

A STUDY ON FOOD HYGIENE AND SAFETY PRACTICES FOLLOWED BY SELECTED HOTELS IN COIMBATORE CITY

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Abstract

Working in the food processing industry is a challenging yet a fulfilling career. Especially when working within the hotel or the hospitality industry it is even more a challenging task as the high levels of standards are to be maintained in order to meet the expectations. Food processors and food handlers in the hotel or hospitality industry are advised to improve knowledge on food handling and hygiene practices for food safety assurance. The data were collected from 35 hotels using convenient sampling techniques. Simple percentage analysis, Chi square and Ranking method were used to analyze the data. A positive relationship was observed and there was a satisfactory result to the food safety training and FSSAI hygiene practices. About the socio-demographic data, it was observed that there has been positive association between the “food safety training” and “designation” of participants

Index Terms: Food Hygiene, Safety Practices, FSSAI, Hotels.

Introduction

Food safety is the conditions and measures necessary to ensure the safety of food from production to consumption. Food contamination can be cause at any point of time i.e., during harvesting, processing, storage, distribution, transportation or preparation. An effective way to communicate this information is through food hygiene training, which teaches food handlers the proper techniques of handling, storing and cleaning of food. These good practices prevent customers from suffering food poisoning and allergic reactions, help to reduce food waste and boost efficiency.

Working in the food processing industry is a challenging yet a fulfilling career. Especially when working within the hotel or the hospitality industry it is even more a challenging task as the high levels of standards are to be maintained in order to meet the expectations. Food processors and food handlers in the hotel or hospitality industry are advised to improve knowledge on food handling and hygiene practices for food safety assurance. Working in any food processing industry entails keeping up with target production for the day and working vigorously to make sure the food processed is on par with standards for customers. Also, it recommended that the workforce and the workplace where the food is being processed comply with the food safety and hygiene practices. Since a great amount of food is processed in the hotels with a large workforce, at times it becomes hard to track down the food safety practices being followed. This issue can be eliminated by educating workers on what to do and what is expected of them.

Statement of the Problem

For more than 200 diseases ranging from diarrhea to cancer, unhealthy foods containing pathogenic microorganisms and toxic chemicals are responsible. The maximum burden of food-borne diseases is not known in India.

Pesticides and the use of fertilizers have increased almost 170 times in the last 50 years. As a result, residual contaminants from these chemicals contaminate soil and spread into the atmosphere and find their way into the food chain. The hotel industry in the country is the industry in which a large amount of food is consumed. Thus, the need to have proper food safety and hygiene practices in the hotels is very essential to reduce food contamination and the food borne illness that may occur due to the contamination. Also, the hotels must follow standardized methods to overcome such issues. In order to ensure hygiene and safe food handling practices, the study was analyses the food hygiene and safety practices of hoteliers in the city.

Objectives of the study

- To study the food hygiene and safety practices followed in the hotels at Coimbatore city.
- To know the importance of food hygiene and safety practices
- To find whether the hotel industries follow the rules and regulations laid down by the FSSAI
- To know the causes of food borne diseases
- To know if the quality marks are checked at the time of purchasing the product

Review of Literature

Fletcher et al (2019)¹, examined the food safety systems in hotels to find out how comparable they are with the HACCP standards. A cross-sectional study was done. Quantitative data was obtained from the staffs and qualitative data through in-depth interviews with the hotel managers. An observation of the food safety operations was done. The majority (75%) of larger hotels used a combination of HACCP and Ministry of Health food safety strategies ($p = 0.02$) and offered all-inclusive services ($r = -0.705$, $p = 0.001$). Larger hotels were more likely to have a better-quality team approach, HACCP plan, and monitoring of critical control points (CCPs) and more likely to receive higher scores ($p < 0.05$). More than two thirds of hotel staff were knowledgeable of HACCP. Thus, mandatory implementation of HACCP would require that sector-specific policies be developed for smaller hotels and implemented on a phased basis.

Harry Wood (2019)², in his article states that the hospitality sector must adhere to the correct food safety standards and regulations present in their country which reflects in high levels of hygiene and safety to ensure that all food prepared on-site and sold to customers are safe to eat and free from food-borne diseases. He also states that the legal requirements will slightly vary between countries, but the general principles of food safety are the same.

According to the **World Health Organization's report (2019)³**, food borne illness are usually infectious or toxic in nature and caused by bacteria, viruses, parasites or chemical substances entering the body through contaminated food. Food borne contamination can cause severe diarrhoea infections. Chemical contamination can lead to acute poisoning or long-term diseases, such as cancer. Food borne diseases may lead to enduring disability and death. Examples of hazardous food include uncooked foods of fruits and vegetables contaminated with faeces, and raw shellfish containing marine biotoxins. It also states the evolving world and need for food safety as a public health priority.

Asmawi et al (2018)⁴, evaluated the aspects of knowledge, attitude, and practices about food hygiene and safety issues among food handlers who are working in food courts. A cross sectional study was conducted using questionnaire. The collected raw data was analysed using T-test and one-way ANOVA. The mean percentage for knowledge level of food handlers was poor with a score of 58.3%. the mean percentage for attitudes and practices of food handlers were high and good respectively. The study showed that food handlers with poor knowledge score were able to achieve high practices score.

Prabhusaran et al (2018)⁵, had a cross sectional study to evaluate the knowledge, attitude and practices of personal hygiene, sanitation and cleaning of the food handlers in their food processing units or places in Tiruchirappalli, Pudukkottai and Karur districts of Tamilnadu, India. 236 food handlers were interviewed by a self-administered questionnaire. The study showed that most of the good handlers were not having good knowledge in food safety and the people need more training and guidelines towards practice of microbial control. They also didn't have enough knowledge about food hygiene and cleanliness and were also unaware of the issues related to infections that spread through contaminated food.

Souza et al (2018)⁶, assessed the food safety knowledge and practices of food handlers in popular public restaurants in Brazil. A questionnaire containing questions relating to food safety knowledge and food safety practices was used for the study. Regarding food safety knowledge, an average of 73% of correct answers has been observed. Food safety self-reported practices presented 81% of adequacy, while observed practices were 75%. A positive correlation was observed and there was a satisfactory result to the food safety and knowledge and practices. About the socio-demographic data, it was observed that there has been no association between the "knowledge" and "socio-demographic and occupational characteristics" of participants. However, the study revealed that hygienic sanitary conditions were the concerns of the restaurants.

Research Design

The type of research used for this study is descriptive in nature. Samples of 35 hotels were selected using convenient sampling technique. The various analytical tools such as Simple percentage method, Chi-square and Friedman ranking test has been used to analyse the data. SPSS was used for all statistical analysis.

PERCENTAGE ANALYSIS

Table 1. Designation of the Respondents

PARTICULARS	NO. OF RESPONDENTS	PERCENTAGE
Owner	13	40.0
Manager	9	26.7
Chef	5	13.3
Front Desk	3	6.7
Service Staff	5	13.3
Total	35	100

Source: Primary data

Interpretation:

From the above table it is clear that 40% of the respondents are owners, 26.7% of the respondents are managers, 13.3% of respondents are chefs, 6.7% of the respondents are front desk and 13.3% of the respondents are service staffs. Majority of the respondents (40%) are owners of the restaurants.

Table 2. Educational Qualification of the Respondents

PARTICULARS	NO. OF RESPONDENTS	PERCENTAGE
UG	17	66.7
PG	9	13.3
Diploma	9	20.0
Total	35	100

Source: Primary data

Interpretation:

From the above table it is clear that 66.7% of the respondents are undergraduates, 13.3% of the respondents are post-graduates and 20% of the respondents have completed diploma. Majority of the respondents (66.7%) are undergraduates.

Table 3. Year of experience of the respondents

PARTICULARS	NO. OF RESPONDENTS	PERCENTAGE
Less than 5 years	14	60.0
5-10 years	7	13.3
10-15 years	7	13.3
More than 15 years	7	13.3
Total	35	100

Source: Primary data

Interpretation:

From the above table it is clear that 60% of the respondents are having a work experience of less than 5 years, 13.3% of the respondents are having a work experience of 5-10 years, 13.3% of the respondents are having a work experience of 10-15 years and 13.3% of the respondents have a work experience of more than 15 years. Majority of the respondents (60%) have a work experience of less than 5 years.

Table 4. Food Safety Training of Respondents

PARTICULARS	NO. OF RESPONDENTS	PERCENTAGE
Yes	21	73.3
No	14	26.7
Total	35	100

Source: Primary data

Interpretation:

From the above table it is clear that 73.3% of the respondents have given a positive response and 26.7% of the respondents have given a negative response for the statement if they have undergone food safety training. Majority of the respondents (73.3%) have undergone food safety training.

CHI-SQUARE

Association Between Designation And Food Safety Training

H_0 = There exists no relationship between designation and food safety training

H_a = There exists a relationship between designation and food safety training

	Designation	Food safety training
Chi-Square	5.333	3.267
Df	4	1
Asymp.Sig	.025	.041

Source: Primary data

Interpretation:

From the above table it is known that there exists a positive relationship between designation and food safety training ($p < 0.05$). This implies that designation of the respondents influences the food safety training. Thus, reject the null hypothesis.

Association Between Designation And Learning About Food Safety Training Courses

H_0 = There exists no relationship between designation and learning about food safety training courses

H_a = There exists a relationship between designation and learning about food safety training courses

	Designation	Food safety training course
Chi-Square	5.333	4.667
Df	4	4
Asymp.Sig	.025	.023

Source: Primary data

Interpretation:

From the above table it is known that there exists a positive relationship between designation and food safety training courses ($p < 0.05$). This implies that designation of the respondents influences the food safety training courses. Thus, reject the null hypothesis.

Association Between Food Safety Training And FSSAI Hygiene Practices

H_0 = There exists no relationship between food safety training and hygiene practices

H_a = There exists a relationship between food safety training and hygiene practices

	Food safety training	Hygiene practices
Chi-Square	3.267	1.267
Df	1	3
Asymp.Sig	.041	.023

Source: Primary data

Interpretation:

From the above table it is known that there exists positive relationship between food safety training and hygiene practices. This implies that food safety training of the respondents influence the hygiene practices.

RANKING

Ranks For The Causes Of Food Borne Diseases

Particulars	Mean Rank	RANK
Purchase of contaminated food materials	2.87	2
Practicing bad personal hygiene	2.93	3
Cooking food at improper temperature	5.00	6
Unsafe drinking water	4.40	5
Adding artificial food colouring & preservatives	3.07	4
Using of adulteration food items	2.73	1

Source: Primary data

Interpretation:

From the above table the ranks obtained by the various elements are, rank one for using of adulteration food items, rank two for purchasing contaminated food materials, rank three for practicing bad personal hygiene, rank four for adding artificial food colouring and preservatives, rank five for unsafe drinking water and rank six for cooking food at improper temperature.

FINDINGS**Percentage Analysis**

- Majority of the respondents (40%) were owners.
- Majority of the respondents (66.7%) had acquired an undergraduate degree.
- Majority of the respondents (60%) had an experience of less than 5 years.
- Most of the respondents (73.7%) had undergone food safety training.
- Majority of respondents (60%) had strongly agreed to handling food safely is their main responsibility of their job.
- Majority of respondents (86.7%) had strongly agreed that personal cleanliness is highly required while working.
- Majority of respondents (66.7%) had agreed that it is frequent cleaning of floors with disinfectants is needed.
- Majority of respondents (46.7%) had agreed that the health status of food handlers should be evaluated before employment.
- Majority of respondents (53.3%) had agreed that food handlers must ensure that their nails are clean and cut.
- Majority of respondents (53.3%) have strongly agreed that techniques of washing hands properly are important.
- Majority of respondents (40%) have strongly agreed that food handlers should wear gloves when they touch ready to eat food.
- Majority of respondents (46.7%) have responded neutral for food handlers should change gloves after they handle ready to eat food.
- Majority of respondents (20%) have disagreed that food handlers should wear suitable attire before they start working.
- Majority of respondents (40%) have agreed that raw and cooked food should be stored separately to reduce the risk of food contamination.
- Majority of respondents (33.3%) have agreed that learning about food safety through training courses is important.
- Majority of respondents (46.7%) have responded neutral for testing of food items is important as per FSSAI standards.

SUGGESTION

The following are the suggestions based on the results of the study.

- A positive relationship was observed and there was a satisfactory result to the food safety training and FSSAI hygiene practices. About the socio-demographic data, it was observed that there has been positive association between the “food safety training” and “designation” of participants
- The FSSAI standards established need to be strictly followed for protecting and supporting the consumer’s health through food safety regulations. In order to establish this surprise visits by the FSSAI members can be done.
- Conditions and steps for food safety must be conveyed to food handlers by imparting periodic workshops and training on food safety in which food handlers can learn about the handling, storage and cleaning techniques.

- Frequent inspections by the supervisor in-charge must be done to ensure that the workplace and workforce adhere with the food safety and hygiene standards.
- Regular health checkups for the food handlers can be held up by the hoteliers to examine the health conditions of the food handlers working in the hotels. Also, the health status of food handlers must be evaluated before employment to ensure food safety and food hygiene.
- The food prepared must be tested in laboratories according to the FSSAI standards in order to reduce the ill health that may be caused.
- Space for raw and cooked food to be stored separately can be allocated to reduce food contamination.
- The process of reheating of food should be avoiding by the food handlers to avoid food contamination.
- A proper uniform for the food handlers can be issued by the hoteliers to the food handlers to enable food safety and hygiene.

CONCLUSION

Food borne illness is a widespread public health problem globally. Due to the presence of a wide array of food-borne diseases, developing countries bear the brunt of the problem. Many people in India suffer from multiple episodes of diarrhea and others are ill due to poor sanitation and unsafe drinking water. Imparting food safety education is the first step towards combating the problem of food safety. There is a need for many more such efforts to eradicate food borne illness from its source completely.

Food can be made safe by coordinated efforts of all stakeholders. The government must implement the present laws related to food safety as strictly as possible. Strict action must be taken against companies which violate the prescribed food safety standards. The consumers must be made aware of the importance of food safety. We have to come to terms with emerging challenges to ensure food safety. These new challenges are in the form of newly discovered food borne pathogens, rapidly emerging food technologies and increasing global trading in food products.

From the study, it is known that there exists a significant relationship between designation and food safety training. The FSSAI standards implemented by the Ministry of Health & Family Welfare, Government of India are being followed by the hoteliers. Most of the hoteliers consider the quality marks before purchasing the food products. Food contamination being one of the major causes for food borne diseases is being controlled by reducing reheating of food. The food handlers mostly wear suitable attire and ensure personal cleanliness to ensure food safety and hygiene. Also, the results of the study support the need for more effective information on food safety and hygiene practices. Insufficient information and understanding about food safety are known to contribute to non-compliance of food service operators in implementing food safety practices in their business. In this matter the government plays an important role by providing wide-ranging information about food safety and food hygiene to both consumers and food service operators in running their business to ensure that all food sold is safe to consume, and eventually lead to a better food safety operation.

REFERENCES

1. Fletcher, S. M., Maharaj, S. R., & James, K. (2009). Description of the food safety system in hotels and how it compares with HACCP standards. *Journal of travel medicine*, 16(1), 35-41.
2. Asmawi, U. M. M., Norehan, A. A., Salikin, K., Rosdi, N. A. S., Munir, N. A. T. A., & Basri, N. B. M. (2018). An Assessment of Knowledge, Attitudes and Practices in Food Safety Among Food Handlers Engaged in Food Courts. *Current Research in Nutrition and Food Science Journal*, 6(2), 346-353.
3. Prabhusaran, N., Manivannan, L., Pramila, M., & Prabhakar, Y. K. (2018). Knowledge, Attitude and Practice of personal hygiene, cleaning and sanitation during food processing. *nation*, 2, 3.
4. Souza, C. V. S. D., Azevedo, P. R. M. D., & Seabra, L. M. A. J. (2018). Food safety in Brazilian popular public restaurants: Food handlers' knowledge and practices. *Journal of food safety*, 38(5), e12512.
5. Al-Nasraween, M., Al-Jaghbeer, M., Al-Qutob, R., & Taha, H. (2018). Assessment of Food Safety Knowledge among Chicken Shawerma Food Handlers in Amman/Jordan. *European Journal of Public Health*, 28(suppl_4), cky214-083.
6. Manning, L. (2018). The value of food safety culture to the hospitality industry. *Worldwide Hospitality and Tourism Themes*.
7. Ma'moun, A., Al-Shakhsheer, F., & Al-Ababneh, M. M. (2017). Restaurant Employees' Food Handling Practices in Irbid City, Jordan. *Journal of Tourism and Hospitality Management*, 5(1), 81-89.
8. Akabanda, F., Hlortsi, E. H., & Owusu-Kwarteng, J. (2017). Food safety knowledge, attitudes and practices of institutional food-handlers in Ghana. *BMC Public Health*, 17(1), 40.
9. Lee, H. K., Abdul Halim, H., Thong, K. L., & Chai, L. C. (2017). Assessment of food safety knowledge, attitude, self-reported practices, and microbiological hand hygiene of food handlers. *International journal of environmental research and public health*, 14(1), 55.
10. Moreb, N. A., Priyadarshini, A., & Jaiswal, A. K. (2017). Knowledge of food safety and food handling practices amongst food handlers in the Republic of Ireland. *Food Control*, 80, 341-349.