

A study on Food Safety and Hygiene

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ABSTRACT

Food safety and Hygiene is an important public health issue in the India. Eating at Restaurants and other food service facilities increasingly has been associated with diseases. Food safety indicates to those hazards that have physical, chemical and microbiological effects it makes food injurious to health. It also describes handling, preparation and storage of food in order to prevent food borne illness. Food safety often overlaps with food defense to prevent harm to consumers. Food can transmit disease from persons to other persons as well as serve as a growth medium for bacteria that can cause food poisoning so food safety and Hygiene is a significant public health issue. Every year death of approximately two million people occurs due to unsafe food. More than 200 diseases occurs because of harmful bacteria, viruses, parasites or chemical substances in Food.

Key Words: Food, Safety, Hygiene, Health and Service

FOOD SAFETY AND HYGIENE

INTRODUCTION :

Humans must have food to survive. In India and other countries, the system of obtaining food was highly localized before the twentieth century. With the development of new technologies and improved transportation, food production and distribution systems became national in scope and more complex. The current food system stretches from producers to consumers and is international in scope. Ensuring its quantity, nutritional adequacy, and safety has become more complicated, and requires major government and private-sector efforts.

Food safety encompasses a wide spectrum of issues-not only the avoidance of foodborne pathogens, chemical toxicants, and physical hazards, but also issues such as nutrition, food quality, labeling, and education. The system for regulating the food supply in India involves all levels of government from federal to local.

FOOD HYGIENE

Food hygiene are the conditions and measures necessary to ensure the safety of food from production to consumption. Food can become contaminated at any point during slaughtering or harvesting, processing, storage, distribution, transportation and preparation. Lack of adequate food hygiene can lead to foodborne diseases and death of the consumer.

BACKGROUND :

In large scale cooking, food is handled by many individuals, thereby increasing the chances of food contamination due to improper handling. Deliberate or accidental contamination of food during large scale production might endanger the health of consumers, and have very expensive

repercussions on a country. The purpose of this study was to evaluate the food safety knowledge, attitudes, and practices among institutional food- handlers.

Food safety issues also involve the interplay of domestic and international legal, political, scientific, social, and economic forces. Intense debates about desired levels of protection and about the appropriateness of different control measures can arise as parties discuss the scientific bases for risk decisions, public expectations, and relative costs and benefits of intervention in different ways and in different components of the food system.

Science must play a vital role in food safety decisions through risk assessment, that is, the identification of hazards and the determination of the likelihood and severity of risk under given conditions of exposure (IOM, 1997). Hazards are biological, chemical, or physical substances that can cause adverse consequences. Hazards associated with food include microbiological pathogens, naturally occurring toxins, allergens, intentional and unintentional additives, modified food components, agricultural chemicals, environmental contaminants, animal drug residues, and excessive consumption of some dietary supplements. In addition, certain methods of food preparation in the home can contribute to increasing some of these hazards. However, a hazard does not pose a risk in the absence of exposure. The susceptibility of the consumer and the magnitude of exposure determine whether those hazards cause immunological changes, genetic and developmental changes, cancer, or death.

Hazard identification is the basis for estimating risk. A food safety risk is the probability of harm to health resulting from a food-related hazard at a particular exposure to a specified person or group. It is important to recognize that safety is an intellectual concept, not an inherent biological property of a substance; safety has been defined as the judgment of an acceptable level of risk. Thus, "safe food" involves a subjective evaluation of social issues and values, as well as a scientific assessment of risk (Lowrance, 1976; Miller, 1997).

REVIEW :

According to the (Ministry of Food and Agriculture and the World Bank 2007) In every 40 Indian suffer serious food borne illness per year 4,20,000 cases are reported with an annual death rate of 65000 which cost the government India Rs. 690,00,00,000 annually. This report could be an under estimate as report rate is low and the calculation of cost is developing countries only the cost born by individuals through hospitalization and medication is considered whilst others in developed countries consider the cost to employers, institutional bodies like laboratories, surveillance, disability cost and cost from other family members. Who take care of the sick members and premature mortality according to FDA the loss of productivity in India (2010 due to food born disease was approximately 594,279 days 19,809 months) this could be huge in terms of cost to the state. Studies from the commercial food sector have dominated research in the country with special focus on street foods although there is reported food poisoning cases on the media from the institutional setups specifically schools. In 2012 reported that a study on microbiological food safety is one on the decline and highly centred in the capital city in the country. Although all food hazards are detrimental to the health of consumers and require monitoring and the control in the country, currently microbiological hazards in ready to eat foods and comical hazards mostly pesticides from agriculture product including fresh vegetable and fruits have been highlighted (Amoah, Abaidoo, & Ntow, 2006; Bempah, Donkor, Agei, Buah-Kwofie, & Boateng, 2011; Feglo & Sakyi, 2012; Mensah, YeboahManu, Owusu-Darko, & Ablordey, 2002). There is minimal information on physical contaminants / hazards, food allergy and injuries caused by these. This could be due to less awareness and or lack of public education of these hazards. The FAO/WHO, 2005 regional report on food safety for Africa recorded microbiological hazards as the most

eminent risk from street foods but also reported the danger of high levels of heavy metals including lead, cadmium, arsenic, mercury and copper and also pesticide residues from utensils, raw materials or transport methods used. This work looks at food safety and hygiene report in India.

CLINICAL BORNE ILLNESS :

Food safety the food and drugs authority (FDA) is a national regulatory body under the ministry of health with the responsible of implementing food polices and ensuring the safety and wholesomeness of food for consumers (FDA) Roles including food manufacturing and processing site inspection, licensing, product registration and monitoring they also provide good hygiene. Practice training for food handlers. The India standard author develops and promotes international and locally acceptable standards for the industry. Other sporting agencies including the ministry of health, ministry of health agriculture, Indian tourist board and the environment agency. 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. Who are individual or group of people who sell ready to eat food at readily accessible areas including caterers, night club, beer bars, chop bars, cold store, hotels and restaurants operations and bagged water processors. 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. This is subject to renewal on a yearly basis world health organization report of high levels of diarrheal cases of which a higher percentage are due to food and water borne infections.

REGULATORY FRAMEWORK

The Food Safety and Standards Authority of India is a statutory body under Food Safety and Standards Act, 2006. The Food Safety and Standards Act (FSS), 2006 is the primary law for regulation of food products. This act also sets up the formulation and enforcement of food safety standards in India. The FSSAI appoints food safety authorities on the state level.^[14]

The FSSAI functions under the administrative control of the Ministry of Health and Family Welfare. The main aim of FSSAI is to

- Lay down science-based standards for articles of food
- To regulate manufacture, storage, distribution, sale and import of food
- To facilitate food safety

RESEARCH

FSSAI has set certain guidelines for food safety research. The Research and Development division is responsible for research with the following objectives:

- Generate new knowledge that would help in continuously updating and upgrading food safety standards which are compatible with international organizations
- Carry out evidence based studies for improving or building policies.

QUALITY ASSURANCE

- FSSAI has been mandated to perform various functions related to quality and standards of food. These functions in addition to others include “Laying down procedure and guidelines for notification of the accredited laboratories as per ISO17025.”

STANDARDS

Standards framed by FSSAI are prescribed under Food Safety and Standards (Food Product Standards and Food Additives) Regulation, 2011, Food Safety and Standards (Packaging and Labelling) Regulation, 2011 and Food Safety and Standards (Contaminants, Toxins, and Residues) Regulations, 2011.

CONSUMER OUTREACH

Consumers can connect to FSSAI through various channels. Recently an online platform called 'Food Safety Voice' has been launched which helps consumers to register their complaints and feedbacks about food safety issues related to adulterated food, unsafe food, substandard food, labeling defects in food and misleading claims & advertisements related to various food products. A GAMA portal for concerns regarding misleading claims and advertisements too is operated.

TEMPERATURE CONTROL

Temperature control is important to prevent food poisoning, either by killing off bacteria (e.g. through cooking) or reducing the multiplication of bacteria (e.g. through refrigeration).

Refrigerators must be set so that high-risk foods are kept below 8 degrees Celsius. Freezers should be below -18 degrees Celsius. These should be regularly checked to make sure that they are reaching the required temperature and that there is no build up of ice in freezers or freezer compartments.

A food probe thermometer is a useful tool to make sure that food has been thoroughly cooked or has been stored correctly. These are readily and cheaply available from many suppliers of catering equipment and safety equipment supplies. As a guide, foods requiring thorough cooking to the centre, such as sausages and cottage pie, should reach 70 degrees Celsius for two minutes, 75 degrees Celsius for 30 seconds or 80 degrees Celsius for six seconds. Probes must be disinfected after use and records kept.

Many bought products designed for reheating come with instructions for heating and serving. If these instructions are followed, the above temperature checks may be skipped. Similarly, if it is obvious that something is hot (such as a simmering gravy), again the temperature checks can be waived. 'Safe' foods such as vegetables are often not subject to temperature checks.

RECORD KEEPING

It is essential to keep certain records so that you can refer back to them. This might be, for example, a record of what food items were bought from a wholesalers and supermarket (which might be as simple as keeping and invoice or receipt). Many parts of the food handling process could have a check list or date / time record, but this is not likely to be necessary for the simplest of food handling operations.

A record of temperature checks needs to be kept. For a refrigerator or freezer, take a note of the date and temperature. For foods, also note down what kind of food was probed. Should any temperature not be within limits, list whatever corrective action was taken, such as adjusting a freezer temperature.

CONCLUSION

The food safety is an important issue needs to be advanced as soon as possible. Food safety is important in public health. People are wishing to eat more clean and trustable food. Risk assesment is useful in identifying factors reducing the risk including animal production phase, improvement of farm hygiene contributes food safety.

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