

SURVEY OF FOOD SAFETY MEASURED IN THE CANTEEN OF AUTOMOBILE SECTOR COMPANIES OF AURANGABAD MIDC AFTER COVID 19

Rupesh R. Bhavsar¹, Dr. Sonali Kshirsagar²

¹Assistant Professor, MGMU IHM.

²Guide, (Professor) BAM University.

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Abstract:

India is a country where industrial development is a wave to strengthen the country's economy. But in this development employee welfare is not been looked at very well. Employee welfare includes canteen facility .and these canteens Food safety is always an issue when it comes to large canteen management. Most of the time these canteens were operated in the industrial sectors providing food to 150-2000 or more people at a time. They work in two shifts serving breakfast, lunch, high tea, snacks, and dinner. As per the company, policy food is provided to work as a part of its welfare and costs extra to the company. These facilities are very basic and mostly outsourced by a private contractor or on very few occasion company management run itself. Workers of these units always talk about food quality, hygiene, cleanliness, and the attitude of food handlers and found that they are not very satisfied after many efforts of the company. This affects the culture of the organization and the attitude of workers working there for more than 5-10 -20 years or more. It also affects absenteeism, and health-related issues of workers related, to foodborne diseases in long run within the service span of employees. A close survey of the store management, cooking procedure, service of food, workplace standard, statutory requirement, and personal hygiene of food handlers was collected and a suggestion was given to fill the gap for improving the food safety of some industrial canteens. . Close survey of the store management, cooking procedure, service of food, workplace standard, statutory requirement and personal hygiene of food handlers was collected and the suggestion was given to fill the gap for the improvement in the food safety of some industrial canteens.

Keywords: Food Safety, Canteen Facility, Regular Audit, Food Safety Supervisor, Automobile Companies, Aurangabad MIDC.

Introduction

Food businesses all around the country are being harmed by poor food hygiene. Not only may unfavorable reviews and a lack of consumers harm your reputation, but poor food hygiene can also represent a major public health risk, and in rare situations, even death. One of the most prevalent types of food poisoning is gastroenteritis. However, in severe cases, food poisoning can lead to hospitalization or even death. Poor food hygiene increases your risk of cross-contamination in the kitchen, which is a common way an individual might suffer from an allergic reaction. Having a good level of food hygiene training will ensure all of your staff is aware of the severity of food allergies and intolerances and that everyone takes the appropriate measures to avoid cross-contamination.

Food hygiene training is essential because it teaches you how to run a sanitary and safe kitchen. It ensures that everyone is on the same page in terms of keeping the facilities, themselves, and any equipment clean, storing food at the proper temperature, and avoiding

other potential hazards like cross-contamination, which might cause a serious reaction or even death.

As per the company, policy food is provided to work as a part of its welfare and costs extra to the company. These facilities are very basic and mostly outsourced by a private contractor or on very few occasion company management run itself. Workers of these units always talk about food quality, hygiene, cleanliness, and the attitude of food handlers and found that they are not very satisfied after many efforts of the company. This affects the culture of the organization and the attitude of workers working there for more than 5-10 -20 years or more. It also affects on absenteeism, and health-related issues of workers related, to foodborne diseases in long run within the service span of the employee. Due to private catering vendors or suppliers, there is a neglect of the necessary procedure of the food safety management system. This cause in a low score of food hygiene, kitchen hygiene, and personal hygiene of food handlers with unsatisfied employees who get a bad service experience at the time of meal every day.

Layout and design of food establishment premises: service area should be planned and designed to ensure the following work flow –

The flow of food should be always in the forward direction as shown in the following diagram -



Literature Review:

A study conducted on hand hygiene was conducted of food handlers working in canteen of Kolkata west Bengal to show the correlation between variables that is knowledge and self-reported food practices of food handler with social demographic data .the study is exploratory in nature and done in five different institutional canteen in Kolkata .in research finding researcher proves education is an important factor in regarding to food safety and food handlers need to understand the importance of hand hygiene and disease transmission . Researcher also gives the above reference According to Freitas et al the level of education completed is an important indicator of work quality, quality of life and growth potential of employees. So low level of education in the present study could have an impact of the behaviour pattern regarding hand hygiene. (Banik, Chakrabarty, & Das, 2020) (Banik, Chakrabarty, & Das, 2020)

Food safety is critical for public health and economic development. The hospitality industry offers a variety of food services, led by food handlers with diverse background

Researcher try to find out food safety knowledge and practices in the hospitality industry of Ghana. Respondent show good level of knowledge (66%) about food safety but lack with

required training. They have finding that not only kitchen staff is responsible for food safety it involve all the food handlers from purchase to service person. Out of 100 only 65 foods handled go under medical screening and improper handling of food is responsible for any type of food borne diseases. Researcher shows that there is correlation between food safety practice and other variables like age, gender, education, training etc. At end he also states that training to vendors is also required for improvement. Training program need to be enforced by the local authority for large scale implementation and improvement in results. (Odonkor, 2020)

Above research is form Ghana researcher stated that as per government estimation 1 in 40 people suffering from food borne diseases in course of life and it cost almost 69 million dollars annually to the government. So there is need to ensure food safety of people.

Odonkor, S. T. (2020). An Assessment of Food Safety Knowledge and Practices in the Ghanaian Hospitality Industry. *Journal of Food Quality*, 9.

In other case cross sectional study was conducted by researcher to find Food safety knowledge, practices and attitude of food handler among the students of Gondar, northwest Euphoria in 2019. One-way ANOVA was done for examining socio demographic variable association with KAP, and Pearson correlation analysis was conducted to measure the association among food safety knowledge, attitude, and practice scores. The survey was conducted in 430 students randomly after analysing the data collected he reached at statement that there is association between knowledge and practice and food safety practice attitude in independent variable within the student.

In other finding researcher also suggest that current level of food safety knowledge and practices and students attitude can be improve by the some additional training session or formal education. (Azanaw & Dagne, 2019) In the study researcher state that food borne diseases (FDB) become big problem for all society and growing public health issue worldwide .This cause serious illness and in some cases death as well.

Azanaw, J., & Dagne, H. (2019). Food Safety Knowledge, Attitude, and Practice of College Students. *BioMed Research International*, Volume 2021, 1-10.

Purpose of the Study:

Survey will show the current level of food safety in canteens of auto part companies in Aurangabad MIDC and suggest the need full parameters to uplift the current situation.

The Objective of Study:

- To understand the current level of food safety in industrial canteens of auto part companies Aurangabad.
- To show how appointing a food safety supervisor can make visible changes in food safety of canteen management and increase employee satisfaction.
- Close supervision can improve the standard of food chain on canteen management.

Hypothesis:

- H1: Close supervision and appointment of a Food safety supervisor (FSS) can improve the standard of the food chain on canteen management in any

Sample Selection: Research design:

Descriptive research

Sample Design: Convenience random sampling

City	Total No of Industrial Units	No of total employees
Aurangabad	777	77508

As per District wise distribution of registered factories (2010-11) MIDC Aurangabad which consists of 71 large-scale units and 36635 no of workers in the factories.

1. Universe: Total MIDC of Aurangabad City.

No of Large scale units 71

Category	Area of MIDC
C	Shendra ,Chikhalthana, Aurangabad
D	Walinj
D+	Paithan , Jafrabad

2. Sample size: 5 respondents each units were selected as a sample

Total sample size: 25*2=50 Respondent

3. Sampling procedure: Convenience Random Sampling

4. Research Instrument: Structured Questionnaire

Survey was done in month of Dec 2020 just after the first lockdown taken off after covid 19 outbreak. Within that All Major companies of Aurangabad MIDC is consider who is having canteen facility for the workers under the company Act 2006. Random sampling were collected from MIDC areas of Aurangabad form the workers, employs about the canteen facility. Questioner was prepared about the canteen facility and food handler’s behavior towards food safety after pandemic. Data was collected about the store management, cooking procedure, service of food, work place standard, statutory requirement and personal hygiene of food handlers. Data was closely supervised for the different parameters and conclusion wan drawn after comparing the data.

Data was collected in five different unit of manufacturing which produce auto components, as per the rules of food safety every company have canteen committee which takes decision on behalf of management so we collect the response through catering manager, store person, chef in charge, service person or supervisor, company employee (worker), administration staff (HR) representative who look after the various aspects of catering activity.

As per the production cycle of catering establishment work for canteen of the above company’s controlled data was collected at the various spots in following order:

1. Store
2. Preparation and production area
3. Food service area
4. Over all work place standard
5. Statutory requirement
6. Personal hygiene

Feed Back	Store Procedure			
	Purchase specification	Separate store	Quality check	Food grade container
ID1	3	4	4	1
ID2	5	4	4	2

ID3	5	4	4	2
ID4	4	4	5	2
ID5	5	3	5	1
Total	22	19	22	8
Out of 5	4.4	3.8	4.4	1.6
Average	3.55			

First feedback is collected in Dec 2020 which shows first three parameters in store procedure are well maintained but last parameter about food grade container which is corrected by the gap analysis done after data is been observed closely.

Feed Back	Store Procedure			
	Purchase specification	Separate store	Quality check	Food grade container
ID1	3	4	4	5
ID2	5	4	4	5
ID3	5	4	4	5
ID4	4	4	5	4
ID5	5	3	5	4
Total	22	19	22	23
Out of 5	4.4	3.8	4.4	4.6
Average	4.3			

As per the company employee feedback it is found that there is drastic change in the canteen management after covid 19 pandemic and it can be seen in every aspect of various activity as above. As per the workflow diagram observed all the above stopovers of food are supervised closely, every section is divided in to different control points for close observation with the marking scale 1-5 (1 – minimum)(5 –maximum)

Sr. No	Main Area of Work	Control 1	Control 2	Control 3	Control 4
1	Store	Purchase specification	Purchase specification	Quality check	Food grade container
2	Preparation and production area	Standard Recipe	Cooking Method and equipment	Cooking Temperature Hot / Cold	Food Hygiene and Standard
3	Food service area	Wholesome and nutritive food	Hygiene standard in Dinning Area	Holding-Display Temperature 2 hours	Close lid Dustbin
4	Over all work place standard	Planned Internal Audit	Promotion activity to encourage healthy life style (nutritive food -Physical activity)	Equipment maintenance and Hygiene check	FSSAI approved vendor

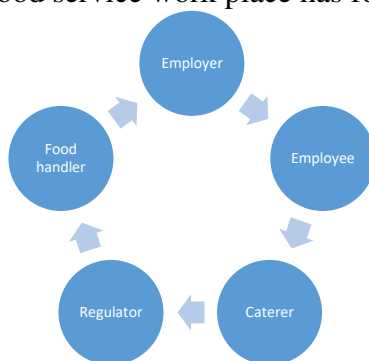
5	Statutory requirement	Food safety Policy	FSSAI Registration	Food safety Training	Health Check-up of Catering staff
6	Personal hygiene	Clean Uniform	Hand Sanitization	Efforts by staff to maintain Hygiene	Head Gear/Cap

All the above parameters are marked on the 1-5 scale pointers from minimum to maximum.

Chapter 4 Presentation, analysis, Data interpretation

FSSAI also develop the rating for the Healthy work place to work to promote the above aspect of healthy food at work place.

At this 21st century we are overcome of epidemic like covid 19 and as we know employee work long hours at workplace and have at least one meal and breakfast at work. So this is common responsibility of individuals and work system to ensure safe and hygienic food for better health in long run. Eating habits affects lot on health on long run; good and healthy food can protect employees from various diseases like diabetics, blood pressure, heart stork and obesity. When it comes to food service work place has following stakeholders:



It is really much benefited to invest on healthy and safe nutritious food and will become smart and sustainable strategy for every work place. Because it improves overall health and wellbeing and also productivity of employees. It also reduces the cost of absenteeism and health care and low productivity due to illness and poor health. This is investment to retain the good employees and attract new one as key of human resource. This help to build trust with employees and prestige for company in competitive environment.

(Dec20) who work in Auto Component Manufacturing Sector Company’s

Auto Parts company	Store Procedure	Preparation -Food Production	Food Service	Work Place standard	Statutory Requirement	Personal Hygiene
Sample1	3.55	3.50	3.70	3.65	3.25	3.75
Sample 2	3.75	3.75	3.90	3.65	3.65	3.80
Sample 3	3.90	3.65	3.60	3.40	3.75	3.45
Sample 4	3.25	3.20	3.30	3.40	3.00	3.45
Sample 5	3.65	3.70	3.65	3.90	3.65	3.70

Average	3.62	3.56	3.6	3.60	3.46	3.63
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Above data is collected from the samples and measure on the scale of 5 pointer for each major part of production chain.

In next quarter same data is collected form the same company’s after appointment of Food safety Supervisor there is drastic change in the each and every parameter which shows FSS is the main component of the production chain and he must have suitable education, expertise and experience to deal with the food handlers and corrected the situation.

Gap analysis is done in all above parameters and improvement is been suggested in every aspect if the food production chain which includes Store Procedure, Preparation -Food Production, Food Service, Work Place standard, Statutory Requirement, Personal Hygiene. 4 control measures for every procedure is suggested and observed the frequency for the gap fulfilment.

(Mar 21) who work in Auto Component Manufacturing Sector Company’s

Name of the company	Store Procedure	Preparation -Food Production	Food Service	Work Place standard	Statutory Requirement	Personal Hygiene
Sample 1	4.30	4.25	4.55	4.35	3.25	4.45
Sample 2	4.65	4.60	4.70	4.55	4.65	4.60
Sample 3	4.55	4.30	4.25	4.10	4.45	4.25
Sample 4	3.80	3.85	4.00	4.25	4.05	4.05
Sample 5	4.35	4.30	4.30	4.50	4.40	4.25
Average	4.33	4.26	4.36	4.35	4.16	4.32

Conclusion:

Though it is necessary to appoint Food safety supervisor (FSS) for the better execution of food safety policy of the organization and must have power to exercise effectiveness of new system with timely support from the company management.

Role and Responsibility of FSS (Food Safety Supervisor):

FSS must insure that canteen, vendor or service provider must have FSSAI license or registration. Food vender, caterer or work place kitchen need to be compliant with FSSAI norms part II and V of schedule 4 of food safety and standard regulation 2011.

Canteen establishment or vendor must follow the guide line specification in section 2 of the orange book. Employee concern regarding food safety must be handling in timely manner. He must ensure all food handlers must train for FoSTaC program for the catering. He must have daily check on food handlers regarding measures of maintaining health and safety at the work place. Guide lines are specified in the orange book. He is also responsible to maintain medical record of food handler as per the FSSAI rules.

He must ensure that if the food handler in unwell due to bad stomach or skin diseases must not allowed working till he is certified by medical practitioner. Water testing is required in every six month internally and by NIBL lab as per the rules of FSSAI.

As good practice food testing need to be done internally and at least once in month. Sample of each category is required for the testing. As per FSS act food testing need to done annually. Hygiene swabs of all food handlers, utensils, and equipment’s need to be done

every quarter of the year .Pest control need to be done internally of all the areas and records must be maintained.

Recommendation:

- FSS must be trained for supervisor role under FSSAI guide line and attended training for the same.
- At least one FSS is required in 25 food handlers to insure best hygienic practices
- FSS must be familiar with all the sections of orange book, the safe and nutritious food handbook and DART book published by FSSAI.

Reference:

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