

Analysis of Food Sanitation and Hygiene Practices in Eateries on Karya Wisata Street, Medan Johor District

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Abstract

Background: This study aims to analyze food sanitation and hygiene practices at food establishments on Karya Wisata Street, Medan Johor District. **Method:** A descriptive observational method was applied to 15 food establishments, including restaurants, food stalls, coffee shops, small eateries, and cafés. Data were collected through direct observation using a checklist based on the Indonesian Minister of Health Decree Number 1098/MENKES/SK/VII/2003, as well as brief interviews with food managers or handlers. The data were analyzed descriptively. **Result:** The results showed that most establishments met the requirements for clean water availability (93.3%), building and ventilation conditions (86.7%), and cleanliness of eating and cooking utensils (86.7%). However, several aspects remained below the required standards, including the use of personal protective equipment (PPE) by food handlers (40%), personal hygiene of food handlers (53.3%), availability of fire extinguishers (26.7%), wastewater disposal systems (60%), and pest control (60%). A total of 66.7% of establishments lacked proper wastewater drainage systems, while toilet cleanliness and food storage practices were also suboptimal. Overall, food sanitation and hygiene practices at the study location were fairly good, but improvements are still needed in basic sanitation and personal hygiene of food handlers. **Conclusion:** The study concludes that the implementation of food sanitation and hygiene on Karya Wisata Street has not yet fully complied with health standards. Therefore, regular supervision, continuous education, and increased awareness

among managers and food handlers are necessary to prevent contamination risks and foodborne diseases.

1. Introduction

Food sanitation and hygiene are important aspects in maintaining the quality and safety of food consumed by the community. The implementation of good hygiene and sanitation practices in food establishments can prevent food contamination by microorganisms, chemicals, or foreign objects that may cause various health problems, such as diarrhea, food poisoning, and foodborne diseases. Therefore, every food establishment needs to pay attention to environmental cleanliness, equipment, food ingredients, processing procedures, and the personal hygiene of food handlers so that the food served is safe for consumption.

The rapid development of the culinary business has led to an increasing number of food establishments in various regions, including on Karya Wisata Street, Medan Johor District. The presence of restaurants, food stalls, coffee shops, small eateries, and cafés plays an important role in meeting the community's food consumption needs. However, the increase in the number of food establishments must be balanced with the implementation of good food hygiene and sanitation standards so that food safety is maintained and does not pose health risks to consumers.

Some food establishments are still found to have not implemented optimal food hygiene and sanitation practices. Common problems include lack of cleanliness in food processing areas, food storage that does not meet standards, use of unhygienic equipment, and poor personal hygiene of food handlers. These conditions can increase the risk of food contamination, which impacts public health.

Food hygiene and sanitation are related to the presence of *Escherichia coli* bacteria in food, which can endanger consumer health.⁷ The implementation of food hygiene and sanitation is an important effort to prevent foodborne diseases.¹¹ Furthermore, many food vendors still do not meet hygiene and sanitation standards, particularly in terms of personal cleanliness and food management.⁹

Food hygiene and sanitation behavior is influenced by the knowledge and habits of food handlers.¹³ Some food establishments still do not meet sanitation requirements, especially regarding environmental cleanliness and sanitation facilities.^{16, 18} Meanwhile, education and socialization regarding food hygiene and sanitation can improve food handlers' understanding of maintaining cleanliness and food safety.^{4, 20} Based on these problems, research is needed on food sanitation and hygiene practices at food establishments on Karya Wisata Street, Medan Johor District. This study aims to analyze the implementation of food hygiene and sanitation in the processing, storage, and serving of food in accordance with applicable health standards.

2. Materials and Methods

The materials used in this study included an observation checklist containing food sanitation and hygiene indicators in accordance with applicable health standards. The checklist was developed in accordance with Decree of the Minister of Health of the Republic of Indonesia No. 1098/MENKES/SK/VII/2003 on Sanitation and Hygiene Requirements for Eateries and Restaurants. In addition, this study also used writing instruments to record observation results, a cell phone camera for documentation, and a field notebook to record additional information during the data collection process. Other materials used included a brief interview sheet containing structured questions to elicit information from food handlers or managers regarding the implementation of sanitation and hygiene at their business premises.

This study employed an observational method with a descriptive approach to examine food sanitation and hygiene practices at food establishments on Karya Wisata Street, Medan Johor District. The study was conducted through direct observation at 15 food establishments, including restaurants, food stalls, coffee shops, eateries, and cafes. The research locations were selected based on the presence of food establishments that were still actively operating and easily accessible in the area.

Data collection was conducted using an observation checklist based on hygiene and sanitation standards for restaurants and eateries as stipulated in the Decree of the Minister of Health of the Republic of Indonesia No. 1098/MENKES/SK/VII/2003. The aspects observed included the cleanliness of the dining environment, sanitation conditions in food preparation areas, cleanliness of dining and cooking utensils, food storage, food serving processes, availability of sanitation facilities, and personal hygiene of food handlers.

In addition to the observations, brief interviews were conducted with managers or food handlers to obtain additional information regarding the implementation of food sanitation and hygiene at their establishments. The data obtained was then recorded, classified, and analyzed descriptively to provide an overview of the level of food sanitation and hygiene implementation at food establishments on Karya Wisata Street, Medan Johor District.

3. Results

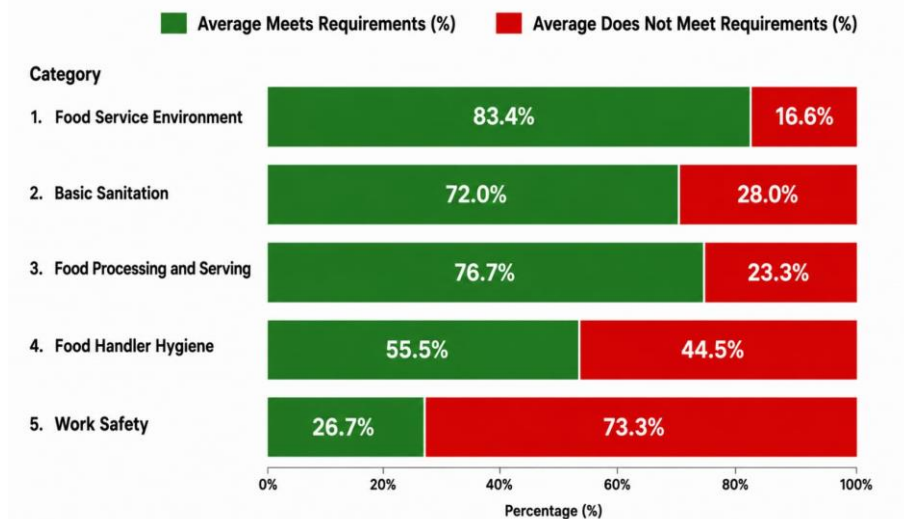
This study was conducted at 15 food establishments located on Karya Wisata Street in the Medan Johor subdistrict. Observations were made to assess food sanitation and hygiene conditions based on several aspects, including environmental cleanliness, building condition, availability of clean water, waste management, equipment cleanliness, food storage, personal hygiene of food handlers, and other sanitation facilities.

Table 1. Observation Results of Food Sanitation and Hygiene at Food Establishments on Karya Wisata Street, Medan Johor District

No.	Aspects Observed	Meets the Requirements	Percentage (%)	Doesn't meet the requirements	Percentage (%)
Food Service Environment					
1.	Cleanliness of food establishment environment	12	80,0	3	20,0
2.	Building and ventilation conditions	13	86,7	2	13,3
Basic Sanitation					
3.	Availability of clean water	14	93,3	1	6,7
4.	Availability of trash bins	12	80,0	3	20,0
5.	Wastewater disposal system	9	60,0	6	40,0
6.	Availability of toilet/latrine	10	66,7	5	33,3
7.	Pest control (insects and rats)	9	60,0	6	40,0
Food Processing and Serving					
8.	Cleanliness of kitchen area	11	73,3	4	26,7
9.	Cleanliness of eating and cooking utensils	13	86,7	2	13,3
10.	Food storage	10	66,7	5	33,3
11.	Hygienic food serving	12	80,0	3	20,0
Food Handler Hygiene					
12.	Personal hygiene of food handlers	8	53,3	7	46,7
13.	Use of PPE by food handlers	6	40,0	9	60,0
14.	Availability of handwashing facilities	11	73,3	4	26,7
Work Safety					
15.	Availability of fire extinguishers	4	26,7	11	73,3

Table 2. Observation Results of Food Sanitation and Hygiene at Food Establishments on Karya Wisata Street, Medan Johor District (By Category)

Category	Meets the Requirements	Doesn't meet the requirements
Food Service Environment	83,4	16,6
Basic Sanitation	72,0	28,0
Food Processing and Serving	76,7	23,3
Food Handler Hygiene	55,5	44,5
Work Safety	26,7	73,3

Figure 1. Diagram of the Results of Observations on Sanitation and Food Hygiene at Eating Establishments on Karya Wisata Street, Medan Johor district (By Category)

Based on observations of 15 food establishments, it was found that the highest level of compliance with sanitation and hygiene requirements was in the Food Establishment Environment category, with a percentage of 83.4%. These results indicate that most food establishments have sufficiently clean environmental conditions, as well as buildings and ventilation systems that meet health requirements. Good environmental conditions can help create a comfortable atmosphere for customers while reducing the risk of food contamination.

The Food Processing and Serving category achieved a compliance rate of 76.7%, indicating that most food establishments have implemented fairly good food processing and serving practices. The cleanliness of kitchen areas, dining and cooking utensils, and hygienic food presentation are critical factors in ensuring food safety and preventing contamination by disease-causing microorganisms.

Furthermore, the Basic Sanitation category has a compliance rate of 72%. Although most food establishments have provided clean water and adequate trash bins, several shortcomings were still found regarding wastewater drainage systems (SPAL), toilet

availability, and pest control. These conditions can increase the risk of environmental contamination and become a source of disease transmission if not properly managed.

In the Food Handler Hygiene category, the compliance rate reached only 55.5%. These results indicate that food handlers' hygiene practices still need improvement, particularly regarding the use of personal protective equipment (PPE) and personal hygiene. Food handlers are a key factor influencing food safety due to their direct contact with food during processing and serving.

Meanwhile, the Work Safety category obtained the lowest percentage, which was 26.7%. The low score in this category was due to the fact that very few food establishments provided fire extinguishers (APAR). In fact, the availability of fire extinguishers is very important as an effort to prevent and combat fires that can occur at any time in food processing areas.

Overall, the research results show that most food establishments on Karya Wisata Street, Medan Johor District, have met the requirements in terms of environment, basic sanitation, and food processing and serving. However, improvements are still needed in the aspects of food handler hygiene and work safety so that all food sanitation and hygiene requirements can be met optimally. These findings indicate the need for continuous coaching, supervision, and education for managers and food handlers to improve the quality of sanitation and food safety at food establishments.

4. Discussions

The research results show that most food establishments on Karya Wisata Street, Medan Johor District, have implemented food sanitation and hygiene practices fairly well, especially in terms of environmental cleanliness, availability of clean water, ventilation, and cleanliness of eating utensils. These conditions indicate that some food establishment managers have awareness of the importance of maintaining the cleanliness and safety of the food served to consumers. According to the Decree of the Minister of Health of the Republic of Indonesia Number 1098/MENKES/SK/VII/2003, environmental and equipment cleanliness is one of the important requirements for maintaining food quality to avoid contamination.

Based on the research results, the Food Environment category obtained the highest compliance percentage, which was 83.4%. This high percentage indicates that most food establishments have clean environments and fairly good building and ventilation conditions. A clean environment plays an important role in preventing food contamination and creating comfort for consumers. These results are consistent with previous research, which stated that good environmental and ventilation conditions are important factors in supporting the implementation of food hygiene and sanitation.¹² Other studies also show that environmental cleanliness is one of the main indicators in assessing restaurant hygiene and sanitation.¹⁶

In the Food Processing and Serving category, the compliance percentage was 76.7%. These results indicate that most food establishments have implemented fairly good food processing and serving practices, characterized by cleanliness of the kitchen area, eating and cooking utensils, and relatively hygienic food serving. However, some food establishments were still found to have not implemented optimal food storage practices. These findings are consistent with research stating that cleanliness of the kitchen, utensils, and food storage are important components in maintaining food safety.³ Another study also explains that the implementation of hygiene and sanitation in food processing and serving stages can reduce the risk of contamination that causes foodborne diseases.¹⁵

The Basic Sanitation category obtained a compliance percentage of 72%. The high percentage in terms of clean water availability indicates that most food establishments have provided water sources that meet operational needs. However, there are still several food establishments that have not met the requirements for wastewater disposal systems, toilet availability, and pest control. These conditions have the potential to increase the risk of environmental contamination and food contamination. These results are consistent with research stating that adequate basic sanitation facilities are important factors in preventing foodborne diseases.¹¹ Other research also confirms that waste management, provision of clean water, and good sanitation facilities are important components in the implementation of food hygiene and sanitation.⁵

The Food Handler Hygiene category obtained a compliance percentage of 55.5%. These results indicate that the implementation of personal hygiene by food handlers still needs improvement, especially in the use of personal protective equipment (PPE) such as aprons, masks, gloves, and head covers. Additionally, some food handlers were still found to have not implemented optimal personal hygiene habits. Food handlers have a very important role in maintaining food safety because they interact directly with food during the processing and serving process. These findings are consistent with research stating that the knowledge and attitudes of food handlers are related to the personal hygiene behaviors they practice.² Other studies also show that the better the knowledge and attitudes of food handlers, the better the hygiene and sanitation practices they perform.⁸ Furthermore, recent findings indicate that hygiene and sanitation behavior is influenced by knowledge, attitudes, and the availability of adequate supporting facilities.¹

Meanwhile, the Work Safety category obtained the lowest compliance percentage, which was 26.7%. This low percentage is due to the fact that very few food establishments provide fire extinguishers (APAR). In fact, cooking activities using gas stoves and electrical equipment carry the risk of fire. The availability of fire extinguishers is a form of prevention and emergency response that can protect both workers and consumers. These results are consistent with research showing that there are still food processing establishments that have not met work safety aspects, particularly regarding the provision of fire extinguishers.¹⁷ Other studies also confirm that the implementation

of good food hygiene and sanitation must be supported by work safety aspects to create a safe and healthy work environment.¹⁸

Overall, the research results show that the Food Environment category (83.4%) had the highest compliance rate, while Work Safety (26.7%) had the lowest compliance rate. These findings indicate that most food establishments have paid attention to environmental conditions and food processing, but there are still weaknesses in terms of food handler hygiene and work safety. These research results are consistent with several studies which stated that the implementation of food hygiene and sanitation requires adequate supporting facilities, good food handler behavior, and continuous supervision so that food safety can be optimally ensured.^{6,14,9}

5. Conclusions

Based on the results of the research conducted on 15 food establishments on Karya Wisata Street, Medan Johor District, it can be concluded that food sanitation and hygiene practices are generally quite good. Most food establishments have met several important aspects, such as environmental cleanliness, availability of clean water, ventilation, and cleanliness of eating utensils. However, several deficiencies were still found in the aspects of basic sanitation and personal hygiene of food handlers, such as suboptimal wastewater disposal systems, toilet cleanliness, food storage, and the low use of personal protective equipment (PPE) during food processing. These conditions have the potential to increase the risk of food contamination and the occurrence of foodborne diseases. Therefore, it is necessary to improve supervision, education, and awareness among managers and food handlers regarding the importance of implementing food hygiene and sanitation according to health standards, so that the safety and quality of food served to consumers are maintained.

References

1. Andini P, Hidayati F, Fitri A. Factors related to the implementation behavior of food hygiene and sanitation in restaurants in Sekayu District in 2025. *Pubhealth Journal of Public Health*. 2025;4(2):164-170.
2. Astuti D, Puspitasari DZ, Porusia M. The relationship between knowledge and attitudes with personal hygiene behavior of food handlers in home industry processed shredded meat products. *Jurnal Kesehatan*. 2023;16(1):51-63.
3. Azla A, Pratiwi C. Overview of the implementation of hygiene and sanitation in food management at the Nutrition Installation of the University of North Sumatra Hospital. *Jurnal Andaliman: Jurnal Gizi Pangan, Klinik Dan Masyarakat*. 2023;3(1):15.

4. Deviatin NS, Twistiandayani R, Rahmawati D, et al. Socialization of hygiene and sanitation to street vendors in Gresik Regency, East Java. *Jurnal Pengabdian Sosial*. 2024;1(9):1315-1320.
5. Doktriana RAG, Yaser M, Wahyudi J. Analysis of food hygiene and sanitation in the hospital nutrition installation. *Antigen: Jurnal Kesehatan Masyarakat dan Ilmu Gizi*. 2024;2(2):11-21.
6. Fauziah R, Suparmi S. Implementation of food management hygiene sanitation and knowledge of food handlers. *Jambura Health and Sport Journal*. 2022;4(1):11-18.
7. Halimatussadiyah H, Novianti S, Maywati S. Food hygiene and sanitation in relation to the presence of *Escherichia coli* bacteria in rice stalls at Cikurubuk Market, Tasikmalaya City. *Jurnal Kesehatan Komunitas Indonesia*. 2024;20(2):147-162.
8. Hartini S. The relationship between hygiene sanitation knowledge level and food handler attitudes with hygiene sanitation practices (Study at PT. Ryan Katering, Jakarta). *Nutrizione: Nutrition Research and Development Journal*. 2022;2(2):16-26.
9. Ismainar H, Harnani Y, Sari NP, Zaman K, Hayana H, Hasmaini H. Hygiene and sanitation among elementary school snack food vendors in Pekanbaru City, Riau. *Jurnal Kesehatan Lingkungan Indonesia*. 2022;21(1):27-33.
10. Makhfirah N, Hadi A. Education on equipment hygiene sanitation to improve knowledge of food handlers at the Nutrition Installation of Meuraxa Hospital, Banda Aceh. *Jurnal SAGO Gizi dan Kesehatan*. 2024;5(2):556-562.
11. Nurpratama WL, Azmi NF, Puspasari K. Food hygiene and sanitation among food vendors as an effort to prevent foodborne diseases at Cikarang Market, Bekasi Regency. *An-Nadaa: Jurnal Kesehatan Masyarakat (e-Journal)*. 2023;10(1):1-8.
12. Paramasatiari AAL, Suryanditha PA, Wedhangga IKM. Food and environmental hygiene sanitation at Campus X canteen. *Warmadewa Minesterium Medical Journal*. 2023;2(3):179-184.
13. Permatasari I, Handajani S, Sulandjari S, Faidah M. Factors of food hygiene sanitation behavior among street food vendors. *Jurnal Tata Boga*. 2021;10(2):223-233.
14. Pramono TD, Gaffar MR, Tjahjawati SS, et al. Implementation of hygiene and sanitation in culinary business actors. *JABI: Jurnal Abdimas Bhakti Indonesia*. 2023;4(1):1-8.
15. Rahmadhani D, Sumarmi S. Overview of the implementation of food hygiene and sanitation principles at PT Aerofood Indonesia, Tangerang, Banten. *Open Access under CC BY-SA License*. 2017:291-299.
16. Rahmawati K, Siwiendrayanti A. Implementation of food hygiene sanitation in restaurants at tourist destinations. *Indonesian Journal of Public Health and Nutrition*. 2023;3(3):349-356.
17. Rifai NAS. Hygiene sanitation of food management places at Casper Restaurant. *Jurnal Pendidikan dan Teknologi Kesehatan*. 2025;8(2):346-356.

18. Setyawati NF, Rahmadani DW, Rusba K. Analysis of food hygiene sanitation implementation at Kemal Box Cafe Balikpapan. *Identifikasi*. 2025;11(2):327-331.
19. Suluh DG, Agustina A, Kristina RH, Sadukh JJ, Akoit RA. Prevention of foodborne diseases through healthy snack education and PHBS improvement among elementary school children in Babau Village. *Indonesian Journal of Community Dedication*. 2025;3(3):471-478.
20. Sundari CDWH, Dhyana Putri IGAS. Improving knowledge about food hygiene and sanitation among food handlers in Ped Village, Nusa Penida. In: *Seminar Nasional Pengabdian Kepada Masyarakat 2021*. Vol 1. 2022:57-69.
21. Indonesia. Departemen Kesehatan. Keputusan Menteri Kesehatan Republik Indonesia Nomor 1098/MENKES/SK/VII/2003 tentang Persyaratan Hygiene Sanitasi Rumah Makan dan Restoran. Jakarta: Departemen Kesehatan; 2003.