The National Policy on Urban Street Vendors (2004) defines street vendor as a person who offers goods for sale to the public without having a permanent built-up structure but with a temporary static structure or mobile stall (or head load). Street vendors may be stationary occupying space on the pavements or other public/private areas, or may be mobile in the sense that they move from place to place carrying their wares on push carts or cycles or baskets on their heads, or may sell their wares in moving trains and buses.

The preparation and sale of street foods is an age-old activity. There has been an increasing trend in the sale and consumption of commercially vended foods in our country in recent years. One sector of commercial foods that has grown significantly in the last few decades is street foods. The growth of the street food sector is more evident in the urban areas of the country. In fact, this activity has reached new dimensions as a result of rapid urbanization. According to Cress-Williams (2001), the street food industry plays an important role in cities and towns of many developing countries, both economically and in
meeting food demands of city dwellers. Street-food vending has become a common part of urban lifestyle due to high unemployment and limited work opportunities in the country (Gadi et al., 2013).

The street food hawkers serve a highly varied clientele and play an important role in the marketing of goods to poor customers. The street foods are generally sold at a lower cost than fast foods. Hence, they provide an accessible source of nutrition to the low income population. The central characteristic of street food service is their retail location, they are sold on the street and this feature categorizes them as part of the informal sector.

Chakravarty and Canet (1996) classified street food vending into three general groups. These include (i) foods prepared at home and sold at the food stall (ii) foods prepared and sold at the food stalls and (iii) foods prepared in a cottage type of factory and brought to the stall for sale. Street foods are of a heterogeneous food category, encompassing meals, drinks, and snacks. They are mass consumer foods that are normally eaten without further processing or cooking. These foods show variation in terms of ingredients, methods of processing, and consumption patterns. Subratty et al. (2004) observed that everything, from full course lunch or dinner to snacks, fruit juices and tea are sold by the street food vendors. Street food hawkers link urban and rural economies through movement of traders and commodities.

Street foods play an important socio-economic role; they provide a regular source of income for millions of low or unskilled men and
women in developing countries. Regular food service establishments like restaurants require investments in terms of space, furniture, interiors, equipment and staff employed. On the other hand, street food operations often are familial operations where the entire family is involved in the procurement of ingredients, pre-preparations, actual preparation and sale of the foods. They are widely distributed and are available in both urban and rural settings. Street foods are popular because they are served quickly, tasty and are available at reasonable price (Suneetha et al., 2011). Thus, street foods have an important implication for both the consumers who enjoy these foods and street food handlers who handle and serve these foods.

Increasing population, migration from rural to urban areas, increase in the number of women in gainful employment, inflation and the breakdown of the joint family system are some of the factors that have supported the growth of the street food sector. Long distances to commute between workplace and home often compel individuals to eat food from commercial outlets.

Street food outlets are seen mushrooming at crowded places on the road-side either on the pavements as temporary structures or as pushcarts parked on the wayside near public places like bus stands, cinema halls, market areas and parks. The street hawkers operate from busy spots all over the region, lining streets, markets and traffic junctions. Most street food vendors operate their food stands alone and generate sufficient income to sustain their daily lives. They operate with very basic cooking facilities, in private homes, in courtyards, in rented facilities near
vending sites, or on-site at their food stands. Street food kitchens are often small, congested, and habitually situated next to open gutters along the streets. Vending stalls are usually located outdoors, with or without roof cover, and situated in high pedestrian traffic areas. Majority of these vending sites furthermore lack basic infrastructure and services like potable running water, waste disposal facilities, and sufficient water for washing utensils.

Another aspect of street foods that requires consideration is the convenience aspect. People who live far from their place of employment, as is the case around the big cities, and have to travel long distances may be in a situation where it is difficult for them to have regular meals at home. According to Dardano (2003), street vended foods are appreciated for their unique flavours, convenience and the role they play in the cultural and social heritage of societies. They cater to local cuisines and are suited to the local palette but are often lacking in hygiene and food safety and offer little nutritional value to the consumers.

Quality and safety are the two common concerns with regard to street foods. Poor hygiene and sanitation practices are one of the major bottlenecks in street food vending (Omemu and Aderoju, 2008). It has been observed that since they belong to the unorganised sector, they are not under the scanner of regulatory authorities. In most of the cities in India, they function without a license and periodical checking on the quality of foods served or any prescribed hygienic standards.
Street food vending assures food security for low-income urban populations and provides a livelihood for a large number of workers who would otherwise be unable to establish a business for want of capital. Street food vending also offers business opportunities for developing entrepreneurs. Since, street vending has been proven to be a good source of income, requiring low capital investment, street food vendors are on the rise. The sale of street foods thus makes a sizeable contribution to the economies of developing countries.

Food handling personnel play an important role in ensuring food safety throughout the chain of food production and storage. Mishandling and disregard of hygienic measures on the part of the street food vendors may enable pathogenic bacteria to contaminate the food causing illness to the consumer (Abdalla et al., 2009). According to Trickett (2000), practices such as preparing food with uncovered skin abrasions, failure to wash hands after using the toilet or after handling contaminated material, spitting or sneezing may contribute to the occurrence of food-borne diseases. The risk of microbial contamination is dependent on the type of street food and how the food is prepared. In general, cereal and bakery products with low moisture content, products that have been adequately sugared, salted, or acidulated, and some fermented products are less likely to support bacterial growth as opposed to dairy, egg, and meat products. Dishes containing raw ingredients or made with ice are also high risk items. Foods cooked just before consumption are safer than those which have been cooked and stored for long at ambient temperature.
The microbial invasion of street-vended foods occurs due to contamination from raw materials and equipment, additional processing conditions, improper handling and unhygienic conditions prevalent among the vendors (Suneetha et al., 2011). Barro et al. (2006) postulated that pathogens may also invade the interior surfaces of the foods during peeling, slicing, handling, trimming and other processes like packaging, storing, marketing, wrapping etc. The vendors can also be carriers of pathogens like *Escherichia coli*, *Salmonella*, *Shigella*, *Campylobacter* and *Staphylococcus aureus* and they eventually transfer these food borne hazards to consumers.

In addition to microbial hazards, street foods can become contaminated with high levels of toxic chemicals including heavy metals, mycotoxins and unapproved food additives. Similarly, prohibited synthetic sweeteners are frequently used to adulterate drinks sold on the street. Pesticide residues above authorized levels were also detected in street foods, particularly in vegetable-based products (FAO/WHO, 2005). Contaminants may enter the foods under the street conditions where dust and vehicular traffic raise pollution levels.

It has been reported by Tambekar et al. (2007) that the conditions of street food preparation and vending raise many concerns for consumer health. They are frequently associated with a variety of diseases due to their improper handling and serving practices (Barro et al., 2006). People, who patronize street foods, have been reported to suffer from food borne diseases like diarrhoea, cholera, typhoid and food poisoning.
The safety aspects of street food vending are often a matter of concern: Food Safety Management Systems (FSMS) can help to mitigate the problem of street food safety. Hazard Analysis and Critical Control Point (HACCP) is a food safety measure that can be implemented throughout the food production chain to prevent street vended foods from being contaminated with bacteria and viruses. Hazard analysis consists of microbiological quality evaluation, observing preparation, vending, serving and storing practices to identify the sources and modes of contamination. The most commonly identified hazards include improper food handling, improper waste disposal, contaminated water, vegetables and spices, microbial and chemical contamination and improper storage temperatures (Rane, 2011).

The street food sector has many negative connotations with regard to hygiene and safety issues. It has been observed that among all kinds of foods consumed today, the street foods are exposed to abundant sources of contamination. Bacterial contamination of such foods is of common concern to many who buy these foods. An unacceptably high level of microbiological contamination has been demonstrated in street vended foods. Chemical hazards are often associated with street foods (FAO/WHO, 2005). Contaminated water and ice have been frequently shown as an important source of contamination in street foods. Hazard identification and risk characterisation need to be undertaken for street foods to gauge the health impact of street food consumption.

Although, street foods offer a potential benefit, the fact that street vendors are largely poor and uneducated cannot be ignored (Department
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The safety of street vended foods in Kochi (FAO, 2001). Similarly, Zobida and Mutabazi (2012) reported that street food vendors are often poor, uneducated and lack appreciation for safe food handling. This lack of knowledge concerning the safe preparation of street food might result in major public health risks. According to Von Holy, (2004) inadequate public awareness of the hazards posed by certain street foods, because of lack of consumer education, compounds the problem of ignorance of the vendor with regard to the safety aspects of food handling and microbiological status. A major intervention in improving the safety of ready-to-eat foods or street foods entails training of food vendors on hygienic handling of foods (FAO/WHO 2002; Cardoso et al., 2009; Chukuezi, 2010a; Seaman and Eves, 2010). Thus, education and training of street food vendors may offer the most cost-effective strategy to reduce the incidence of food borne diseases. Research has shown that a majority of food-related illnesses and death could be controlled, or eliminated, by the use of proper food handling techniques. Food safety education comprising safe food handling techniques can form a critical component of the overall strategy to ensure the safety of street vended foods.

In other parts of the world such as in South East Asian countries and certain African and Latin American continents, street foods have become well established and form an integral part of the urban way of life. Recognising this trend, exhaustive studies on the street food sector and street food safety have been undertaken. A code of conduct and a set of guidelines on urban street foods are implemented in these countries. Though, there have been numerous documented studies on the
microbiological quality of street foods from all over the world and a few from other parts of India, there is a paucity of data regarding the street food sector and the quality characteristics of street vended foods in Kerala. It is assumed that change in the knowledge level of the street food vendors is possible through food safety education and this in turn may lead to a change in hygiene behaviour of the street food vendors. With this objective in view, the investigator has ventured into development of a food safety education programme for the street food vendors in the study locale.

The objectives of the present study are the following:-

1) To study the back ground details of street food vendors as well as their customers in Kochi city.

2) To appraise the quality characteristics of street vended foods.

3) To evaluate the microbiological quality and detect the presence of food borne pathogens in selected street foods.

4) To develop HACCP protocols for the foods subjected to microbiological assay and determine the Critical Control Points.

5) To plan, conduct and evaluate a food safety education programme for the street food vendors.

6) To make a holistic appraisal of the street food sector through SWOT analysis and suggest the support needed for improving the hygiene standards of street food vending service.

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