

# Culinary Hygiene and Sanitation: A Systematic Literature Review

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**Abstract:** Healthy food refers to food that is both sanitary and nourishing. Edible sustenance Hygienic food refers to food that is free from pathogens and contaminants that can pose a health risk. Food processed products typically exhibit vulnerabilities in terms of their safety, including biological or microbiological, chemical, and physical dangers. The occurrence of hazards or pollution, typically resulting from substandard raw materials, processing techniques, and insufficient sanitation and hygiene practices, has raised concerns regarding the awareness of workers or producers involved in handling processed food. This research aims to investigate the topic of Culinary Hygiene and Sanitation through a systematic review of existing literature. This review was conducted utilizing the latest and most advanced methodologies, following the recommended reporting items for reviews and meta-analyses (PRISMA) standards. The findings of this study clarify that food plays a multifaceted role and serves various purposes, including promoting health, reflecting political and social status, exerting power and fostering cooperation, influencing social and economic standing, embodying cultural values, responding to population density, reflecting changing times, and adhering to principles of hygiene and sanitation. The key elements of the facility are the physical location and structure, the sanitary facilities, the kitchen area, the dining room, and food storage area, the handling of food ingredients and prepared food, the food processing area, the storage area for food ingredients and prepared food, the food serving area, the presentation of food, the equipment used, and the labor involved.

**Keywords:** Culinary; Hygiene; Sanitation

## Introduction

Health must be maintained as best as possible because it is very important. Food is one of the causes of a person's health problems. It is very important to maintain healthy and nutritious food intake. However, to keep your body healthy and maintain good environmental health, there are other things you need to pay attention to. One of them is the cleanliness and hygiene of snacks. Food sanitation hygiene includes all actions necessary to keep food and drinks free from health threats, starting from when the food is made,

during processing, storage, transportation, and when the food is ready to be consumed (Uçar et al., 2016).

Sanitation hygiene encompasses the measures used to regulate and manage elements in food, individuals, locations, and equipment that have the potential to induce illness or health issues (Yuniar et al., 2023). Requirements for Sanitation and Hygiene Effective sanitation management is crucial since it directly impacts the potential transmission of diseases and poses a significant risk to public health. This includes the proper handling of food, individuals, locations, and equipment (Herniwanti & Jayanti, 2022; Kumwenda,

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2019). Vendors and food vendors who sell their food in the community understand how important cleanliness and hygiene are many providers of this food are found in shopping centers, offices, schools, colleges, and entertainment venues (Cortese et al., 2016; Morano et al., 2018; Pilamala et al., 2023). One of the public facilities that has a food vendor area is the college canteen, which serves the food needs of college students and employees.

Unfortunately, canteen cleanliness is often considered less important and is not yet fully part of university management (Rachmadewi et al., 2021). However, the impacts caused by ineffective canteen management can disrupt environmental health. Students can not only buy food in the college canteen, but they can also buy food around the college in question, which is of course outside the authority of college management (Wang et al., 2024). However, college canteens remain the responsibility of the college. Food producers can realize and understand the importance of cleanliness of snack foods by carrying out supervision and education (Chen & Antonelli, 2020).

Instructions on cleanliness have been given in various places and public facilities in Indonesia (Komarulzaman et al., 2023; Makmur, 2022). For example, in elementary schools, there are food stalls, food vendors at high schools, fruit ice sellers at markets, and refill drinking water depots at hospitals. The PTS concerned, BEDO (Trade and Export Development Organization) and ILO (International Labor Organization) collaborate to provide hygienic training to food practitioners in the area (Nuhriawangsa et al., 2023). The aim of the service activities for food producers and vendors is to find out to what extent they understand the importance of sanitation (Isanovic et al., 2023; Shabir et al., 2023). so that sellers know how important cleanliness is from the customer's perspective.

Prior studies have investigated the hygiene and sanitation practices of street food vendors in Jakarta's street food courts (Pujasera) (Harianto & Ardani, 2021);. Additionally, research has been conducted on the application of food hygiene and sanitation principles among food handlers at the Madang Campus Canteen, Faculty of Medicine, University of Sriwijaya.

Application of Food Hygiene and Sanitation Principles on Food Handlers at The Madang Campus However, there has been no research that examines Culinary

Hygiene and Sanitation: Systematic Literature Review. Based on the literature review above, this research aims to examine Culinary Hygiene and Sanitation: A Systematic Literature Review.

## Method

This investigation was conducted as a systematic review in accordance with the PRISMA standards. The PRISMA guidelines offer a multitude of factors to take into account while creating a systematic review (Figure 1). This research will primarily concentrate on several key aspects: The purpose and operation of food, culinary hygiene, and sanitation. At first, we gathered the most recent research on Culinary Hygiene and Sanitation through a systematic literature review. Using a set of specific keywords as criteria. Next, we utilize eligibility criteria to assess the collection. To offer a comprehensive analysis of present-day patterns, we exclusively chose literary works that were released in 2015 or beyond. Furthermore, we restrict the scope of literature to solely encompass journals and proceedings.

## Result and Discussion

The study utilized the Preferred Reporting Items for Systematic Reviews (PRISMA) reporting technique. The research was conducted systematically throughout the necessary stages of the research process. The offered information is thorough and unbiased, to integrate pertinent study findings. The process of conducting a systematic literature review involves several key processes. These steps include formulating research inquiries, conducting comprehensive literature searches, evaluating and selecting pertinent articles, assessing and selecting the most valuable research findings, analyzing the data, synthesizing qualitative results, and finally, preparing research reports. The systematic literature review research process involves several processes, including writing the research background and objectives, formulating research questions, doing a literature search, selecting relevant articles, extracting data from the articles, evaluating the quality of the studies, and summarizing the findings.

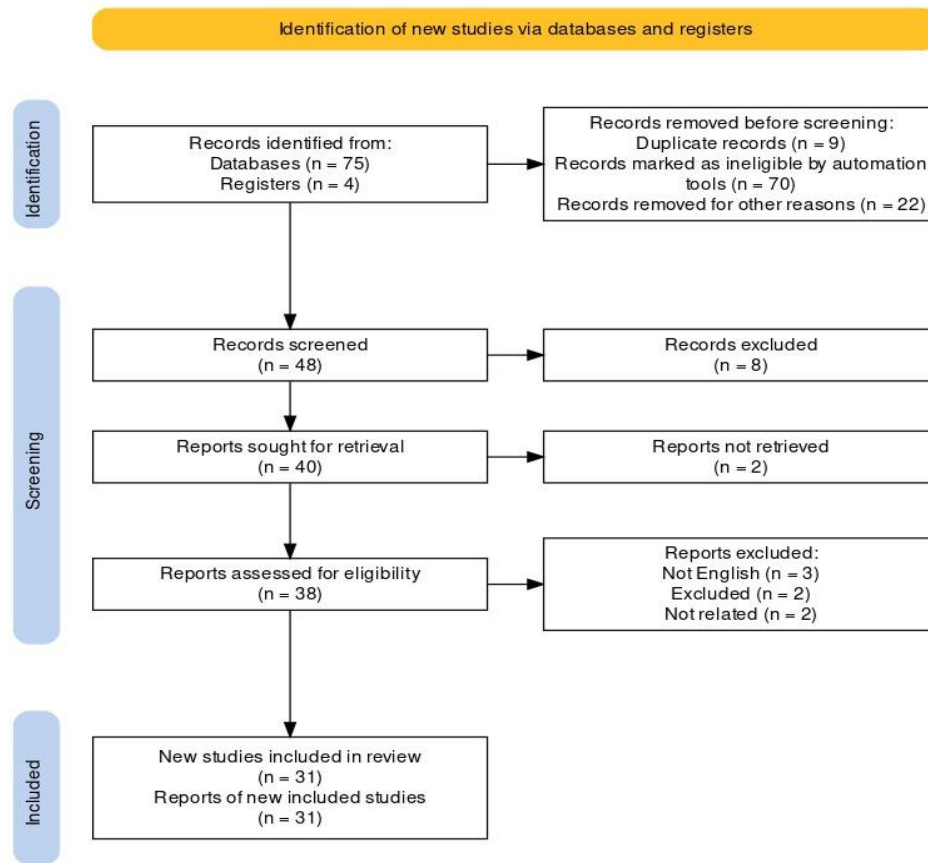


Figure 1. Flow of the literature search process based on PRISMA guidelines

The complete article is published in the 2015-2023 international journal, indexed in the database, and has

the theme Culinary Hygiene and Sanitation: A Systematic Literature Review.

Table 1. Role and function of food

Source	The role and function of Food
(Kumar et al., 2021); (Briffa et al., 2020); (Dwivedi et al., 2023)	Health
(Nowell et al., 2017)	Political status and power and Cooperation
(Bukman et al., 2014)	Shows economic status
(Magano et al., 2023); (Grace, 2023); (Bouafou et al., 2021)	Shows social status
(Kwon et al., 2023); (Monterrosa et al., 2020); (Collier et al., 2021)	Show culture
(Cattaneo et al., 2022); (Goldin, 2019); (Miladinov, 2023); (Fukase & Martin, 2020)	Shows population density
(Nemeth et al., 2019); (Wijaya, 2019)	Marks changing times

*The Role and Function of Food*

Apart from its function for human health, food can also indicate political, economic, social, and cultural status, population density, and changing times. The following are the functions of food in general:

*Health function*

To provide power or energy to the body of living creatures so that they can carry out their daily activities, a source of regulation and protection for the body against disease, a source of bodybuilding, both for

growth and repair of the body, as a source of replacement material for old cells worn out by age.

*Political status and power*

For example, officials or government agencies hold traditional food events to explore traditional wisdom, this is also the case one tool for seeking legitimacy.

*Shows economic status*

Several things that can be related to this statement include: Economic status influences nutritional status, which can easily be seen from the health conditions of

infants and toddlers in an area; The choice of place to eat can indicate a person's economic status, although economic status can also be judged from other things. Example: People who choose to eat at street vendors tend to be categorized as people with lower middle economic status, while those who eat at restaurants tend to be categorized as people with upper-middle economic status.

*Shows social status*

The cutlery used can indicate the social status of the wearer. Each country has unique cutlery that determines the social status of the wearer, but some do not affect the social status of the wearer.

*Show culture*

How to choose, prepare, and eat food often differs from one culture to another." Food is one of the cultural characteristics. Food is one form that is touched by culture. In various cultures in the world, food can be seen from the way it is cooked and how it is served.

Maybe the raw ingredients are the same, but the cooking and serving methods are different and maybe the names are different. Changing the way someone eats from one cultural group to another is not easy, even though the raw ingredients are the same, if the processing method is different the taste will be different, and it is not certain that someone from another culture will be willing to eat.

*Shows population density*

This statement is also related to the economic status of a region or country. The food consumed by countries that have dense populations and are classified as poor countries is of course different from developed countries with better economic levels. So the nutritional status in poor countries is classified as poor and this is caused by the food consumed.

*Marks changing times*

The many instant foods that have appeared on the market show that times are increasingly modern and demand speed and everything instant.

**Table 2.** Principles of culinary hygiene and sanitation

Source	Principles of culinary hygiene and sanitation
(Awoniyi et al., 2024); (Gwenzi et al., 2021); (Awoniyi et al., 2024); (Kurokawa et al., 2020)	Location and Building
(Vargová et al., 2020); (Silva, 2023)	Sanity Facilities
(Cosgrove & Loucks, 2015); (Obaideen et al., 2022)	Kitchen room, dining room, and food warehouse
(Espinosa-Marrón et al., 2022); (Carolinna et al., 2022)	Foodstuffs and Prepared Foods
(Shankar, 2023); (Pandey et al., 2023); (Koutchma & Ezzatpanah, 2021)	Food Processing
(Amit et al., 2017); (Pinto et al., 2023)	Storage Place for Foodstuffs and Prepared Foods
(Zairinayati et al., 2020)	Food Serving
(Pakdel et al., 2023)	Equipment used
(Strano et al., 2022)	Labor

*There are several principles of food hygiene and sanitation:*

*Location and Building*

The location of the food management area is in direct contact with external conditions so there is a very high possibility of contamination due to dust, smoke, insects, and mice. Other components that do not meet the requirements are the division of space that is not appropriate, many of the walls still look dirty, the depot ceiling has holes, minimal ventilation, lack of lighting, and signs of the presence of mice. Still finding signs of the presence of rodents and vectors can cause proliferation which can become a source of disease transmission.

*Sanitation Facilities*

Sanitation facilities refer to the physical structures and equipment that are utilized to uphold environmental quality and regulate factors that may pose a risk to human health. These facilities encompass clean water facilities, latrines, sewers, waste channels,

hand washing stations, rubbish bins, bathrooms, lockers for work attire, preventive measures against flies, mice, and other animals, as well as cleaning equipment.

*Kitchen room, dining room, and food warehouse*

The kitchen room is a place where someone carries out activities to process and provide food or food. The dining room is a container that accommodates eating activities, a place for residents to eat, and a room that must have adequate lighting and ventilation as well as good air.

*Foodstuffs and Prepared Foods*

Food ingredients are materials that usually come from animals or plants that can be eaten by living creatures to provide energy and nutrition. With the presence of food ingredients, it will be possible to guarantee that the food ingredients will last longer according to the durability of each of these ingredients. Therefore, the placement of food ingredients to be

processed must be stored in the place where they should be stored so that they do not affect other food ingredients.

#### *Food Processing*

Food processing is the transformation of basic resources into consumable food products. Effective food processing adheres to the concepts of hygiene and sanitation. Food processing activities must be conducted in a manner that prevents direct contact with the body. Plastic gloves and food tongs are utilized to protect against direct contact with food.

#### *Storage Place for Foodstuffs and Prepared Foods*

Food storage is a way of storing, arranging, and maintaining food, both dry and wet, and recording reports. Once the food is received, it must be immediately taken to a storage room for storage, either a warehouse or a cold room. The purpose of food storage is to preserve and safeguard the condition and quality of stored food, shielding it from damage, decay, and other environmental disruptions. It also aims to meet the demand for specific types and quantities of food with the appropriate quality and timing, while ensuring a diverse supply of foodstuffs. Sufficient amount and level of excellence. Temperature has a significant impact on the quality of processed food.

#### *Food Serving*

The food served is ready-to-eat food that is suitable for eating. According to the principle of serving food, the container for each type of food is placed in a separate container and kept closed.

#### *Equipment used*

Equipment is a tool that comes into direct contact with food. To avoid contamination, the equipment used to process and serve food must be by its intended purpose and meet hygiene requirements. Processing equipment is items used for food handling. Care and storage of kitchen equipment must be taken care of and pay attention to standard operating procedures. Because if it is damaged or lost it will hamper the food processing process in the kitchen. So, when storing it, you must follow the correct standard procedures so that the equipment remains good and can be used again if needed.

#### *Labor*

Workers are people who are directly related to food and equipment starting from the preparation, cleaning, processing, and transportation, to serving or food being made until the food is ready to be served or served.

## Conclusion

Food is a human need to support survival which is useful for growth and building body cells, keeping them healthy and functioning as they should. Culinary hygiene and sanitation is one of every human's efforts to prevent contamination of food with bacteria which will damage the quality of the food and even cause the transmission of diseases due to food and behavior. Hygiene and sanitation must be carried out by correct and appropriate procedures.

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#### Author Contributions

Conceptualization, methodology, validation, formal analysis, inquiry, resources, and data curation were performed. The writing process included original draft preparation, review, and editing, as well as visualization by Z. All authors have reviewed and consented to the final version of the manuscript that has been published.

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#### Conflicts of Interest

The authors declare no conflict of interest.

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