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## Assessing the Level of Hygienic Practices among Street Food Vendors in Sunyani Township

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**Abstract:** In recent time, there has been an increased in the springing up of street food vendors across the country and there is therefore an urgent need to ensure that street food vendors adhere to hygienic practices to protect public health. The main aim of the study is to assess the level of hygienic practices of street Food vendors in Sunyani Township. The study adopted descriptive approach and survey was used to gather primary data from 140 respondents. Questionnaires were used to gather data from the respondents and with the help of research assistance the questionnaire were delivered to the premises of the vendors. Data obtained from the study were analyzed by using SPSS and the results were presented in the form of tables. The study revealed that street food vending trade is predominantly a job for women in Sunyani and 85% of the respondents had no any form of training workshop on personal, food and kitchen hygiene. Furthermore, the study revealed that, respondents practiced minimal hygienic practices. The researchers strongly recommended that, Sunyani Metropolitan Assembly should occasionally organized seminars on basic training in personal, kitchen and food hygiene. This is to ensure that they follow the required rules for proper hygiene and sanitation.

**Key words:** Street food vendors, hygienic practices, safety, food borne illness, sunyani township

### INTRODUCTION

Street vended foods have a long tradition in most countries of the world and Ghana is no exception.

In Sunyani, there is a noticeable increase of street food vendors and there is a clear evident in the town centre and the old market area where they sell both raw and cooked food items. The term street food refers to a wide variety of ready to eat foods and beverages sold and sometimes prepared in a street or other public places. (FAO, 1997).

Most street foods are also classed as both finger food and fast food and are cheaper on average than restaurant meals. Street food vending may be consumed on the premises or it can be taken away and eaten elsewhere (WHO, 1996).

According to a 2007 study from the Food and Agriculture Organization, 2.5 billion people eat street food every day. Most of the vendors have either no formal education or few years of schooling and therefore, lack knowledge on proper food handling and their role in the transmission of pathogens (Mensah *et al.*, 2002).

The street food industry has an important role in the cities and towns of many developing countries. People purchase street food for a number of reasons, such as to obtain reasonably priced and flavourful food in a sociable setting, to experience ethnic cuisines and also for nostalgia. Street-vended foods also, provide ready-to-eat meals that are accessible (Mensah *et al.*, 2002; Oranusi and Braide, 2012).

Furthermore, urbanization and migration have changed the patterns of living and eating. The easy availability of foods in the streets of cities and small towns has helped workers cope with long periods of absence from home. Street foods contribute significantly to food security and nutrition (Amoah, 1992; Chakravarty and Canet, 2002). Mwangi (2002) asserts that, street food in Nairobi provides a substantial amount of income for most vendors, with most of them earning an income above the official minimum wage.

In spite of numerous advantages offered by street food vendors, the emergence of informal food businesses can cause health problems if the foods are not prepared and handled properly.

Multiple lines of evidence reveal that foods exposed for sale on the roadsides may become contaminated either by spoilage or pathogenic micro-organisms (Bryan *et al.*, 1992; Ashenafi, 1995; WHO, 1989). Evidently, street vended foods have shown epidemiological links with illness (Abdussalam and Kaferstein, 1993). FAO (1997) further stipulates that street foods raise concern with respect to their potential for serious food poisoning outbreaks. The rise of street food vending has created health problems like improper and unhygienic handling of food. According to studies done in Africa on street foods, their tremendous unlimited and unregulated growth has placed a severe strain on city resources, such as water, sewage systems and interference with the city plans

through congestion and littering adversely affecting daily life (Canet and N'diaye, 1996; Chaulliac and Gerbouin-Renolle, 1996).

A number of studies have shown that these foods are sometimes held at improper temperatures, excessively handled by food vendors and sold at very dirty surroundings (WHO, 2001, 2003; Muinde and Kuria, 2005; Ghosh *et al.*, 2007).

With the increasing pace of globalization and tourism, the safety of street food has become one of the major concerns of public health and a focus for governments and scientists to raise public awareness's.

Food safety is a vital issue in both developed and developing countries in that food borne illness contribute to millions of illnesses and thousands of deaths annually (Pilling *et al.*, 2008). It is becoming a key public health issue, since a large number of people have their meals outside home and as such they are exposed to food borne illness that originate from street food vendors. In view of that, the World Health Organization (WHO, 2000) has developed five main preventive steps to enhance food safety which include thorough cooking of food; thorough re-heating of stored food; avoiding contact between raw foods and cooked food; and protection of food from insects, rodents and other animals.

These five keys to safer food are of immense importance in developing countries and equipping food vendors in countries with such information could impact significantly on food safety.

However, little is known about how street food vendors in Sunyani perceive and prioritize food hygiene practices. This study therefore seeks to assess the level of hygienic food practices of the street food vendors in Sunyani Township. Findings from this study will provide useful information for policy formulation and strategic interventions.

## MATERIALS AND METHODS

**Area of the study:** Sunyani is surrounded by the forested Southern Ashanti Uplands; the city of Sunyani arose as an outpost camp for elephant hunters during the 19th century. The name Sunyani derives from the Akan word for elephant "Osono. Sunyani Municipality is one of the twenty-two administrative districts in the Brong Ahafo Region of Ghana. It lies between Latitudes 7° 20'N and 7° 05'N and Longitudes 20° 30'W and 20° 10'W and shares boundaries with Sunyani West District to the north, Dormaa East District to the west, Asutifi District to the south and Tano North District to the east. The Municipality has a total land area of 829.3 Square Kilometres (320.1 square miles). It has population of approximately 70,299. Sunyani is about 105 km from Kumasi, the Ashanti regional Capital.

**Design of the study:** The study adopted descriptive approach and Survey was used to gather primary data from the respondents.

**Population and sample procedure:** The target population constituted all street food vendors in Sunyani. The accessible population was all street food vendors in Rex area, old market, new market, Area four lorry station, Techiman lorry station, Magazine and Sunyani polytechnic area.

Vendors who prepare food on the premises and sell them to the consumers were purposively selected.

Vendors who prepared food at home and conveyed them to the premises to be sold were not considered for the study. This is because the researchers want to get vivid information on hygienic practices of the respondents.

**Instruments:** Questionnaires were designed to obtain information about general characteristics of the respondents, knowledge of food safety, training workshop, medical examination, personal hygiene, food and kitchen hygiene as well as methods of storing left over foods.

The questionnaires were delivered to the vendors at their working places and with the help of research assistants those who cannot read were given a hand to answer it. A total of 140 responded to the questionnaire within a period of one month.

**Data analysis:** Data obtained from the study were analyzed by using SPSS version 20 and the results were presented in frequency counts and percentages.

**Limitations of the study:** Ideally the study should have covered all types of catering establishment in Sunyani township to give a clearer picture of the outcome of the study. However, the findings of this study were limited to only street food vendors.

## RESULTS AND DISCUSSION

The study intended to assess the hygienic practices of street food vendors in Sunyani Township. Descriptive analysis of the data collected was done and the responses are presented in tables.

The first bio-data solicited in the study is the gender of the respondents. The gender on the table 1 shows that 86% of the respondents in this study were females, which is an indication that food vending trade is predominantly a job for women whiles 14% were males. The involvement of people under the age of 18 years in this type of business was observed to be low in this study. Only about 9% of the total subjects were identified to be teenagers. The lower figure of the teenagers in this study did not agree with other reports which indicated that teenagers constitute a significant proportion of the labour force involved in this sector of trading. The discrepancy in this finding and that reported in other studies could be that Sunyani Municipality authorities have policy which deliberately does not favour under-aged people to vend food in their market, since the

Table 1: General characteristics of Respondents

Description(Items)	No. of Respondents	Percentage (%)
<b>Gender</b>		
Male	20	14
Female	120	86
Total	140	100
<b>Age range</b>		
<18	10	9
18-25	17	10
26-30	33	24
31-35	49	35
36 and above	31	22
Total	140	100
<b>Educational background</b>		
Primary	54	39
Secondary/Vocational	42	30
College	15	10
No formal education	29	21
Total	140	100

Table 2: Training workshop on personal, kitchen and food hygiene

Response	Frequency	Percentage (%)
Yes	21	15
No	119	85
Total	140	100

authority may consider such as a form of child abuse. Majority of the street food vendors' fall within the age bracket of 31-35 (35%) which is active working age while 36 and above were 22%.

Educationally, (21%) had no formal education, but (39%) had primary education, (30%) had secondary while 10% had college education.

Table 2 portrays that majority of the vendors (85%) had not attended any form of training workshop on personal, food and kitchen hygiene. Only 15% had attended training workshop on personal, food and kitchen hygiene.

Cohen *et al.* (2001) stated "only knowledgeable and skilled employees who are trained to follow the proper procedures together with management that effectively monitors employees' performances can ensure food safety"

However, a number of studies (Howe *et al.*, 1996; Powell *et al.*, 1997) have indicated that training may bring about increased knowledge of food safety this does not always result in a positive change in food handling behaviour.

Regarding the level of knowledge on food safety, Table 3 shows that 20% of the respondents had some knowledge on laws regarding food hygiene, while 80% had no knowledge thereof. In Ghana, the Food and Drugs Law (PNDC Law 305 B) [22], Amendment Act 523 [23] and various bye-laws on food hygiene aim at ensuring that only safe and wholesome food, drugs and other substances are made available for public consumption. As per these laws, the sale of food under unsanitary conditions is an offence.

In order to understand the background of the respondents better, the researchers sought to find out Medical examination of food handlers, as per FAO and WHO is necessary, this is to ensure that people with

Table 3: Knowledge on food safety

Response	Frequency	Percentage (%)
Yes	28	20
No	112	80
Total	140	100

Table 4: Medical examination

Response	Frequency	Percentage (%)
Yes	60	42.85
No	80	57.14
Total	140	100

Table 5: Personal hygiene practices of the vendors

Response	Frequency	Percentage (%)
Hair cover	6	4
Cutting of finger nails	6	4
Washing of hands	37	26
Cover of mouth and nose	30	21
Touching of ears	15	11
Bathing	35	25
Cover of cut	8	6
Spitting	3	2
Smoking	-	-
Total	140	100

communicable diseases are excluded from food handling. Also, Section 286 of the Criminal Code, (Amendment) Act, 2003 (Act 646) of Ghana charges all food vendors to be examined to ensure they do not infect consumers with communicable diseases. Table 4 shows that 42.85% of the vendors had been medically examined, while 57.14% had not been medically examined which is in contrary to, Section 286 of the Criminal Code, (Amendment) Act, 2003 (Act 646) of Ghana.

Personal hygiene is important because according to Marriot (1985) human beings are the largest contamination sources of food. Hence, the study sought to find out about the personal hygiene practices of food vendors.

Table 5 depict that, only (4%) of the respondents cover their hair during food preparation. A food handler with uncovered head can easily contaminate food by touching the head or loose hair falling onto food. Only 4% of the respondents kept their fingernails clean and short. Rane (2011) reported that Salmonella, non-typhi salmonellae, Campylobacter and E. coli can survive on finger tips and other surfaces for different periods of time and in some instances even after hand washing. It therefore behooves on food vendors always to keep their finger nails short and clean to prevent them from serving as a vehicle for transmission of pathogens. Hands are one of the principle vehicles for the cross contamination of infectious agents onto ready to eat food. Also, only 26% of the respondents washes their hands before handling food, Effective hand washing is of great importance in terms of successful hygienic food preparation, as it prevents the spread of infectious diseases (Restino and Wind, 1990).

Table 5 shows that 25% cover their mouth and nose whenever they sneeze, 11% do not touched their ears

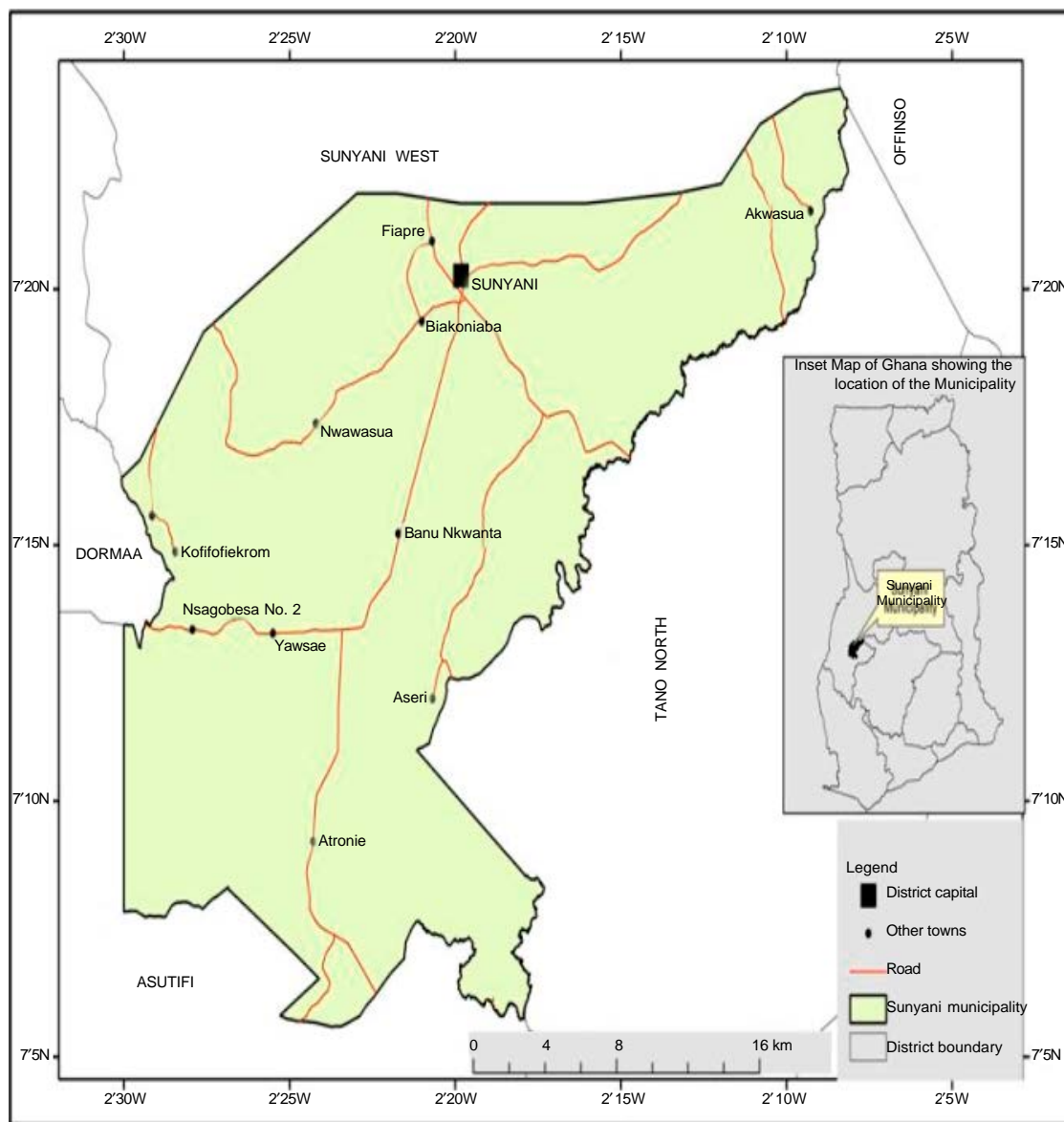


Fig. 1: Map of Sunyani Municipality

during food preparation, 2% spits during food preparation whiles none of the vendors involved in the study smoke during food preparation.

It was important to know how the vendors practices kitchen hygiene. Table 6 shows that 14% did not go to work when they are ill, while 24% allow domestic animals in their food premises, 9% provide good ventilation and 31% also provide good lighting in their food premises during food preparation so that they can see well. The research also revealed that only 22% vendors used sanitizer in cleaning their working surfaces.

Kinton and Ceserani (2007) recommend that food handlers should adhered to food hygiene practices as much as possible to prevent contamination from dust and flies.

Table 7 shows that, 26% of the respondents put their foods in fly proof cages, 49% use clean utensils in cooking food, while 9% serve food at the correct temperature and 16% reheat their food often.

It was important to know the methods used by the street food vendors to store the left over foods since improper storage of left over foods can lead to food poison. Table 8 shows the various methods employed by food vendors to store left over foods. 34% of the street food vendors

Table 6: Kitchen hygiene practices

Description	Frequency	Percentage (%)
People who are feeling ill	19	14
Animals in food premises	34	24
Good ventilation	13	9
Lighting	43	31
Use of sanitizer in cleaning surfaces	31	22
Total	140	100

Table 7: Food hygiene practices

Description	Frequency	Percentage (%)
Use of fly proof cage	36	26
Clean utensils	69	49
Correct temperature of food	12	9
Reheating of food	23	16
Total	140	100

Table 8: Methods of storing left over foods

Description	Frequency	Percentage (%)
Refrigerator	29	20
Polythene bag	5	4
Plastic containers	20	14.28
Cool and dry place	39	27.85
None of above	47	34
Total	140	100

Table 9: Food contamination

Response	Frequency	Percentage (%)
Yes	112	80
No	28	20
Total	140	100

never used any method of storing the left over foods, this is quite risky since food can be easily contaminated. 27.85% store their left over foods in a cool, dry place, 4% in polythene bags, 14.28 in plastic containers while 20% uses refrigerator in storing their left over foods.

The data in table 9 depict that 80% of the street food vendors agreed to the fact that, food can get contaminated during preparation while 20% of the respondents did not agree to it, because may be they believe that all the measures they take during preparation is very hygienic.

**Conclusion:** The study had revealed that high percentages of the respondents in this study were females, which is an indication that food vending trade is predominantly a job for women in Sunyani Township. It is evident from the study that hygienic practices of the respondents showed that large numbers of the vendors practiced minimal hygiene. The hygienic practices in question included personal hygiene, food hygiene, kitchen hygiene and methods of storing left over foods. This is due to the fact that most of the respondents in the study had not attended any form of training workshop on personal, food and kitchen hygiene.

**Recommendations:** In the light of these findings, the following has been recommended:

- 1: Sunyani Metropolitan Assembly and Food and Drug Board should occasionally organized seminars on

basic training in personal, kitchen and food hygiene. This is to ensure that they follow the required rules for proper hygiene and sanitation

- 2: Environmental officers should pay unannounced visit to the premises of the vendors and those found wanting should be fined or prosecuted
- 3: Street food vendors should prepare enough food for the day; so that they can sell all their food since most of them do not have proper storage facilities to store left over foods which can be contaminated easily
- 4: Formation of local food vendor groups would also ensure that food vendors adhere to appropriate codes of practice in street food vending and also serve as a vehicle to efficiently train and convey information to food vendors
- 5: Public health officers should ensure that food vendors undergo medical screening on periodical bases and certificates should be issued to them

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