

# Food Safety and Hygienic Practices Among Street Food Vendors in Ife East Local Government Area Osun State, Nigeria

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## ABSTRACT

This study examined the food safety and hygienic practices among street food vendors in Ife East Local Government Area of Osun State. The study adopted a descriptive survey design with specific objectives. The objectives evaluated the knowledge of food safety regulations among streets food vendors, assessed the hygienic practices and conditions of street food vending sites in ife east local government: investigated the challenges faced by street food vendors in implementing food safety and hygiene practices among the population and suggested strategies to improve food safety practices among food vendors in ife East. Four (4) research questions were formulated for the study. The population of the study consisted of all street food vendors in ife East LGA of Osun State. One hundred respondents were selected for this study. Simple random sampling technique was used and structured questionnaire was used for data collection. The results of the analysis revealed that food vendors do not wear protective clothing such as apron and gloves and they do not wash hands regularly during food preparation and generally they do not practice good hygiene. It also reveals that they do not have access to quality water supply. This work recommended that efforts should be made to improve access to clean water and sanitation facilities for street food vendors, Regular inspections of street food vending sites should be conducted to ensure compliance with food safety regulations and there should be programs that covers basic food safety principles, including proper food handling, storage, and hygiene practices.

**Keywords:** Food safety, Food vendors, Food hygiene, Food preparation

## INTRODUCTION

Street food vendor is widely seen as individual whose effort is to sell ready to eat food to the public, their site is not a permanent built-up structure from which they sell to the public. Street food vendors may be stationary i.e occupying space, or they may be mobile. The street food industry plays an important role in cities and towns of many developing countries both economically and in meeting food demands of dwellers in specific city (Muinde & Kuria, 2020). Street food is a common occurrence in public places, particularly in cities where it often fulfills a basic need to the urban inhabitants or cities where the needs occur (Rahman, Arid, Bakar, & Talib, 2019). Street food vendors prepare food in an informal setting and are thus exposed to climate and temperature changes, poor sanitation and unsafe water supply. The food prepared in these conditions are usually unsanitary and unhygienic. It poses a health risk to the consumer in the form of food borne diseases (World Health Organization, 2018). Food borne diseases are on a rise in both developed and developing countries, in particular, diarrhea diseases which result in estimated 1.9million deaths annually Farthing, Salam, Lindberg, Site, Khalif, Salazar & Krabshuis, (2018). This results from the poor hygienic preparation of some food which is later served to the people for consumption hence creating a critical challenge to their health.

### Awareness of food safety among food vendors

Food safety among food vendors is a major concern aimed at increasing the hygienic standard of the any society especially in Nigeria. The need to strengthen food safety and hygiene practices among food vendors is necessary

for the prevention of food borne diseases. Furthermore, the practical approach to ensure the decrement of the ailment associated with food should be a welcoming idea of any given society. The need for this, is compulsory as many foods borne diseases ranging from cholera which has become the major threat to the nation arises from food consumed from the food vendors. Food safety among food vendors has always been an important issue. Food safety is the utilization of healthy food resources and use of improved strategies to ensure that foods are properly produced, processed, and distributed to ensure safe consumption. Food safety is related to the presence of foodborne hazards like chemical, physical, and biological hazards in food at the point of consumption. Food safety can be defined as “the inverse of food risk” or the absence of harmful substances Mensah, Yeboah-Manu, Owusu-Darko & Ablordey (2022). It is important to note, that consumers may use their own criteria to evaluate whether a food is safe or not (Izah, Ineyougha, Okerentugba, & Oghale, 2019), and the regular inspection of the food vendors by food inspectors on regular basis will help reduce the production of unhealthy food and reduce the incidence of food borne diseases.

### **Food hygiene practices among food vendors**

Food hygiene has to do with food and environmental cleanliness of an individual or group of people in charge of food preparation to prepare healthy food for the populace, (FAO, 2022). Addressing food safety and hygiene challenges in the street food sector requires a multifaceted approach involving various stakeholders, including vendors, consumers, and regulatory authorities. In this study, food hygiene is seen as all efforts towards ensuring good healthy food in order to prevent the occurrence of diseases or other health hazards. Thus, food hygiene entails keeping one’s environment and food healthy to avoid the ill-health of disease for a healthy living and consumption in the society. Efforts to improve food safety and hygiene practices among street food vendors can include training and education programs, provision of adequate infrastructure and resources, and effective monitoring and enforcement of food safety regulations (Cortese, & Dedzo, 2021).

Food hygiene practices is a subject of wide scope and it is a broad term used to describe the preservation and preparation of foods in a manner that ensures the food is safe for human consumption. Food hygiene deals with the prevention of contamination of food stuffs at all stages of production, collection, transportation, storage, preparation, sale and consumption. The food safety and hygienic practices have become a problem to achieve especially in Nigeria where most vendors do not care about the implications of their poor habit. Most vendors show little no care about their surroundings where their vending sites are located. This has been the major challenging occurrences in this era where diseases have drastically increased. Poor food safety and hygiene practices among street food vendors can lead to the transmission of foodborne illnesses, which can have significant health and economic consequences (Grace, 2018). Common foodborne pathogens associated with street foods include Salmonella, Escherichia coli, Staphylococcus aureus, and Bacillus cereus (Mensah, 2022). These pathogens can cause a range of illnesses, from mild gastroenteritis to more severe conditions like typhoid fever and cholera (WHO, 2018). Debates on genetic food safety include such issues as impact of genetically modified food on health of further generations and genetic pollution of environment, which can destroy natural biological diversity. In developed countries, there are intricate standards for food preparation, whereas in lesser developed countries, the main issue is simply the availability of adequate safe water, which is usually a critical item. In theory, food poisoning is hundred percent (100%) preventable. Food sanitation also extends to keeping the preparation area clean and relatively germ-free. Mixing bowls, spoons, pairing knives and any other tools used in the kitchen should be washed thoroughly before use. Kitchen countertops and cutting boards should also be cleaned and sterilized from time to time. Keeping a sanitary workplace will also cut down on the chances of some type of foodborne illnesses from developing when people consume a prepared food. Food contamination occurs most commonly from excreta on people’s fingers, flies etc (i.e. faeco-oral transmission). Food contamination may also occur by skin infection especially the hands of food-vendors (staphylococcal food poisoning),

### **Statement of the Problem**

Food is the most important and only substance that is universally consumed by all humans and animals to stay alive. Food needs to be carefully handled or safe guarded properly because contamination anywhere along the food chain can have far reaching effects and sometimes fatal consequences. Street food vendors prepare food in an informal setting and are thus exposed to climate and temperature changes, poor sanitation and unsafe water

supply. Food borne illnesses is a burden in terms of incapacitating people, causing discomfort, pain, grief and suffering, disruption to industry and commerce and strain on the health service. The implication of poor safety and unhygienic practices among the street food vendors is a serious concern for the general public and so there should be a proper sensitization and measures on the food safety and hygienic practices to ensure consumption of hygienic food free from foodborne disease in the society.

### **Purpose of the Study**

This study investigated food safety and hygienic practices among the street food vendors in Ife East Local Government Area. Specifically, the study:

- i. evaluated the knowledge of food safety regulations among street food vendors in Ife East.
- ii. assessed the hygienic practices and conditions of street food vending sites in Ife East Local.
- iii. investigated the challenges faced by street food vendors in implementing food safety and hygiene practices among the population.
- iv. suggested strategies to improve food safety practices among food vendors in Ife East.

### **Research Questions**

The following constitute the research question:

- i. what is the level of knowledge among street food vendors in Ife East regarding food safety regulations?
- ii. what are the hygienic practices and conditions at street food vending sites in Ife East?
- iii. what are the main challenges faced by street food vendors in implementing food safety and hygienic practices in Ife East?
- iv. What are the strategies that can be adopted to improve food safety practices among food vendors?

### **Significance of the Study**

The research gave a clear insight to the level of awareness on food safety and hygienic practices among street food vendors. This study is significant to the following persons and groups.

Ministry of Health, food vendors, parents, school children, researchers and the entire society. The findings enabled the Health Ministry authorities to be aware and appreciate the roles and problems of food vendors in the public primary schools helping them to come up with good policy intervention to promote food safety measures in the various school environments where the food vendors operate. The findings are targeted to help food vendors adopt good hygiene practices to prevent food contamination. Equipping them with the skills to ensure proper food hygiene as well as the need for them to maintain their personal and environmental cleanliness where they sell their products and offering the children with good quality food by the food vendors in the schools.. The good quality food would help to improve their nutritional status. This would assist in reducing the outbreak of food poisoning.

### **Scope of the Study**

This research work investigated food safety and hygienic practices among street food vendors in Ife East Local Government Area of Osun State. The study investigated the practice of food vending and the roles of the food vendors in maintaining a hygienic food for consumption by the consumers. This work also evaluated the knowledge of food safety regulations among street food vendors in Ife East. This study tends to assess the hygienic practices and conditions of street food vending sites in Ife East Local. It also investigated the challenges faced by street food vendors in implementing food safety and hygiene practices among the population and

suggested strategies to improve food safety practices among food vendors in Ife East.

## **RESEARCH METHODOLOGY**

The procedure adopted in the process of the study is described under the following sub-headings: research design; area of the study; population of the study; sample and sampling techniques; instrument for data collection; validation of the instrument; reliability of the instrument; method of data collection and method of data analysis.

### **Research Design**

This study is a descriptive survey that seeks to investigate the food safety and hygienic practices among street food vendors in Ife East.

### **Area of the Study**

The study was conducted in Ife East Local Government Area, Osun State which has about thirty (30) local government area with Ife East Local Government Area mostly occupied by teachers, farmers, traders, vendors as well as other business establishment. Nonetheless, food vending is one of the most common businesses in vogue in this area.

### **Population of the Study**

The population of the study comprises of all street food vendors in Ife East Local Government Area of Osun State. The total population is one hundred and thirty-four (134).

Source: **Ife East Food Vendor Association.**

### **Sample and Sampling Techniques**

The research adopted one hundred (100) food vendors for the study; the research adopted simple random sampling technique for the study. Some of the food vendors did not readily make themselves available for the research instrument's response.

### **Instrument for Data Collection**

The research instrument used for the collection of data is a structured questionnaire. The questionnaire was designed based on the purpose of the study, using the likert four point rating scale; Strongly Agree (SA) rated as four (4) points, Agree (A) rated as three (3) points, Disagree (D) rated as two (2) points, Strongly Disagree (SD) rated as one (1) points

The questionnaire was used to obtain information from the respondents directly concerned.

### **Validation of the Instrument**

The instrument was validated by the researcher's supervisor and/or other research experts of the department of Home Economics. The items were criticized and corrections were done in accordance to the stipulations of the supervisor and the experts.

### **Reliability of Instrument**

The questionnaire was tested for its consistency using test-retest method. 10 copies of the questionnaire was given to ten (10) food vendors in Ife East which is outside the research area. After two (2) weeks another set of the same questionnaire items was given to the same set of people. This was used to test the correlation of their responses.

## METHOD OF DATA ANALYSIS

The researcher visited the location and administer the questionnaire face to face to the respondents. At the end, the researcher collects the filled questionnaire which indicates the responses of the respondents. The data collected was analyzed by weighing each of the response option by using the likert rating style of 4, 3, 2, and 1 for SA, A, SD, D, respectively. A cut-off point will determine the accepted and rejected items. The cut-off point will be obtained by totaling the normal value divided by the number of nominal values  $\frac{4+3+2+1}{4} = \frac{10}{4} = 2.50$ . any item with the mean of 2.5 and above was taken as agree while any one with mean below 2.50 was taken as disagree.

### Data presentation, interpretation and analysis

The results gathered from this analysis provided basic footing for the acceptance and validation of the results. In addition, the purpose of this chapter was to analyse the data and its interpretation as it was collected from the sample through the use of questionnaire.

## RESULTS AND DISCUSSION

VARIABLES	ITEMS	FREQUENCY	PERCENTAGE
<b>Gender</b>	Male	<b>13</b>	<b>13%</b>
	Female	<b>87</b>	<b>87%</b>
	<b>Total</b>	<b>100</b>	<b>100%</b>
	<b>Table 1: Gender of Respondents</b>		
<b>Age</b>	20-30	31	31%
	31-40	34	34%
	41-50	21	21%
	51 and above	14	14%
	<b>Total</b>	<b>100</b>	<b>100%</b>
	<b>Table 2: Age of respondents</b>		
<b>Education Level</b>	PRIMARY SSCE	29	29%
	NCE	21	21%
	DEGREE	13	13%
	<b>Total</b>	<b>37</b>	<b>37%</b>
		<b>100</b>	<b>100%</b>
	<b>Table 3: Education of respondents</b>		
<b>Marital Status</b>	Single	36	36%
	Married	44	44%
	Separated	4	4%
	Divorced	7	7%
	Widowed	9	9%
	<b>Total</b>	<b>100</b>	<b>100%</b>
	<b>Table 4: Marital status of respondents</b>		

**Table 4: Marital status of respondents**

**Source: Field Survey, 2024**



Table 1 above shows that 100 respondents representing 100% of the total sample containing 43 of males representing 43% while 87 respondents also constituting 87% of the total sample are females. It is observed that the respondents are mostly female food vendors.

The table 2 above showed that 31 respondents representing 31% of the total sample indicated to be between the ages of 20-30. Meanwhile, 34 respondents representing 34% of the total sample were between the ages of 31-40. In addition, 21% of the respondents were from the ages of 41-50 and finally 14% of the respondents are falls between the age range of 51 and above.

Further, table 4 reveals that the respondents' marital status of 36 singles representing 36%, 44 married representing 44%, however, widowed/separated/ divorced were 20%. This indicates that vendors across Ife East Local Government were randomly selected.

**Research Question 1:** What is the level of knowledge of food safety regulations among street food vendors in Ife East?

**Table 5: Mean and Standard Deviation of the level of knowledge of food safety regulations among street food vendors in Ife.**

S/N	Items	SA	A	D	SD	$\bar{x}$	SD	Decision
1	Food vendors are familiar with the food safety and hygienic practice.	54	23	13	10	3.2	0.55	Agreed
2	Food vendors are aware of the National Food Safety Policy and Guidelines.	28	41	23	8	3.0	0.90	Agreed
3	Food vendors store food at the recommended temperature for safety.	29	25	32	14	2.7	0.52	Agreed
4	Food vendors are properly informed about the food safety regulation.	29	31	28	12	2.8	0.89	Agreed
5.	Food vendors always develop interest in food safety awareness.	35	26	25	14	2.8	0.89	Agreed

**Keys:**  $\bar{x}$  = mean, SD = Standard deviation, Cut-off point = 2.5

**Source:** Field Survey (2024)

Table 5 which rated the level of knowledge among street food vendors in Ife East regarding food safety regulations, revealed that all the items (1-5) having above 2.5 cut-off point agreed in their decision. It revealed that food vendors are familiar with the food safety and hygienic practice. In addition, food vendors are aware of the National Food Safety Policy and Guidelines. Furthermore, food vendors store food at the recommended temperature for safety; food vendors properly informed about the food safety regulation. Finally, food vendors always develop interest in food safety awareness. These findings are in line with the argument raised by Muinde & Kuria (2020), that "lack of knowledge and awareness among street food vendors can lead to poor hygiene practices, contributing to the contamination of food products and increasing the risk of foodborne illnesses". And also supported by the ascertainment of (Cortese & Dedzo 2021) that "vendors who possess a strong foundation of knowledge about food safety concepts, such as temperature control, cross-contamination prevention, and personal hygiene, are more likely to adopt and implement appropriate practices in their operations." It is therefore, important to note that inability of the food vendor to get informed with necessary information as regards to the likely hygienic practices in their area could be a great harm to the consumers of the food cooked at that point in time.

**Research Question 2:** What are the hygienic practices and conditions at street food vending sites in Ife East?

**Table 6: Mean and standard deviation of the hygienic practices and conditions at street food vending sites in Ife East.**

S/N	Items	SA	A	D	SD	$\bar{x}$	SD	Decision
1	Food vendors do not wear protective clothing, gloves, or hairnets and wash your hands regularly when preparing your food.	44	30	14	11	3.1	0.91	Agreed
2	Cleaned and sanitized utensil are used while handling ready-to-eat food items.	21	56	20	3	3.0	0.97	Agreed
3	There is access to clean water for cooking, washing, and cleaning.	26	30	38	7	2.7	0.78	Agreed
4	The location for food vending is dirty.	27	30	33	8	2.8	0.88	Agreed
5	Food vendors have a designated area for waste disposal.	29	26	37	8	2.8	0.98	Agreed

**Keys:**  $\bar{x}$  = mean, SD = Standard deviation, Cut-off Point =2.5

**Source:** Field Survey (2024)

Table 6 above also examined the hygienic practices and conditions at street food vending sites in Ife East. The findings revealed that food vendors do not wear protective clothing, gloves, or hairnets and wash your hands regularly when preparing their food. However, they clean and sanitize utensil while handling ready-to-eat food items. The vendors also have access to clean water for cooking, washing and cleaning. But they however, agreed that most of the location for food vending is dirty and that the vendors have a designated area for waste disposal. The findings however, contradict the suggestions of (Muinde & Kuria, 2020) which stated that “the food vendor should choose the uniform that is suite for a cooking like aprons, non-slip shoes and hats that keep the working area safe and the employees will be also free from cross-contamination as possible. Safety practice is the most important lesson that the business should be learned. This means that to be able to manage any edible things, the food vendors should make it a point of duty and as a matter of importance to always dress properly by covering their hair and other part of their body that could easily get in contact the food being prepared for consumption purpose.

**Research Question 3:** what are the main challenges faced by street food vendors in implementing food safety and hygienic practices in Ife East?

**Table 7: Mean and Standard Deviation of the main challenges faced by street food vendors in implementing food safety and hygienic practices in Ife East.**

S/N	Items	SA	A	D	SD	$\bar{x}$	SD	Decision
1	Customer(s) complains regularly regarding food quality or hygiene.	44	26	21	9	3.1	0.71	Agreed
2	Food vendors do not have access to clean water for cooking, washing and cleaning.	17	45	23	15	2.6	0.77	Agreed
3	Food vendors do not have adequate equipment, such as refrigerator, and vending infrastructure.	23	44	28	1	2.9	0.74	Agreed
4	There is no food safety measures and hygienic practices in your area affordable.	34	39	20	7	2.7	0.62	Agreed
5	Customers often fall sick due to airborne diseases.	20	25	37	18	2.5	0.91	Agreed

**Keys:**  $\bar{x}$  = mean, SD = Standard deviation

**Source:** Field Survey (2024)

Table 7 above rated the the main challenges faced by street food vendors in implementing food safety and hygienic practices in Ife East. This findings revealed that customers complain regularly regarding food quality and hygiene. Food vendors do not have access to clean water for cooking, washing and cleaning. They do not have adequate equipment, such as refrigerator, and vending infrastructure. It also reveals that there no enough food safety measures and hygienic practices in their area which are affordable. Customers fall sick due to airborne diseases. The findings are align with Rane & Ghosh, (2019) in which they ascerted that street food vendors are faced with challenges of infrastructure and lack of toilet facilities at vending sites even the available food vending sites built with basic infrastructures and services are very expensive, leaving low income street food vendors, especially in many developing countries as Nigeria, with the option of using metal containers, shops built with wooden materials or shed made with palm fronds by the roadside. (Idowu *et al*, 2021) “many of them pass their feaces and urine in nearby bushes and uncompleted buildings, cleaning up with sheets of paper”. It is of great significance to note that most times, these food vendors find it difficult to meet the standard demands of the tools facilitate hygienic practices devoid of harmful substances in the vending site, lack convenience room and among others.

**Research Question 4:** What are the strategies that can be adopted to improve food safety practices among food vendors?

**Table 8: Mean and Standard Deviation of the strategies that can be adopted to improve food safety practices among food vendors.**

S/N	Items	SA	A	D	SD	$\bar{x}$	SD	Decision
1	Food vendors should attend regular training and workshops on food safety and hygiene practice.	68	22	5	5	3.5	1.01	Agreed
2	Consumers should be enlightened to demand for hygienic food from food vendors	37	43	16	4	3.1	0.98	Agreed
3	Awareness on good hygienic food practices should be done by the government regularly.	41	33	23	3	3.1	0.98	Agreed
4	Government should implement law against unsafe food preparation practices	44	32	18	6	3.0	0.97	Agreed
5	Food vendor association officials should ensure hygienic practices among member	40	30	15	5	2.9	0.81	Agreed

**Keys:**  $\bar{x}$  = mean, SD = Standard deviation, Cut-off Point = 2.5

Finally, table 8 rated the strategies that can be adopted to improve food safety practices among food vendors. The findings revealed that vendors should attend regular training and workshops on food safety and hygienic practice. Customers should be enlightened to demand for hygienic food from food vendors. Awareness on good hygienic food practices should be done by the government regularly. Government should implement law against unsafe food preparation practices. Food vendor association officials should ensure hygienic practices among member. The findings are in line with the assertion of Springer, (2018) and WHO (20218), they indicated that there is need to integrate food science with behavioral science and use a systems-based approach to managing food safety risk. The importance of organizational culture, human behavior, and systems thinking is well documented in the occupational safety and health fields. However, significant contributions to the scientific literature on these topics are noticeably absent in the field of food safety. Food safety encompasses all practices and procedures involved in ensuring the safety of food from production to consumption. This includes controlling hazards that may occur at various stages of the food chain, such as microbial contamination, chemical contamination, and physical hazards. Proper food safety practices help prevent foodborne illnesses, which can have severe health consequences and economic impacts. To ensure safety measures of good hygienic practices of food vending in Ife East Local Government Area of Osun State, the items listed on table 8 should be well attended to especially on the part of the government. However, the food vendors are saddled with the



responsibility to promote good hygienic food vending practices by adhering to the principles guiding how food should be prepared for consumption purpose and even for commercial purpose.

## CONCLUSION

Food safety and hygiene practices among street food vendors in Ife East, Nigeria, are essential for ensuring the safety and quality of the food sold. While there is limited specific research on Ife East, findings from studies conducted highlighted several key issues. Street food vendors often face challenges such as inadequate knowledge of food safety principles, lack of access to clean water and sanitation facilities, and economic constraints that hinder their ability to comply with food safety regulations. These challenges can lead to poor food handling practices and increase the risk of foodborne illnesses.

Interventions to improve food safety and hygiene practices among street food vendors in Ife East should focus on providing education and training on food safety, improving access to clean water and sanitation facilities, and enhancing regulatory enforcement of food safety standards. By addressing these challenges, it is possible to improve the overall safety and quality of street food in Ife East, leading to better health outcomes for consumers. Further research is needed to understand the specific challenges faced by street food vendors in Ife East and to develop targeted interventions to address these challenges. By working together with vendors, government agencies, and other stakeholders, it is possible to improve food safety and hygiene practices among street food vendors in Ife East and ensure the safety and well-being of consumers.

## RECOMMENDATIONS

To improve food safety and hygiene practices among street food vendors in Ife East, several recommendations can be considered.

1. Firstly, there should be a focus on education and training programs tailored to the specific needs of street food vendors..
2. Efforts should be made to improve access to clean water and sanitation facilities for street food vendors. This can be achieved by providing communal water points and public toilets in areas where vendors operate.
3. By raising awareness about the importance of food safety and hygiene practices, consumers can be encouraged to patronize vendors who follow food safety guidelines. This can create a market-driven incentive for vendors to improve their practices.
4. Furthermore, collaboration with stakeholders such as government agencies, NGOs, and other organizations is essential. By working together, these stakeholders can develop and implement food safety programs and interventions that are effective and sustainable
5. Research and monitoring should be conducted to assess the impact of interventions aimed at improving food safety and hygiene practices among street food vendors.

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