

## Hygienic Practices of Food Handlers in India

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### Abstract

The present study has been undertaken to review the "Hygienic Practices of Food Handlers in India". Food Hygiene is concerned with the hygienic practices that prevent food poisoning. The study was conducted to know about the hygienic practices followed by food handlers in India; and secondary data was collected from different journals, books, internet, etc. Results depicted that the levels of personal hygiene of the food handlers in the eating establishments were found to be unsatisfactory. The findings highlight the importance of food hygiene education among the food handlers to inculcate the practices of good personal hygiene among the food handlers.

**Keywords:** Food Hygiene; Food Handler; Hygienic Practices.

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### Introduction

Hygiene is a set of practices performed for the preservation of health. Hygiene refers to conditions and practices that help to maintain health and prevent the spread of disease. Whereas in popular culture and parlance it can often mean mere 'cleanliness', hygiene in its fullest and original meaning goes much beyond that to include all circumstances and practices, lifestyle issues, premises and commodities that engender a safe and a healthy environment. Some regular hygienic practices may be considered good habits by a society while the neglect of hygiene can be considered disgusting, disrespectful or even threatening. Food hygiene is concerned with the hygiene practices that prevent food poisoning.

Food hygiene consists of several principles adopted to ensure food safety and to protect food from any chemical, microbiological or other type of contamination that can render it unfit for human

consumption, to prevent the spread of communicable diseases associated with food and food processing and also to ensure that consumers of food are not fraudulently treated. It also ensures that food when purchased is of a nature, composition and quality as demanded by the purchasers. Proper food hygiene should ensure that food is handled, stored, prepared and served in such a way and under such conditions so as to prevent, as far as possible, the contamination of the food (WHO, 2011).

A food handler is anyone who handles food or items that may come into contact with food, such as eating and drinking utensils. All food handlers are legally obliged to comply with the health and hygiene requirements set out in the food safety standards. The food safety standards contain requirements that apply only to food handlers. These requirements relate to health and hygiene and have been included to ensure that food handlers take steps to avoid contaminating food.

All consumers have the right to expect safe, hygienically prepared and good quality food. This is the reason that the handling of food requires care to prevent the hazards. Good hygiene practices are the set of requirements to prevent contamination of food in order to provide safe food to the consumers. Food borne illnesses can result from contamination due to improper practices like when there is lack of environmental hygiene and poor sanitation, mixed and inappropriate transportation, poor storage, poor personal hygiene, unsafe source of food.

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Received on 19.12.2017, Accepted on 16.01.2018

In India, varieties of ready to eat foods are available. This generally includes Chinese fast food, Parathas, Puribhaji, Bhatore and Kulche apart from lighter snacks like tea, biscuits, mathi etc. This is the major source of income for the vendors and consumers get instant, tasty and cheap food in return. So Street Food Vending in urban areas especially in metropolitan cities has become an integral part of the urban lives and culture. It is also recognized that despite of good taste and easily availability, street food vendors are often poor, uneducated and lack hygiene practices. So, street foods are perceived to be a major public health risk (WHO, 2013).

Therefore, an attempt has been made to review the study entitled "Hygienic Practices of Food Handlers in India" with the following objectives:-

- To know about the hygienic practices followed by food handlers in India.
- To analyze the factors affecting the hygienic practices of food handlers in India.

### Materials and Methods

The present study is based mainly on secondary data collected from different journals, books, internet, etc.

### Results and Discussions

The findings and discussion pertaining to the study "Hygienic practices of food handlers in India" are discussed as follows:

In Maharashtra, Gupta and Ketkar (1981) conducted a study and reported that 50% of the food handlers were habituated to chewing pan and 40.1% to chewing tobacco. Food handlers who belongs to below poverty line group were found suffering from majority of the morbid conditions like anemia, halitosis, scabies and other skin disease, phrynoderma, tuberculosis, leprosy as compared to those above poverty line. However hypertension, diabetes and dental carries were more common amongst the individuals who were above poverty line. Of the total 160 food handlers, 54 (33.75%) were suffering from some or the other disease. The high level of morbidity in food handlers could probably be due to poor environmental conditions, poor personal hygiene and low socio-economic status.

In Allahabad, Paulson D.S. (1994) conducted a study and reported that outbreaks are generally

caused by foods due to poor personal hygiene of the vendors and that have been mishandled or mistreated during preparation or storage. Handling with bare hands may result in cross contamination, hence introduction of microbes on safe food (Food Agriculture Organization, 1997). Personal hygiene of the vendors was observed and it was found that clothes of (46.6%) of the vendors were moderately clean and clothes of (13.4%) of the vendors were dirty, 60% of the vendors had short nails which were not polished. About (40%) of the vendors were chewing tobacco during food handling and (73.3%) of the vendors did not wiped their hands after every serving.

In Maharashtra, despite continuing progress made in food quality and safety, food borne disease outbreaks continue to be reported in the literature. The most frequently identified factors contributing to the outbreaks are contaminated raw foods or ingredients, and poor personal hygiene by persons who handle foods (Report of the Food and Drugs Authority retail food programmes, 2000). The study reveals that maximum number (54.37%) of food handlers were below 30 years of age but unfortunately 3.75% were small children below the age of 10 years.

Mahan V (2001) conducted a study in Maharashtra, and reported that the overall prevalence of intestinal parasite infestation to be 14% whereas in a study by OA Idowu and SA Rowland (2006) 97% of the food vendors were infected with one or more faeco-orally transmissible parasites. Such a high prevalence of intestinal parasites is largely due to poor personal hygiene practices and environmental sanitation, lack of supply of safe water, poverty, ignorance of health-promotion practices, and impoverished health services. Washing of hand with only water after using the toilet was practiced by 81(50.62%) whereas frequency of cutting nails is less or nil in 26.25% of the food handlers.

In Karnataka, the findings are similar to that of Bolton (2004), who reported that most of the food poisoning in restaurants was due to lack of knowledge of food handlers in safety and hygiene aspects. Also the findings revealed a significant relationship between the knowledge and the knowledge of practices on food safety among the food handlers. It also revealed that information booklet was effective in improving knowledge on food safety.

Bhaskar *et al.* (2004) conducted a study in Allahabad and reported that defective personal hygiene can facilitate the transmission of pathogenic bacteria found in environment and on people's hand via food and humans. Hygiene during handling and cooking of street foods was observed. 20% vendors

cooked food in advance of sale and (16.6%) of them cooked food on morning of sale. After preparing their foods they kept them and served them at ambient temperature. Only (23.3%) of the vendors reheat the food. 50% vendors served food in steel plate and glass (26.6%) and some served on leaves (10%) and news paper (13.4%) with bare hands (36.6%).

A study carried out by Chumber *et al.* (2007) in Allahabad and found that unhygienic surroundings like sewage, improper waste disposal system and inadequate water supply attract flies and houseflies which further increase food contamination. About (63.3%) of the vendors prepared their foods in unhygienic conditions given that garbage and dirty waste were close to the stalls. 60% of the vendors threw waste water besides the stall making the environment surrounding quite filthy.

Andargie *et al.* (2008) conducted a study in Maharashtra and found that 11% of the food handlers did not practice hand washing after using the toilet, this shows that there is a need to give more emphasis on personal hygiene, self care, training and related practices of food handlers.

Another study carried out by Rahul, *et al.* (2008) in New Delhi among the food handlers of Moulana Azad Medical College, revealed that after a three month intervention programme using posters and flip charts, there was an improvement in the knowledge of the food handlers in the food handling practices evidenced by increased hand hygiene practices from 23.5% to 65.4%.

Isara AR and Isah EC (2009) conducted a study in Maharashtra, and reported that 59 (36.87%) food handlers were found illiterate in which different markedly, wherein they found 98% of the respondents were having formal education. The lower literacy rate may be due to the fact the majority of food handlers were migrants from states like Madhya Pradesh, Bihar and Uttar Pradesh where the literacy rates are relatively lower.

This was supported by the study conducted by Isara and Isah (2009) in Karnataka, who found that more than half (52.6%) of the employees had poor knowledge in food hygiene and safety and it also reported that the prevalence of food contamination in fast food restaurants was 37.5%.

This finding was supported by the study conducted by Sung and Chang among the food handlers of Korea (2010) whose results showed an increase in knowledge for the food handlers from 49.3% to 66.6% two weeks after a training programme on food safety.

In Karnataka, George *et al.* (2013); revealed that there were no samples with good knowledge on food safety and all the samples belonged to either average or poor knowledge.

A study conducted by Kumar *et al.* (2013) in Allahabad and found that personal hygiene, health and food handling practices were observed which showed that out of 30 vendors chosen for survey, 80% were in healthy condition and 20% of them were suffering from cold and fever. 73.3% of the vendors continue food preparation during illness. Regarding reasons for hand washing maximum percentage of vendors (33.4%) and (30%) washed hands after using the toilets and handling garbage.

Taraphdar and De (2016) conducted a study in Kolkata and found that 73% of the study population believed that importance of hand washing is removal of dirt while 45% believed it to be prevention of diseases. On the contrary in Karnataka study almost all the respondents (96.7%) stated that hand washing was important for the prevention of diseases and 45.6% stated its importance to maintain cleanliness.

In Assam, Pokhrel and Sharma (2016) carried out a study and found that out of the 100 interviewed vendors, none had undergone any formal training or apprenticeship on food preparation. They claimed to be self-taught by observing others. Systems should be put in place to ensure that food handlers remain aware of all procedures necessary to maintain the safety and suitability of food. Street food vendors are often unlicensed, untrained in food hygiene and sanitation, and work under crude unsanitary conditions (Food Agriculture Organization, 1997). Findings also showed that 68% of the vendors had the habit of reading food labels before buying them. Results showed that vendors prepared the foods either at home or at the stalls. Majority of the foods were pre-prepared from home and cooked in the stalls. While the rest were brought fully cooked and reheated before serving. Observation during the study showed that the vendors prepared their foods in unhygienic conditions. In all the study areas, garbage and dirty waste were conspicuously close to the stalls. Observation couldn't be made on aspects like, whether the vendors washed the fresh foods like carrots, cabbage, coriander leaves, capsicum, etc. before preparation, as they were cooked or chopped from home and brought. 100% of the vendors asserted that they thoroughly wash the vegetables.

This statement however, cannot be entirely trusted. As there was no source of potable water supply available at their areas of operation, water was ferried from homes of the street food vendors. Vendors carried

water to their business premises in containers of different capacities ranging from 5 to 20 liters. This water, however, was not enough for food preparation and dishwashing. Personal hygiene of the vendors was observed while the vendors were preparing, selling and cleaning in their respective stalls. The use of apron, gloves, hairnet was devoid in 92% of the vendors. Long and dirty nails were also a common observation. Coughing, sneezing and touching of hair during handling of food were also not uncommon. All the vendors handled money while serving food and most of them had worn jewellery and other accessories. Another observation which was found common in majority of the vendors was their habit of wiping their hands in a towel after each preparation.

### Conclusion

This study reveals areas of improvement which would translate into positive change towards attaining safe street food. Every vendor, helper or food handler should undergo a basic training in food hygiene. The levels of personal hygiene of the food handlers in the eating establishments were found to be unsatisfactory. The cooks and suppliers who handled food were not maintaining a satisfactory personal hygiene, thereby increasing the risk of food contamination considerably. Good personal hygiene is also expected among the cleaning and dish washing staff. Food hygiene can be best promoted by educating the food handlers about personal hygiene.

Good hygiene principles need to be regulated and enforced. There is a need for introduction of standards, development on food safety management system that are suitable for the locality with continuous and intensive workshops for food handlers.

The Food Safety and Standards Authority of India (FSSAI) has been established under the Food Safety and Standards Act, 2006 as a statutory body for laying down science based standards for articles of food and regulating manufacturing, processing, distribution, sale and import of food so as to ensure safe and wholesome food for human consumption. FSSAI also provides good hygiene practices training for good handlers.

The government of India is also given directives to the local authorities including metropolitan assemblies and their districts to actively control and monitor food safety practice of food vendors. The water and food hygiene unit of the environmental health department of the districts is responsible for

the health monitoring and certification of food vendors. Continuous sensitization programmes for food handlers and consumers along the food chain of their roles on compliance with food safety requirements. Good hygiene practices which are mostly called prerequisite measures to be available and enforced as the basic requirement for food industries and vendors.

This is to ensure that they follow the required rules for proper hygiene. As street food forms an integral part of our society vendors should be encouraged to participate and train under the different schemes related to food safety and hygiene lunched by the government. This will in turn upgrade the skills of the street food vendors and also contribute to prevent food borne illness. The findings highlight the importance of food hygiene education among food handlers, to inculcate the practices of good personal hygiene.

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