lingkungan dan Personal Hygiene terhadap Perilaku Pedagang Makanan Kaki Lima di Sekitar Kampus Unisba Tamansari Kota Bandung. In *Bandung Conference Series: Medical Science* (Vol. 4, No. 1, pp. 62-67).
- Rahman, A., Tosepu, R., Karimuna, S. R., Yusran, S., Zainuddin, A., & Junaid, J. (2018). Personal hygiene, sanitation and food safety knowledge of food workers at the university canteen in Indonesia. *Public Health of Indonesia*, 4(4), 154-161.
- Sari, M. H. (2017). Pengetahuan dan sikap keamanan pangan dengan perilaku penjaja makanan jajanan anak sekolah dasar. *Journal of Health Education*, 2(2), 156-163.
- Selviana, R., Harmani, N., & Zainal, A. U. (2023). Faktor-Faktor yang Berhubungan dengan Perilaku Personal Higiene Pedagang Makanan Kaki Lima. *Jurnal Pustaka Medika (Pusat Akses Kajian Medis dan Kesehatan Masyarakat)*, 2(1), 19-24.
- Serli, S., Werdyaningsih, E., Yulis, D. M., Mustari, S., Atika, Z., Kunaryanti, K., & Yusrianto, Y. (2023). Sanitation and Environmental Health in Traditional Snack Food Trader of Elementary School, Buntusu Village, Makassar City. *International Journal of Health Sciences*, 1(4), 525-540.
- Tarigan, K. B., Syaputri, D., Tanjung, R., Manalu, S. M. H., & Ginting, J. N. B. (2022). Pengetahuan dan sikap terhadap hygiene sanitasi pedagang/penjamah makanan jajanan. *Jurnal Ilmiah PANNMED (Pharmacist, Analyst, Nurse, Nutrition, Midwifery, Environment, Dentist)*, 17(3), 422-425.
- Trigunarso, S. I. (2020). Hygiene Sanitasi dan Perilaku Penjamah Makanan dengan Angka Kuman pada Makanan Jajanan di Lingkungan Sekolah. *Jurnal Kesehatan Lingkungan*, 11(1), 115-124. <http://dx.doi.org/10.26630/jk.v11i1.1739>
- Umar, A. A., Sambo, M. N., Sabitu, K., Mande, A. T., & Umar, J. (2019). Personal hygiene of street-food vendors in Sabon-Gari local government area of Kaduna State, Nigeria. *Nigerian Journal of Basic and Clinical Sciences*, 16(2), 114-120.

Dirmanda Sukmawati*, Rezaniasyfiradayati

Fakultas Ilmu Kesehatan, Universitas Muhammadiyah Surakarta
Corresponding Author: *E-mail: dirmandasukmawati@gmail.com

DOI: <https://doi.org/10.33024/minh.v7i6.342>