



## **SPECIAL ARTICLE**

### **Street Foods – A Review, Down the Memory Lane**

**Indira Chakravarty\* PhD, D.Sc**

#### **SUMMARY**

Street foods are foods and beverages that are sold in open public places by Hawkers and Vendors. They are tasty, have wide variety, are nutritionally acceptable, easily accessible, cheap and cater to local taste. The major problems with street foods are lack of food safety and hygiene. The study done in Kolkata which listed 1.20 Lakh vendors endeavoured to develop an action plan for better management of street foods. It worked in tandem with local supportive structures (Municipal Corporation and Police), with Chief Secretary leading the advisory committee. FAO of United Nations supported it and the study developed the 'Calcutta Model'. The present paper summarizes the outcome of the study and

**\*FICAN(USA), FIC, FIMSA, FIWA, FIPHA**

**Padmashri Awardee – 2014**

**Chief Advisor, Public Health Engineering Department, Govt. of West Bengal (WSSO)**

**Board Member, UNU- IIGH Member, Core Committee, WASH (Swachh Bharat Mission), MODWS, Govt. of India**

**Ex Member, Food Safety and Standards Authority (FSSAI), Ministry of Health and Family Welfare, Govt. of India**

**Former Addl. DGHS, Director and Dean, All India Institute of Hygiene and Public Health, Ministry of Health and Family Welfare, Govt. of India**

**Former Director, Chittaranjan National Cancer Institute, Ministry of Health and Family Welfare, Govt. of India**

**Director, Professor and HOD, Dept. of Biochemistry and Nutrition, AIHHPH, Govt. of India**

**Former Regional Director, MI, IDRC, (South Asia)**

**Former Act Regional Advisor Nutrition, WHO(SEARO)**

highlights some of the future actions that were taken, based on it. It also links to various government efforts that now support this endeavour.

## **INTRODUCTION**

Ready-to-eat foods and beverages prepared and /or sold by vendors and hawkers especially on the streets and other public places-found in clusters or individually around places of work, schools, hospitals, railway stations, bus terminals etc., are popularly termed as the 'Street Foods'. With increasing population and a trend towards industrialization and urbanization, the street food vending phenomenon has reached a dimension that could not be anticipated even a couple of decades ago.

Street foods are the most important support system to ensure proper health and nutritional status of the consumers who form the most under privileged category of the urban population. Compared to any other food system, it caters to the needs of the largest number of population from all walks of life, and particularly to the poor and the lower middle class because of their low costs.

Street foods are a bargain for customers when the demands of time and costs of food, fuel, cooking equipment and transportation are taken into account. In general the consumer likes to get maximum quantity for as low a price as possible. But to be able to sell their street foods, the food vendors must satisfy the needs of the buyers, while making a profit as well. Many low-income families would be worse off if there were no street food vendors to serve fast, inexpensive foods. **(1)**

In today's environment of **accelerated urbanization**, long commuting distances between home and place of work have led the street foods to play an increasingly vital role for **ensuring nutritional security** to the floating population in most cities of the world.

There are millions of single workers as well as cases where both husband and wife work and have no time to prepare meals. All lead to eating street foods.

While the demand for food which can be consumed outside has increased manifold, **restaurant and cafeterias are still out of reach** for the majority of urban

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**and peri urban poor and lower middle class.** Street foods are the most acceptable alternative and also match **ethnicity and taste** of the **local cuisine**.

The most important additional benefits are that they have a wide variety which satisfy the taste and requirements of all categories of customers; are most easily accessible; require the minimal space for efficient operation; are usually fresh as the vendors have no storage facility; very tasty and quite often serves the most traditional foods, over and above the most contemporary food items, as liked by their customers. This wide horizon makes the street foods one of the most interesting commodities to be studied, assessed and eventually improved. Street foods therefore have a **significant nutritional implication** for consumers, particularly for middle and low income sectors of the population, who depend heavily on street foods. The Calcutta study (Calcutta Model) in 1995 had shown that by spending only Rs. 5/-, a balanced diet worth 1000 calories could be purchased.

It also helps in **supporting the rural population** who produce the **basic agricultural products** used in preparing the street foods. (2)

**Hence, the sector has on overall positive influence on the nutritional as well as economic security** including **improvement in the environmental situation** of a city.

Street Foods play an important socio-economic role also in terms of employment potential. It is a source of income and livelihood. The number of hawkers and street vendors is increasing with the gradual increase in population and urbanization. It is estimated that almost 10 million people earn their daily bread by vending their goods in the streets of towns and cities of India. Majority of these are street food vendors.

So, the street food sector has been growing rapidly all over the world and India is no exception.

Therefore, street foods have become an industry by itself where the **benefit** not only goes as a **nutritional support to the customers** but it also gives **socio-economic support to the unemployed urban vendors and rural food producer**. Hence,

there is no other alternative but to **accept the street foods as a way of life in rural, urban and peri-urban areas.**

### **Causes of unsafe street foods and beverages**

The street foods may be contaminated in many instances. The resulting infections or even epidemics are often reported through epidemiological investigations by the Health Department.

But not much is done to prevent such contaminations and identifying the root cause of such contaminations in many countries.

The World Health Organization (WHO) estimates that food borne illnesses affect over 60 million people in less developed countries while 2 million succumb to the illness each year. However, WHO agrees that the absence of any reliable data on the economic and social burden of food borne diseases impedes understanding about its public health importance and also prevents developing risk- based solutions to its management.

Basically the cause of such contaminations can be –

1. Directly by using contaminated foods.
2. More commonly due to other factors like –
  - Contamination from open environment
  - Use of poor quality water
  - Unsanitary food handling
  - Poor personal hygiene of Vendors.
  - Open garbage accumulation
  - Poor sanitation around the area
  - Dirty environment
  - Improper washing methods
  - Inadequate quantity of water
  - Difficulty in accessibility to water / latrines / garbage disposal
  - Poor knowledge of Vendors
  - Overall Poor Environmental Condition

Hence, the environment, water and sanitation are probably the major silent causes leading to unsafe and poor quality street foods and beverages.

### ***THE CALCUTTA MODEL***

The first Calcutta study conducted in 1992-94 was the most significant one, which was followed by several more. It looked into all aspects of street food vending situation of the city.

An Advisory committee chaired by the Chief Secretary, was formed with the members being the Police Commissioners, Calcutta Police; Principal Secretary, Dept. of Health, Govt. of West Bengal; Chairman, CDMA, Govt. of West Bengal; Mayor-in-Council (Health), CMC, Kolkata; Joint Secretary, Ministry of Agriculture, Govt. of India; and the National Project Coordinator.(3)

It was a Technical Cooperation Programme to assess the street food situation, to identify measures to reduce the health risks for consumers and to improve the street food sector. Studies covered such issues as the legal aspects of street food vending; the safety of foods prepared and sold in the streets; Socioeconomic factors affecting consumers and vendors; street food industry practices; street food contamination; and environmental and sanitary consequences of the activity. The project, also conducted field testing of actions such as training and improvement of street food infrastructure.

Four representative areas of the city were chosen for action by the committee which represented all categories of consumers' viz. labourers, office goers, students, housewives, daily commuters covering high middle class to very poor which were College Square, Sealdah, Dalhousie square and Gariahat.(4)

The objective of the project was to develop an acceptable plan leading to consumer safety and provision to vendors with fair access to acceptable street food handling practices after ascertaining the existing situation and recommending the necessary changes.

The study was supported by FAO of United Nations which developed the '**Calcutta Model**'. The National Coordinator and Principal Investigator received the first prestigious Eduardo Sauma Award from the FAO of the United Nations for leading the best Global TCP project. The study looked into several issues eg: - Type of vendors and consumers; timing of operation; cost and profits; nutritive value; physical, chemical and detailed microbiological analysis of all varieties of food and water; HACCP(**Hazard Analysis Critical Control Points**) of foods and water to identify the source of contamination etc.

However, the most important issue was involvement of all stake holders viz State Administration, Police, Local Municipality, Govt. of India, FAO and experts to develop a city action plan. This was a most remarkable achievement. The recommendations were very comprehensive and led to the development of a city plan of action covering all issues on management for improving street food quality. Eg.:- identifying 1.2 lakh vendors of the city, designing of kiosks with help of police, Identification of Vending zones etc.(4) Subsequently other studies were conducted based on this. The Planners and Managers [(Calcutta Municipal Corporation (CMC) and Calcutta Police (CP)] were a part of the information sharing process on issues related to Management and placement of kiosks, Designing of kiosks, Timings of sale, Environmental management, Traffic/pedestrian movements, Regulatory affairs, Pollution control etc.(5)

Some **Salient findings** were:-

1. Clientele ranged from low income to high middle income groups
2. Number of customers varied at different timings of the day
3. As many as 33% of the consumers interviewed purchased street foods on a daily basis, while about 23% patronized the stalls one to four times per week. In the Writer's Building area, about 75% of the office workers obtained some of their diet from the street food stalls five days a week.
4. Each stall catered to approximately 65-70 customers a day
5. On average, regular consumers spent Rs250 on street foods per month.
6. Economically most viable viz 1000 kcal. were available in Rs. 5/- (US \$ 0.08)

7. 50 different varieties of foods were most popular and sold at a cost ranging from 0.50p to Rs 8.00 (US \$ 0.01-0.10) approximately per serving. In total there were about 200 varieties of street foods including traditional foods.
8. The individual vendor started his or her street food trade with an initial non-recurring expenditure of Rs. 1000 to Rs. 2000; the recurring monthly expenditure came close to Rs. 200 to Rs. 300 for small vendors.
9. It was estimated that daily proceeds amounted to Rs. 1500 to Rs. 4000. This profit is more than the minimum wage earned in the formal sector.
10. Nutritive value of street foods were quite satisfactory
11. The nutritional value of the food sold in the streets was assessed by analysing some popular meals. An average 500-g meal contained 20 to 30 g of protein. 12 to 15 g of fat (vegetable fat) and 174 to 183 g of carbohydrate and provided approximately 1000 kcal. The meals cost between Rs. 4 and Rs. 8 (mean Rs. 5). The analysis indicates that street foods may be the least expensive means of obtaining a nutritionally balanced meal outside the home.
12. Most foods were freshly prepared
13. Appearance, smell and taste were satisfactory
14. Physical contaminants like stone, sand etc.; were rarely found.
15. Non - permitted colour especially metanil yellow was commonly present.
16. The age of male vendors ranged from 20 to 45 years, while the age of female vendors was 30 to 54 years.
17. Educational levels among street food vendors were low in general, and 21% of vendors were illiterate.
18. 40% of the vendors were from the rural areas. A sizeable number of vendors were commuters and carried their wares by train, traveling distances of 25 to 30 km.
19. Vendors did not have any licenses.
20. Vendors often functioned with support of unions having political linkages.
21. Vendors were unaware of food regulations and had no training in food-related matters.
22. Stalls were usually open from 10:00 hrs to 21:00 hrs. The hours of operation were adapted to the characteristics of the consumers in the area.
23. No organized water or electricity was available

24. Water used for cooking, drinking, dishwashing, etc. came from pipes or hand operated tube wells but stored unhygienically in buckets or drums of galvanized iron which were refilled as needed. Some but not all stalls separated water for drinking from water for washing and cooking.
25. Bacteriological examination of the drinking-water revealed that 47% samples were found to be contaminated.
26. Personal as well as food hygiene was very poor.
27. No uniform design for kiosks (ambulatory) were there for use.

In order to know the source as well cause of the contamination **HACCP (Hazard Analysis Critical Control Points)** of street foods was conducted for the first time by classifying the food in three groups:

Group-I:

Foods prepared in small scale or cottage scale factories and brought to the street food stalls for sale e.g. Sandesh.

Group-II:

Foods prepared at the home of the vendors and brought to the street food stalls for sale e.g. Ghugni.

Group-III:

Foods prepared and sold at the street food stall itself e.g. Egg roll.

Since water was found to be responsible for contamination of street foods in many ways HACCP of water was also done as follows-

Water samples analysis was carried out in three stages

- I. At source
- II. Immediately after collection by the vendors
- III. Water offered to the consumers (after 3 hours)

**The Hazards analysis critical control point (HACCP) of street foods and water** indicated that contamination in food and water occurred due to the following **reasons-**

1. Poor food processing techniques.
2. Poor handling practices of food
3. Poor handling of water.



4. Unhygienic storage and display of food in the kiosks.
5. Unhygienic storage of water.
6. Poor Environmental conditions.
7. Limited access to sanitary facilities.

## **CONCLUSION**

The remarkable success of the Model at National as well as International level was due to the fact that there was mutual trust and dependence among all stakeholders, which was created through the effective coordination, interaction as well as capacity building process. Vendors themselves acted as trainers (6)

### **Summary of recommendations from The Calcutta Model**

- All vendors to be listed (Police) -- 1 lakh 20 thousand done
- Vendor Free zones Identified(20 streets) identified – (Police and KMC)
- Hawking zones Identified - Camac Street, Theatre Road, Portion of A.J.C. Bose Road and S. N. Banerjee Road, Russell Street, Eastern Portion of Writers' Buildings, Lions Range etc
- Suitable Kiosks designed
- Kiosks are to be placed 50 ft away from important crossings or bus stops - (Police and KMC)
- Only one side of the pavement may be allowed for hawking -(Police)
- Garbage Disposal facility to be improved - (KMC)
- Water supply to be improved in some areas - (KMC)
- Hawking not allowed in carriageways, bridges and flyovers (Police, KMC)
- Washing of utensils may not be allowed on the pavements
- Illegal electric connection not allowed
- Hawkers can be removed from a specified area at any time
- For ensuring Sustainability a Committee need to be formed at the Highest level
- Trainings to be initiated at all levels by

- Police

- KMC

- Vendor Unions
- Institute and NGO
- **Vendors and NGO** should help in:-
  - Developing core trainers' groups
  - Impart regular trainings
  - On-sight motivations
  - Group meetings among vendors
  - Group discussions with all stake holders
  - Supplying food for meetings, etc.
  - Certification.
- Suitable **IEC material** prepared for creating awareness among all stake holders should be used :
- **Certificates** to be given to **trained vendors**
- **Core group of Trainers** need to be developed from trained vendors
- **Vendor's unions** should be involved to **create safe street food** zones on a long term basis.
- Street Food Quality should also be assessed in Municipal Towns subsequently

## ***SUBSEQUENT ACTIONS***

The 'Calcutta Model' has been widely acclaimed, shared in several consultations and replicated by many countries. Some of the steps initiated are as follows –

### **I. International Actions –**

- **FAO Regional Centre of Excellence for Street Foods in Asia** established
- Meeting for **Mayors and Chiefs of Police of 13 Asian Countries**(1996)
- Meeting of **Health and Research personnel of 10 Asian Countries**(1995)
- FAO Regional Seminar on “**Street Food Development**” (**13 Asian countries**) Coordinated at **Bangkok** (1999)
- **Coordinated** and prepared **background document** for FAO Regional Seminar on **Feeding Asian Cities on Street Foods**(2000).

- **Mayor of Kolkata chaired Mayor's Council** at the Bangkok meeting (2000).
- **Plan of Action for 'Management of street foods of South Africa' prepared** (FAO of United Nations) –(2003)
- Helped to prepare **Street Food Management and Safety Plan** for SEAR countries with WHO support (2004 and 2009)
- **Street food** Management initiative for small towns with WHO support (2005)
- Bangladesh street food safety Plan developed with WHO support (2002)
- Creation of integrated food safety Plan for Thailand with WHO support (2009)
- Background document on Street food safety created for WHO / FAO joint consultation of South and Southeast Asian countries in Bangkok (2011)

## II. National Actions

1. Hon'ble Minister in Charge, Ministry of Health and Family Welfare, Govt. of India in the Parliament on 31.11.2005 – Mentioned the Calcutta Model saying – The issues on the safety of these foods, especially the water safety aspects were inculcated into them. Then there was a smooth functioning.
2. Several Projects and meetings have been conducted in several cities and towns with support of WHO; MOFP, Govt. of India; Foundation for Community Support and Development; PHED, Govt. of West Bengal; MOH&FW, Govt. of India etc. in 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014 and 2015

Several studies which replicated the Calcutta Model at national level are -

1. Developing a Safe street food area in Burdwan (WHO) – 2007 – 2008
2. Developing a Safe street food area in Howrah (WHO) – 2007 – 2008
3. Creation of IEC strategy's for improving street foods quality (WHO) – 2007 – 2008
4. Using improved Technologies for better management of street foods (MOFP - GOI) – 2007 - 2008

5. A Nine City Study in Agartala, Agra, Bangalore, Chennai, New Delhi (North and South), Guwahati, Jaipur, Kolkata and Mumbai - (MOFP - GOI) – 2007 – 2009
6. Improving management of street foods in Chennai (WHO) – 2007 – 2009
7. Opening of safe street food zone in collaboration with (WHO) – 2009
8. Towards Creating Howrah as a Safe street food town – 2009 – 2010
9. Development of suitable IEC strategies and their implementation for improving street food quality (FSSAI, MOH&FW, Govt. of India), 2011 – 2014
10. A three state study for comparative assessed and grading of awareness level of street food vendors (DST, Govt. of India) – 2012 - 2015

### **RECENT DEVELOPMENTS**

There have been several recent developments in the last few years, targeting towards enhancement of safety of foods and beverages sold in open public places.

These are detailed below: -

1. The Food Safety and Standards Authority of India (FSSAI), Ministry of Health and Family Welfare, Govt. of India has made special efforts towards making Street Food safe by creating targeted Provision as in the newly formed Street food vending Act of August – 2011 **(7)** For Street Food Vending the Food Safety and Standards Act of August, 2011 describes in Schedule 4 has various provisions required for street food Vendors –
  - Location and environment of Vending stall
  - Vending Cart
  - Water Supply
  - Handling of food

- Raw food
- Cooking and serving
- Storage of cooked food

- Personal hygiene of Vendors
- Drainage and waste disposal

2. **The Ministry of Housing and Urban Poverty Alleviation (MHUPA)**, Govt. of India, has created the **National Policy for Urban Street Vendors** which was approved in 2013, recognizing the importance of street vendors in the gamut of poverty alleviation schemes and stresses the need to integrate this section of the urban population into the society as an equal and legitimate partner. It directs the State Governments to enact legislative frameworks and take necessary steps in conformity with the Policy Directives.

The National Policy for Urban Street Vendors/Hawkers also notes that street vendors constitute approx. 2% of the population of metropolises and they provide the urban population with the much-needed services that neither the municipalities nor the larger retail outlets can provide.

It stresses on the overarching objective of the policy to provide and promote a supportive environment for earning livelihood to the street vendors as well as ensure absence of congestion and maintenance of hygiene in public places and streets. **(8)**

3. The **Bureau of Indian Standards(BIS)** has taken an active lead by creating Indian Standard for street foods called “Street Food Vendors – Food Safety requirements” in 2012 (ICS 67.020) which has been approved by the President of India. The standard document was created by the Food Hygiene, Safety Management and other Systems Sectional Committee – FAD – 15 **(9)**

4. The **Kolkata Declaration** was subsequently created highlighting a set of recommendations following the new food safety act. The consultation was jointly held by **Food Safety and Standards Authority of India (FSSAI)** and **Public Health Engineering Department (PHED), Govt. of West Bengal** in 2011.

Since the recent act undertaken to attain safety of street foods clearly depicts a **preventive and primitive approach** rather than taking a negative approach of giving punishment as a criminal offence, therefore awareness generation, motivation and creating a positive attitude among all stake holders is the most major step as was identified by the **Calcutta Model** years back.

To help support this positive approach the FSSAI, Govt. of India has developed need based Informative Booklets to create awareness among all levels of stake holders with the help of Foundation for Community Support and Development (FCSD). These are of The Red category, giving information in a most simple form.

The Yellow category provides information with detail and justification. The Blue category giving science based evidence for use by authorities, scientists, evaluators as well as all literate stake holders.

The recent study (2015) completed by the Foundation for Community Support and Development (FCSD) with DST, Govt. of India support covering 3 cities of India (10) indicated that while personal hygiene and overall cleanliness is easily understood but its linkage to food safety is not recognised in most of the cases.

Hence, Street Foods still has a long way to go because awareness on safety of foods and its linkage to multiple factors like Personal Hygiene, Environmental Sanitation, Water Quality, Clean Environment, safe ingredients needs to be informed widely among all stake holders.

With use of multiple varieties of additives; pesticides, fertilizers etc; in raw materials; cleaning and disinfection agents and other polluting agents, the food safety related problems are expected to become more intricate which will need careful investigations and a dedicated control mechanism.

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