

# **Analysis of Consumer Food Safety Knowledge and Practices in Rathnapura**

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## **Introduction**

Food safety is a scientific discipline describing handling, preparation, and storage of food in ways that prevent food borne illness. Unsafe food is the likely vector of multiple biological, chemical or physical hazards and certainly of several nutritional problems. Consumers are the end-users of food chain. With their attitudes, knowledge, age, sex, income level and social status food safety knowledge and practices are different. According to the World Health Organization (WHO), up to 30% of the population of developed countries are affected by food borne illness each year; more than 75 million people get sick from food related illnesses in the USA resulting in 325,000 hospitalizations and 5,000 deaths annually (WHO, 2007). The problem is expected to be even more severe in developing countries.

Now Sri Lanka is more concern about food safety and handling practices. There are many rules and regulations. Food Act No. 26 of 1980: This Act controls, manufacture, importation, transport, sale, distribution, advertisement labeling of food. Sri Lankan food & beverage products comply with international standards such as ISO 9000, ISO 22000, HACCP, Halal, Kosher, Organic etc. In Sri Lanka also have many of food borne diseases, but they are not reported often. But mainly diarrhoeal diseases are the prominent. This study assesses the consumer food safety knowledge and the practices among the Rathnapura households.

## **Methodology**

A survey strategy was used in the research. Target population was the entire household in Rathnapura district 301,876. Thought it was large to do an investigation within limited time period and inadequate financial budget, multi stage random sampling technique was employed to select appropriate sample to evaluate the objectives of this study. Eventually 120 household were selected as the sample size where can meet 95% confidential level.

Five key principles of Food safety by WHO, are used to find out consumer knowledge level in food safety. The association between socio economic characteristics and knowledge on food safety was revealed by applying chi-square test. Prevailing food safety measures were identified by using significant measures like smell, appearance, special package, and price and quality certificates. Consumer food safety knowledge was evaluated with household experiences of physical symptoms associate with food borne illness. And also food preparation, purchasing and storage practices were used to identify food safety knowledge and practices of consumers. Analysis was done by using Minitab 14.0 software package and Microsoft Excel.

## **Results and Discussion**

Descriptive statistics for the sample were produced using descriptive statistical analysis. The purpose of generating descriptive statistics was to describe the demographic characteristics of the sample. 56% females and 44% males are in the sample. To prevent contamination of food with pathogens spreading from people, pets and pests, separate raw and cooked foods to prevent contaminating the cooked foods, cook foods for the appropriate length of time and at the appropriate temperature to kill pathogens, store food at the proper temperature, do use safe water and cooked materials. Majority of consumer's (58%) food safety knowledge level was low. 30% of consumers were had high food safety knowledge level. 12% had medium level knowledge on food safety.

Food safety measures were identified by the study as smell, appearance, special package, and price and quality certificates. Among them 12% considered price, appearance and smell as important factors. 7% were merely concern about one factor of them. Smell, package and special offer were identified by 10% of consumers. And also 10% of them were concerned about all measures. Among respondents 63% selected food items without considering about quality certification. The association between socio economic characteristics and knowledge on food safety was analyzed by using chi-square analysis. Income level had significant association with food safety knowledge of consumers. Education level did not show any association on food safety knowledge.

95% of respondents had experienced with any of the food borne illnesses. This shows that consumers have low confident on food safety and how to protect their family from food borne illnesses. Daniels (1998) verified that consumers who considered themselves knowledgeable make food handling errors.

By considering food safety practices on storage and preparation, 53% of consumers agreed that peeled and chopped fruits and vegetables kept in open air for long time cause contamination. But 23% strongly agreed that before using vegetables and fruits, they should be soaked in salt water. Only 10% kept cooled vegetables and fruits in open air more than one hour. In purchasing fish, 8% of consumers observed red color gills, discoloration and brightness of eyes. Majority were concerned on one factor. And also 48% were concerned about cleanliness of preparation and operator. Storage period of fish and usage were not concerned by consumers of 36%. some consumers never keep cooked meat and raw meat at the same place in refrigerator (34%). Cleaning of food preparation area with soap and water was practiced by only 6%. Washing the cutting board with water, used to chop vegetables or cut raw meat was practiced by 8% of consumers (Table 01).

Lack of knowledge is likely to lead to inappropriate food handling behaviors. Generally, consumer's knowledge has been found to be inadequate to ensure that food preparation in the home minimizes the risk of food borne illness. Personal hygiene and cleanliness of surfaces where food is prepared were identified as practices that have to be developed. Nearly 48% consumers were concern on personal hygiene highly,

Table 01: Descriptive on Food preparation practices

Practices	Always	Sometimes	Rarely	Never
Wash hands before prepare foods.	42%	27%	16%	15%
Before prepare food clean hands and equipment with soap and water.	6%	25%	19%	39%
Using cutting board to cut without cleaning after cutting meat.	8%	28%	35%	18%
Keep leftover food at room temperature for more than 2 hours.	47%	11%	18%	18%
Check cleanliness of surfaces where you prepared food.	33%	20%	29%	7%

47% of respondents were unaware on keeping leftover food at room temperature for more than 2 hours can cause contamination. 42% of consumers wash hands before preparing meals. However some respondents were say always if leftovers were safe. 53% of consumers thought that vegetables open up to air cause contamination. Although that 40% of consumers were not aware on cleaning procedure of vegetables and fruits.

### Conclusion

Consumers in Rathnapura district express low level of self-related confidence and awareness on food safety. Information and low understanding of food borne illness issues. However, findings also reveal gaps in consumer’s knowledge of safe food handling practices. For instance many of them believe they can tell food borne illnesses by its appearance, smell, and price.

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