CHAPTER I
INTRODUCTION AND DESIGN OF THE STUDY

INTRODUCTION

Every year, millions of people worldwide die and many are hospitalized from food borne diseases and illnesses as a result of consumption of contaminated food (Knight et al., 2003). World governments concentrate their efforts on improving food safety, in order to promptly and properly respond to the increasing types and incidents of food borne diseases. Food-borne infections are placed in the core of primary community health concerns, by both advanced and developing countries of the world (Eren, 2007). While it is hard to predict the actual number of incidents of food-borne diseases, it is a known fact that many lives were lost to diarrhoea caused by food and water-borne microbiological agents, tolling around 1.8 million minors during 1998 and 2.1 million people, during 2000, in the developing world. In industrial states of the world, on the other hand, it is stated that every one individual in a group of three is affected by food-borne diseases each year and almost 30% of the population in advanced countries are infected with food-borne diseases (Bas, 2004). Many people are poisoned every day by consuming food produced in unhygienic environments, without sufficient knowledge or training in hygiene, using unclean water or due to inefficient storage conditions, lack of cleaning or mixing of chemicals with foodstuffs (Sanlier, 2009). Food can be mishandled at many places during food preparation, handling and storage. Several studies indicate that consumers have inadequate knowledge about procedures needed to prevent food borne illnesses at home (Mederios et al., 2001). The prevention of food borne illnesses requires educating food consumers on safe food handling practices.
(Jevsnik et al., 2008). However, prior to education, it is important to assess food safety issues relevant to consumers. It has been demonstrated that the level of education affects the level of knowledge or awareness in any casual consumer, in combination with age, sex and level of income (Angelillo et al., 2000).

**PROBLEM STATEMENT AND PURPOSE OF THE STUDY**

The global incidence of food borne illnesses is difficult to estimate, but it has been reported that in 2000 alone 2.1 million people died from diarrhoeal diseases (WHO 2006). A great proportion of these cases can be attributed to contamination of food and drinking water. According to World Health Organization (WHO), about 70% of 2 million deaths per year from diarrhoea in developing countries are related to contaminated food. Consumers, infants and senior citizens are in higher risk of food borne illness because they possess a weakened immune system. Nearly 40% of food borne illness is the result of consumption of food prepared at home (WHO 2006).

In a survey, the majority of cases of food-borne illness in homes were never reported to the relevant authorities (Surujlal & Badrie, 2003). In over 90% of households in India, it is the consumer who is involved in the preparation of food. In nature, every consumer takes full care of food safety practices in preparing or obtaining food for their family. However, as per the UNICEF report, in 2009 infant mortality rate is quite high in India (50.78%). In spite of consumers’ whole hearted preparation of food in the most possible hygienic way to protect their family health, food borne diseases exist in both developing and developed countries. As per the WHO report and previous studies, consumers are suffered from food borne diseases due to food prepared at home. All consumers and food handlers take utmost care in food safety, hygienic and hand
washing practices to avoid food borne diseases. But still food borne problems arise and exist in India. The question now is “Why food borne diseases are high in India, eventhough the food is prepared by the food handlers (mothers) with proper care and stored in traditional, hygienic and scientific methods at home?” Hence, the researcher has made an attempt to find out the existing awareness and attitudes of consumers in food handling practices to identify the causes and effects of food borne diseases in Tamil Nadu.

**OBJECTIVES OF THE STUDY**

1. To analyse the awareness and attitudes of consumers about food safety and its impact on food borne diseases.

2. To test the consumers’ confidence level in food safety and quality marks and its relationship with safe and unsafe food.

3. To identify the personal hygienic practices and hand washing practices of consumers and its cause and effect in food safety.

4. To analyse the existing food safety practices at kitchen and their association with unsafe food.

5. To analyse food adulteration, food safety knowledge, practical experience and its association with the complaint handling practices of consumers.

**HYPOTHESES**

The following are the null hypotheses related to this study:

**Ho1**: Awareness of food safety and complaints made about food adulteration entirely depend on the demographic profile of consumers.

**Ho2**: Cleaning of kitchen, kitchen equipments and consumption of half cooked and contaminated food do not differ in the different profiles of consumers.

**Ho3**: Profiles of consumers do not influence the prevalence of food borne illnesses.
SIGNIFICANCE OF THE STUDY

Food borne diseases can be controlled when consumers adopt the methods of food safety suggested in this study.

1. To identify the exact factors influencing food borne diseases.

2. To help the consumers to adopt food safety practices so as to safeguard the health of their families.

3. This study helps to avoid food borne diseases among vulnerable sections of the society, especially children and pregnant women.

4. This study identifies lacunae in food safety knowledge, practices and practical execution and its results can be used to reduce food borne diseases.

5. Both central and state governments can utilise this study to understand the reasons for food borne diseases.

SCOPE OF THE STUDY

The present study covers four districts of Tamil Nadu. i.e. the districts of Thoothukudi, Virudunagar, Kanyakumari and Madurai in Tamil Nadu. It deals with the Awareness and Attitudes of Food Safety Knowledge and Practices of Consumers – A study with special reference to Tamil Nadu State. The period of this study is about 4 years (i.e.) January 2010 to April 2014.

METHODOLOGY

RESEARCH DESIGN

Since the study has its own predetermined objectives and methodology, it is descriptive in nature. Apart from this, an attempt has been made to explain the awareness and attitudes of food safety knowledge and practices among the consumers. Therefore this study is analytical in nature.
SAMPLING PROCEDURE OF THE STUDY

Out of the thirty two districts of Tamil Nadu, four districts of Thoothukudi, Virudunagar, Kanyakumari and Madurai were selected for this study by convenience sampling method. In total, 200 respondents per district (approximately) were selected. The total sample size came to 806 respondents. A well structured interview schedule was used to collect the relevant data.

SOURCE OF DATA

The present study is based on the primary data collected from consumers in urban and rural areas of Tamil Nadu. Secondary data consists of different literatures of books, published articles and websites.

FIELD WORKS AND COLLECTION OF DATA

A well-structured interview schedule was used to collect the primary data from the respondents. The interview schedule consists of three important parts. The first part covers the demographic profile of the respondents. The second part of the schedule includes the awareness of food safety among the respondents. The third part of the schedule includes the knowledge of food safety practices and its impact on food borne diseases related to the respondents and their family members. A pilot study was conducted with 75 respondents. Based on the feedback of the pilot study, certain modifications, additions and deletions were carried out. The final draft was prepared after revising the schedule based on the feedback of the pilot study.

FRAME WORK ANALYSIS

Statistical tool SPSS (17.0) has been applied to classify and analyse the data collected in the survey undertaken. The collected data were processed with the help of
appropriate statistical tools. The applied statistical analysis and its conduct of application are summarized below:

1. **Chi-Square Analysis**: The Chi-Square analysis has been used to analyse the association between the profile of the respondents and their levels of awareness of food safety, food handling practices and knowledge in food safety methods.

2. **Correlation**: The correlation analysis has been used to identify the relationship between the different food handling practices of respondents.

3. **One way analysis of variance**: The One way analysis of variance has been executed to find out the association between demographic characteristics of the respondents and their food safety knowledge and food handling practices.

4. **t Test**: The t-test has been applied to find out the significant differences between urban and rural respondents regarding their food handling practices and food safety knowledge.

5. **Multiple Regression**: Multiple Regression analysis has been used to find out the impact level of food handling practices, food safety knowledge and food safety practices among the respondents based on their overall knowledge and practices of food safety.

6. **Factor Analysis**: Factor analysis has been used to narrate the variables of hand washing practices on its function rotated into two factors namely, hand washing practices with soap and without soap.

**LIMITATIONS OF THE STUDY**

The present study is subject to the following limitations:

1. Even though there are many causes for food borne diseases, the present study covers only awareness, knowledge and hygienic practices of the respondents in food safety.

2. Only four districts have been selected in Tamil Nadu on the basis of convenience sampling method.

3. The linear relationship between the dependent and independent variables are based on assumption.

4. The response to the interview schedule may be subject to the memory of the respondents.
STRUCTURE OF RESEARCH REPORT

For a neat and clear presentation of the study, the report has been divided into eight chapters:

1. The first chapter explains the introduction, problem statement and purpose of the study, objectives, significance of the study, methodology, limitations and structure of the thesis.

2. The second chapter reviews the important previous studies related to the main study.

3. The third chapter discusses the analysis of food safety awareness, attitudes and perception of the consumers and their impact and consequences on food borne diseases. The reasons for the food borne diseases are analyzed here.

4. The fourth chapter analyses the confidence level in food safety and quality marks and their relationship with safe food.

5. The fifth chapter discusses and analyses the hygienic practices of consumers while handling kitchen equipments. The hand washing practices of consumers are also analysed in this chapter.

6. The sixth chapter analyses the identification capacity of the consumers regarding unsafe food while handling leftover, contaminated, and the consumption of half cooked food.

7. The seventh chapter deals with the consequences of adulterated food and the related complaint handling practices of consumers. The attitude of consumers towards complaining about adulterated food is also discussed in this chapter.

8. The eighth chapter discusses the relevant and important findings of the study. Appropriate suggestions have also been given in this chapter.
REFERENCES


