

A Study of Food Safety and Hygiene Standards Maintained by Local Restaurants in Mumbra

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Abstract: *The purpose of this study was to determine the knowledge of food safety and personal hygiene practices among the local restaurants in the Mumbra area. For this purpose of self - self-administered, a multiple choice questionnaire was applied, distributed, and feedback was taken. The circumstances and procedures required to ensure the safety of food from manufacturing to consumption are known as food hygiene. At any moment during the process of processing, storing, distributing, transporting, or preparing food, food can get contaminated. A closely related but more general notion is "food safety," which refers to the absence of any potential pollutants or risks from food. Therefore, a major challenge in the food industry is to motivate food handlers to apply what they have learned regarding food Safety and hygiene standards. Every day, diseases brought on by eating contaminated and unclean food cause major health problems for people all over the world. Good hygienic practices (GHP) to prevent and control foodborne diseases. Foodborne diseases result from eating foods that contain infectious or toxic substances. The procedures that guard against microbial contamination of food at every stage of the supply chain, from farm to table, are specifically referred to as "food hygiene."*

A closely related but more general notion is "food safety," which refers to the absence of any potential pollutants or risks from food. Both names can be used interchangeably in real life. Hazard identification and control are necessary for HACCP implementation in the food industry. Motivating food handlers to put what they have learned about food hygiene into practice is therefore a significant difficulty in the food industry

Keywords: Food Safety, Personal Hygiene, Good hygienic practices, Food safety

I. INTRODUCTION

The food system is a complex, concentrated, and dynamic chain of activities that begins with the production of raw agricultural commodities on farms, orchards, and ranches and moves to value-added processed and manufactured products and then to retail food store and food service establishments (restaurants and institutions) where they are merchandised, prepared, and sold to consumers. Food and beverage processing facilities transform raw agricultural materials into intermediate foodstuffs or edible products.

Through mergers and acquisitions, the food processing sector has consolidated and become increasingly concentrated in recent years. India has about 53,000 hotels and 70 lakh restaurants in the organized category and 2.3 crore restaurants in the unorganized sector. The food service sector has grown steadily since the 1980s. This rise has been driven by several variables, including technological advancements, culinary trends, labour concerns, organizational issues (labour, outsourcing or contracting of services, and professional attainment of management), and technology.

The health and nutritional status of people are largely dependent on the quality of food they eat. Therefore, it is crucial to make sure the food they eat is healthy and safe. Rapid industrialization and changes in the lifestyles of people have resulted in a marked increase in the consumption of food outside the house. Large numbers of eating establishments such as restaurants, fast food centres, dhabas, street food stalls, etc. have mushroomed in cities of India, which are manned by different categories of workers. Unhygienic preparation of food in such places provides ample opportunities for contamination, growth, or survival of food-borne pathogens. In a highly populated country like India, the number of man-hours people lose by consuming unhygienic food and falling ill clearly points out the need to implement food safety measures in some places. Food handlers are an important source of introducing pathogens into foods during their preparation and service. A food handler is any person who handles food, regardless of whether he prepares or serves it.

Food handlers in restaurants are epidemiologically more important than domestic food handlers in the spread of food-borne illnesses.

Various microorganisms can be introduced into food by unhygienic activities such as wearing unclean clothes, coughing and sneezing in the area where food is being prepared, and incorrect hand washing. Food handlers involved directly or indirectly in food handling, usually have very poor knowledge of personal hygiene and are not exposed to appropriate hygienic methods of food processing and food handling. Owing to the lack of information available on the hygiene and sanitation practices of food handlers of the restaurant workers, the present study was undertaken to determine the hygiene and sanitation practices of food handlers as well as the microbial quality of selected samples brought from small and medium restaurants of Mumbra.

1.1 Objectives:

1. To study food safety and hygiene standards maintained by local restaurants in Mumbra
2. To study different procedures used by food handlers, while handling food by local restaurants in Mumbra.

II. REVIEW OF LITERATURE

Five keys to safer food manual (2006)

Since the beginning of written history, eating unhealthily has been a concern for human health, and many of the issues with food safety that exist now are not brand-new. Despite the greatest efforts of governments worldwide to enhance food safety, foodborne illness continues to be a major public health concern in both developed and developing nations. An estimated 1.8 million people die from diarrheal illnesses every year, and the majority of these cases are linked to tainted food or water. Most foodborne illnesses can be avoided with proper meal preparation.

(More than a taste test: just how hygienic is Mumbai's street food? 2019)

Any time of day or night, you can find vada-pav, or deep-fried mashed potato patties, served with green chutney on a street corner in Mumbai. Alternatively, you can get a bowl of pav-bhaji, which is a spicy concoction of mashed tomatoes and vegetables topped with a blob of butter, an onion, and a squeeze of lemon. People have a soft spot for bhelpuri, a tangy, savory blend of puffed rice. It's so delectably delicious that we frequently overlook details like the cooking circumstances, the food preparer's hygiene, and whether or not they're using gloves. It is true that street food vendors typically exchange money with the same hand they use to prepare food, without donning gloves.

Food Safety Management-A Practical Guide for the Food Industry (2013)

The following are the 5 Food Safety Rules in the Kitchen:

First rule: wash your hands after each step.

Rule 2: Clean your workspace.

Rule 3: Cooked meals, vegetables, produce, and raw meats should all be chopped on different cutting boards.

Rule 4: Cook meals to safe temperatures.

Rule 5: Foods should be kept hot or cold.

The following are the four Cs of food safety: cross-contamination, chilling, cooking, and cleaning.

The Ten Rules of Safe Food Practice are as follows:

1. Choose Foods Processed for Safety. ...
2. Cook Food Thoroughly. ...
3. Eat Cooked Food Immediately. ...
4. Store Cooked Foods Carefully. ...
5. Reheat Cooked Foods Thoroughly. ...
6. Avoid Contact Between Raw Foods and Cooked Foods. ...
7. Wash Hands Repeatedly. ...
8. Keep All Kitchen Surfaces Clean.
9. Protect food from insects, Rodents, and other animals
10. Use safe water

(Mumbra a Status Report, 2012)

Mumbra-Kausa is a neighbourhood where households with incomes ranging from low to high. Chart, both the extremely wealthy and the extremely impoverished can be found. The range of monthly revenue is less than 500 to two million rupees. The typical monthly household income of the population under the survey is found to be Rs. 11,034.08. This is less than the typical monthly amount. Navi Mumbai's household income in 2005 was Rs. 12,691, according to a CIDCO-performed survey. It is significant to remember that the average person per capita Only Rs. 2354.50 is earned. A much higher percentage of households are in the low-income category as compared to households in the middle or upper-income categories.

Restaurants in Mumbra

Mumbra is a city and suburb in the Thane district of Maharashtra, Western India. It is located close to Mumbai and is part of the Mumbai Metropolitan Area.

Mumbra is home to 900,000 people living in the Thane urban area. Mumbra is a populated town and maintaining hygiene standards becomes a challenging task for the restaurant owners and staff members.

Since there are a lot of eateries in Mumbra that are close to one another and provide large-scale services, they must maintain good cleanliness standards. In every part of our lives, the use of safety precautions and good hygiene has increased since the post-pandemic period.

Three to four large restaurants and a few smaller Chinese eateries may be found in Mumbra. The large restaurant has both vegetarian and vegan options. Given that Mumbra is 3.5 kilometres long, walking to the eateries is more convenient for most people. In Mumbra, one can save their travel expenses. The Mumbra restaurant can easily make home deliveries. Three of Mumbra's most well-known eateries are Noorani, Sahil, and Cafe Salwa. In Mumbra, there are 22.5 vegetarians and 78.5 non-vegetarians. Mumbra's restaurant staff members aren't trained chefs, but they have enough experience to please patrons with delectable meals while adhering to hygienic standards. After entering a restaurant, new employees receive ten to fifteen days of training in customer service.

In the city of Mumbra, poor personal hygiene and carelessness are prevalent because of congested regions that ultimately put a lot of strain on restaurants to keep up with the services they offer to their patrons. We'll attempt to examine the difficulties these eateries encounter in upholding personal cleanliness as well as how this challenge can be overcome by opting for certain measures such as proper cleansing of hands and using sanitizers.

Food Hygiene

The World Health Organization lists the following five principles of food hygiene:

- Prevent food contamination from infections that spread from people, pets, and pests.
- To avoid contaminating the cooked meal, keep raw and cooked items separate.
- Cooks food to destroy viruses by cooking it for the right amount of time and at the right temperature.
- Keep food in storage at the right temperature.
- Make use of safe raw materials and water.

Restaurants are therefore an important venue to consider in the prevention of foodborne diseases. Few studies have been published on food safety knowledge of restaurant food handlers in Mumbai, and we are aware of no restaurant food handler knowledge studies at any other place. In Mumbai, a survey of food handlers' hygiene knowledge revealed that only 58% of the food handlers knew that food poisoning can be caused by cooked rice, and several food handlers did not know the temperature required to control the growth of bacteria.

Hand washing

To prevent cross-contamination, food employees must wash their hands and any exposed areas of their arms as soon as they come into contact with bare human body parts, use the restroom, handle animals, cough or sneeze, wipe their hands, use tobacco, eat or drink, handle soiled utensils, and engage in other activities that can contaminate their hands.

Food workers are required to wash their hands and any exposed armpits in a facility that is appropriately equipped. They should rub their hands together firmly and then rinse well with clean water. Workers are expected to pay close attention to the spaces between and under the fingernails.

Hygiene:

For the duration of their employment, food personnel are required to uphold a high standard of personal hygiene and adhere to appropriate hygienic measures. Employees working in the food industry must have appropriate hair restrictions and wear clean outerwear. In the areas designated for food preparation and serving, staff are not permitted

to smoke, eat, or drink. Access to the spaces used for food preparation and service must be limited to all non-working unauthorized individuals.

Avoid Contacting Ready-to-Eat Food with Bare Hands

Workers in the food industry are not allowed to touch exposed, ready-to-eat food with their hands. Use appropriate utensils, such as gloves, deli paper, spatulas, tongs, or dispensing equipment.

Temperatures

Hot Holding: Food that may be dangerous must be kept at 140°F or above. **Cold Holding:** Food that may be harmful must be kept at 41° F or lower.

Cooking:

Poultry; stuffing made of fish, meat, or poultry; stuffed pasta, fish, or meat; 165° F for 15 seconds.

15 seconds at 155° F for fish, pork, and pooled uncooked eggs.

Frozen fish, meat, and pork, as well as broken raw shell eggs, made to order and served immediately, at 145° F for 15 seconds.

Cross-Contamination:

During storage, preparation, holding, and display, food must be kept apart from ready-to-eat foods to prevent cross-contamination. Knives, cutting boards, and food storage containers are among the items and equipment that need to be properly cleaned and sterilized before being used for ready-to-eat food and after handling raw animal meals.

Cleaning:

Equipment and utensils that come into touch with food must be washed, rinsed, and sanitized using a commercial dishwasher or a three-compartment setup. Three basins big enough for the utensils to be submerged in, a potable hot water supply, and a suitable wastewater disposal system are the bare minimum for a utensil washing setup that will wash, rinse, and disinfect. Cleaning and sensitization of in-use equipment and utensils is required at least every four hours.

Wiping Cloths:

When cleaning food spills from both food-contact and non-food-contact equipment surfaces, wet wiping cloths must be kept in a solution containing 100 mg/l of clean chlorine sanitizer. To clean up food spills from carryout containers and tableware, use dry cleaning rags. Every wiping cloth must be devoid of visible dirt and food particles, and it cannot be used for any other reason.

Personal Hygiene - The application of hygienic principles for the maintenance of health is referred to as hygiene.

The cleanliness of an individual's body is referred to as personal hygiene. Keeping employees healthy is crucial to maintaining food sanitation. Individuals can potentially harbor microorganisms that infect others by spreading viruses or by causing food poisoning.

Personal Effects Personal items such as linens, cutlery, food, and single-service products must be kept apart from personal apparel and belongings in a designated area.

The food sector is compelled to put more of an emphasis on staff education and training and emphasize that managers and employees understand the fundamentals of food safety.

Food and utensils used in food processing, preparation, and serving shouldn't come into touch with workers. Human diseases that can be spread through food include intestinal problems, dysentery, typhoid fever, infectious hepatitis, and respiratory tract diseases like the common cold, sore throat, pneumonia, scarlet fever, TB, and trench mouth. In many cases, even after a patient recovers, the disease-causing microorganisms may still be present.

Transient bacteria can be eliminated by hand washing for 15 seconds (as opposed to the average of 7) with soap and water, which work as emulsifying agents to dissolve grease and oils on the handstands.

As a disinfection step following hand washing with soap and water, alcohol hand rub, gel, or rinse sanitizers that contain at least 60c/o alcohol have been integrated. The alcohol will start to evaporate after around 15 seconds. This hand sanitizer works well for enhancing personal hygiene and doesn't promote the development of germ resistance.

III. RESEARCH METHODOLOGY

Included in the study were social surveys in the form of structured questionnaires with questions based on Mumbra restaurant food safety studies. One hundred local Mumbra restaurant patrons have been chosen as research samples.

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Data interpretation and analysis

1. Mumbra's residents are aware of food safety and hygienic requirements, and they are happy with the standards upheld at neighbourhood eateries.
2. To uphold hygiene standards, staff members should sanitize themselves, wash their hands after handling trash and uncooked food, prepare and serve meals, and before changing into work attire.
3. When working in the kitchen, employees should not wear any type of flashy band, jewellery, or shoes.
4. The most crucial step in guaranteeing restaurant food safety is training hotel personnel.
5. Use hot water, soap, and sanitizing sprays. It should also include a dedicated storage area.

Limitations

1. There are many different types of restaurants, from tiny to huge, and because covering them all would be extremely difficult, the study and survey can be seen as the limitation of the study.
2. One hundred Respondents to the poll provided their views on Mumbra's food safety and hygiene practices. However, as everyone knows, opinions vary, further restricting the scope of the study. The main source of data for the study was primary data and secondary data so the chances of unbiased information are less.
3. Lack of information constitutes a shortcoming of the study
4. Subgroups were too small to conduct factor analyses on them separately

IV. SUGGESTIONS

People need to become more knowledgeable about food safety procedures to protect themselves against illnesses such as dysentery and food poisoning. Since customers and citizens play a significant part in upholding hygienic standards, they should keep an eye on food safety regulations. If a customer notices something bothersome at a restaurant, they should ask the staff to investigate right away and take appropriate action. Restaurants should adhere to a grooming requirement and fully consider the personal cleanliness of their hotel workers.

Some other suggestions to improve food safety in Mumbra are mentioned below-

1. Frequent maintenance is necessary for equipment used in food processing; check for indications of deterioration or insect damage, as these could affect output or contaminate produce. Additionally, the premises ought to be examined, and any problems ought to be fixed before they worsen.
2. Pests can swiftly establish themselves on a restaurant's property and transmit disease, contaminating produce with food-borne illnesses or inflicting expensive damage. These pests include insects, rats, birds, and animals. To stop them from causing damage, premises should be sealed, cleaned, inspected, and clutter-free.
3. Establishing protocols for the lawful storage and disposal of waste is a critical component of food safety. Trash can be kept in appropriate places and containers, and it should be disposed of regularly to avoid building up an infestation that could draw pests and raise the danger of contamination.
4. To lower the danger of contamination, it is crucial to routinely clean and disinfect the spaces used for food preparation as well as the machinery and equipment used during food processing. It is important to use the right disinfection chemicals to guarantee sufficient decontamination.
5. Proper training and supervision in food preparation, storage, waste disposal, personal hygiene, cleaning, and pest control should be provided to all staff members. This will demonstrate to them the value of food safety and how they can take proactive measures to reduce the risk of contamination and foodborne illnesses in restaurants in Mumbra.
6. Enough cleaning facilities should be offered to personnel so they can maintain a high degree of personal hygiene since bacteria can spread readily through biological and physical contamination. Employees should take off jewelry, cover or tie up their hair, wash their hands frequently, and dress in clean clothes.

V. CONCLUSION

Mumbra's restaurants have exploded in popularity in recent years, drawing in large crowds of foodies from all walks of life. But ultimately, spreading awareness of the standards for food safety and hygiene was a difficult challenge. Nonetheless, the majority of them were aware of it, although 20% or so were not. However, certain eateries struggle to keep their spaces clean, especially the smaller establishments like cafés and tiny food centres

To determine whether or not restaurants are keeping hygienic practices, the Food and Drug Administration department plays a crucial role. It should regularly inspect eateries to better enforce food safety regulations and ultimately enhance the health of its patrons.

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