# Perception of Market Women on the Practice of Food Hygiene among Food Vendors in Igando, Lagos State

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**Abstract**
Food hygiene practices play a vital role in preventing foodborne illnesses, particularly in developing nations such as Nigeria. Market women serve as key stakeholders in ensuring food safety, given their significant role in selling food items to the public. Despite this, limited attention has been given to their perceptions and adherence to proper food hygiene practices. This study, therefore, assessed the perception of market women regarding food hygiene practices among food vendors in Igando, Lagos State. A descriptive research design was adopted, involving 133 market women from the Igando market. The study explored their level of knowledge and how it influences hygiene practices. Findings revealed that although most participants acknowledged the importance of maintaining food hygiene, notable deficiencies existed in both knowledge and practice. For instance, only 45% reported washing their hands before handling food, while 60% did not use gloves during food handling. Furthermore, 70% lacked access to clean water for handwashing, and 80% did not have access to hand sanitizers. The study concludes that there is a pressing need for continuous education and awareness initiatives to enhance market women's understanding and implementation of food hygiene practices. Strengthening these aspects is crucial for promoting safe food handling and reducing the burden of foodborne diseases in Nigeria.
**Keywords:** Food Hygiene, Food Vendors, Market Women, Perception, Public Health.

## Chapter One
## Introduction
### 1.1. Background of the Study

This study investigates the critical role of food hygiene in ensuring the safety and quality of food sold by vendors, emphasizing its importance for public health. Street foods are frequently prepared and handled in environments that often lack adequate hygiene standards, especially in Nigeria, where many vendors operate with limited access to clean water and sanitation facilities. Such conditions heighten the risk of transmitting foodborne illnesses, which pose serious health threats to individuals and communities. Market women, as primary consumers and handlers of street food, possess perceptions about food hygiene that significantly impact food safety outcomes. Proper hygiene practices among vendors are crucial because poor hygiene can lead to the spread of diseases such as cholera, diarrhea, and other severe health conditions, sometimes resulting in fatality if untreated. Despite their vital role in Nigeria's food supply chain, many vendors demonstrate inadequate hygiene standards and limited knowledge of proper food handling procedures. This has prompted calls for further research into market women's perceptions of food hygiene practices among vendors (Nasaruddin et al., 2018). According to the World Health Organization (2017), over 200 diseases are transmissible through contaminated food, often due to poor hygiene behaviors such as neglecting handwashing after restroom use or raw meat handling, using contaminated water during food preparation or dishwashing, improper food storage temperatures, serving cooked food beyond safe periods, and the failure to wear protective gear like gloves and masks. These lapses increase the risk of illnesses including nausea, vomiting, diarrhea, cholera, and other serious health


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problems, some of which can be fatal if not promptly managed. Market women are instrumental in food handling, preparation, and sales, making their adherence to hygiene standards vital for safeguarding food safety and quality. As primary purchasers for their families, they have a vested interest in the safety of the food they buy, influencing their perceptions of vendors' hygiene practices. However, limited research exists regarding consumers' awareness and understanding of proper food hygiene. This knowledge gap underscores the need to assess market women's perceptions of food hygiene among vendors, particularly in Igando market, to better inform public health strategies and promote safer food handling practices.

### 1.2 Statement of the Problem

Despite the critical importance of food hygiene in ensuring food safety, there remains a limited understanding of consumers' perceptions of hygiene practices among food vendors. This knowledge gap impedes the formulation of effective interventions to improve hygiene standards and protect consumers from health hazards associated with unsafe food handling. Attitudes toward vendor cleanliness and safety measures are insufficiently studied (Lin & Roh, 2019).

The frequent occurrence of diarrheal and foodborne illnesses among market women has driven this study to explore consumer perceptions and propose recommendations to enhance food hygiene at Igando market.

### 1.3 Objectives of the Study

General Objective to examine the perceptions of market women regarding food hygiene practices of food vendors in Igando market, Alimosho LGA, Lagos.

Specific Objectives

- To assess market women's perceived knowledge of proper food hygiene practices by vendors.
- To identify the health consequences of improper food hygiene practices for consumers.
- To evaluate the role of proper food hygiene in preventing foodborne diseases.

### 1.4 Research Questions

- What is the perceived level of knowledge among market women about proper food hygiene practices by food vendors?
- What are the health implications of inadequate hygiene practices on consumers?
- How does adherence to proper food hygiene practices prevent foodborne illnesses?

### 1.5 Research Hypotheses

- There is no significant relationship between market women's perceived knowledge and the actual food hygiene practices employed by vendors in Igando market.
- There is no significant correlation between improper food hygiene practices and the prevention of foodborne illnesses through proper hygiene.

### 1.6 Significance of the Study

This research aims to improve the understanding of both market women and food vendors regarding proper food hygiene, thereby contributing to a reduction in foodborne disease incidence. It will guide vendors on safe food preparation and hygienic handling, potentially influencing policymakers to establish and enforce hygiene regulations for vendors. Additionally, healthcare professionals, especially nurses, can utilize the findings to educate patients and communities about food hygiene. The study will also serve as a valuable resource for future investigations in this field.

### 1.7 Scope of the Study

The research will focus on 133 market women who frequently purchase food from street vendors at Igando market.

### 1.8 Operational Definitions

- Food hygiene: Practices and conditions necessary to control food safety hazards.
- Food vendors: Individuals engaged in the sale of edible food items.
- Hygiene: The maintenance of cleanliness related to individuals, objects, or environments.
- Market women: Local women conducting buying and selling activities in Igando market.


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- Perception: The awareness or understanding acquired through sensory experience.
- Practice: Actions by food vendors that can increase or reduce the risk of foodborne illness.

## Chapter Two
## Literature Review
### 2.1. Conceptual Review

The perceptions of market women regarding food hygiene practices among food vendors are paramount within the domain of food safety, as they significantly influence both the quality and safety of food sold in market settings. These perceptions affect consumer purchasing decisions and trust in vendors. Empirical evidence suggests that factors such as the visual appearance of food, vendor environmental cleanliness, personal hygiene, and vendors' awareness of hygiene protocols shape market women's attitudes (Nasaruddin et al., 2018). However, these perceptions are sometimes influenced by cultural norms and beliefs, which may not always align with objective hygiene standards. Consequently, targeted educational and awareness initiatives are essential to enhance market women's knowledge and foster improved hygienic practices among vendors. Food hygiene practices by vendors are fundamental to ensuring consumer safety and food quality, as substandard hygiene can precipitate foodborne illnesses with significant health consequences. Existing literature has documented various challenges faced by vendors in market environments and recommended corresponding interventions. Proper hand hygiene, specifically handwashing with soap and clean water, represents a critical preventative measure against microbial transmission. Studies reveal prevalent deficiencies in vendor compliance and awareness regarding hand hygiene (Akabanda et al., 2017), underscoring the need for comprehensive education programs. Furthermore, maintaining cleanliness and sanitation of food preparation and storage areas is challenging, with risks of cross-contamination arising from inadequate cleaning of utensils and surfaces. Vendors often encounter obstacles related to limited access to potable water, insufficient sanitation infrastructure, and lack of formal training (Haji-Sheikhi et al., 2018). Addressing these deficiencies necessitates improved infrastructure, resource allocation, and focused capacity-building interventions. Proper food storage is equally imperative, given that inappropriate conditions facilitate bacterial proliferation and jeopardize food safety. Research indicates that vendors frequently struggle with temperature regulation and the segregation of raw and cooked foods (Jabbar et al., 2019). The enforcement of storage protocols alongside equipping vendors with requisite knowledge and equipment is crucial to ameliorating these practices. Educational initiatives have been shown to significantly influence vendor behavior regarding food hygiene (Kamau et al., 2020), highlighting the importance of programs that emphasize food safety and regulatory compliance.

#### Concept of Food Hygiene

Food hygiene encompasses all necessary conditions and measures to ensure food safety, quality, and suitability throughout all stages of production, processing, preparation, storage, and consumption (World Health Organization [WHO], 2020).

It involves practices designed to prevent contamination and deterioration caused by physical, chemical, or biological hazards, thereby safeguarding public health. This concept is especially critical in regions characterized by inadequate environmental sanitation and limited infrastructural development. In many low- and middle-income countries, including Nigeria, the informal food sector is vital for providing affordable nutrition but is often plagued by poor hygiene practices (Eneji et al., 2017). According to the WHO (2021), core food hygiene principles include maintaining cleanliness, separating raw from cooked foods, ensuring thorough cooking, storing food at safe temperatures, and using safe water and raw materials. Non-adherence to these principles promotes the proliferation of foodborne pathogens responsible for diseases such as cholera, typhoid fever, and gastroenteritis.


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**Importance of Food Hygiene in Public Health**

Foodborne diseases constitute a significant global public health burden, affecting millions annually. The WHO (2021) estimates that one in ten people worldwide experience foodborne illnesses each year, leading to approximately 420,000 deaths, disproportionately impacting Africa and Southeast Asia. Vulnerable populations—including children, the elderly, and immunocompromised individuals—bear the greatest risk (Afolaranmi et al., 2015). In Nigeria, inadequate enforcement of food safety laws, poor monitoring, and unsafe food handling contribute to persistent public health challenges. Odeyemi (2016) highlights that many urban food vendors operate under unsanitary conditions, fostering the transmission of diarrheal and enteric diseases, which detrimentally affect workforce productivity, escalate healthcare expenses, and degrade overall community health (Mensah & Julien, 2019).

**Food Vending and Street Food Culture**

Street food vending remains a foundational element of socio-economic life in many developing nations, offering employment opportunities and affordable meals for urban residents (Okojie & Isah, 2014). However, the informal nature of this sector results in widespread gaps in vendors' knowledge of food safety and hygiene standards. Research in Ghana by Monney et al. (2013) revealed that vendors frequently operate proximate to contamination sources such as open drains and waste sites, exposing food to environmental pollutants. Similarly, Chukuezi (2010) noted limited access to clean water and effective waste disposal among food vendors in Owerri, Nigeria, further compromising hygiene. Despite these challenges, street food remains essential for urban nutrition and livelihood.

**Perception and its Relevance to Food Hygiene**

Perception, defined as the cognitive process of interpreting sensory information, critically governs consumers' assessments of food safety and purchasing behaviors (Schiffman & Wisenblit, 2019). Market women, acting as consumers and intermediaries, exert considerable influence on food quality and vendor practices.

Omemu and Aderoju (2008) observed that consumer perceptions often rely on visible hygiene indicators—such as vendor and utensil cleanliness—though these may overlook actual compliance with hygiene standards. Studies such as Adepoju et al. (2018) demonstrate that consumers may equate neat appearance and food coverage with hygiene, even when handling practices are inadequate. Socioeconomic factors, including education, income, and age, further modulate these perceptions; women with higher education levels tend to prioritize food safety, whereas those constrained financially or educationally might prioritize affordability over hygiene (Afolaranmi et al., 2015).

**Perceived Knowledge of Market Women Regarding Food Hygiene**

The level of knowledge market women possess regarding vendor food hygiene directly impacts the safety and quality of foods in the market. Their awareness influences purchasing decisions and trust in vendors. However, multiple studies document low knowledge levels among market women, often attributable to limited education, cultural influences, and insufficient training in food safety, thereby perpetuating public health risks through increased foodborne disease transmission. Consequently, education initiatives targeting market women are imperative (Cheng & Wu, 2019).

**Knowledge and Practices of Food Vendors**

Extensive research on food vendors' knowledge, attitudes, and practices (KAP) in Nigeria and comparable settings indicates significant gaps. For instance, Chukuezi (2010) reported that while 75% of vendors in Owerri recognized the importance of handwashing, only 40% adhered to it consistently, primarily due to inadequate facilities. Likewise, Okojie and Isah (2014) found that vendors in Benin City possessed reasonable hygiene knowledge


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but faced challenges with waste management and personal hygiene. Eneji et al. (2017) identified education level, water availability, and inspection frequency as determinants of vendor hygiene behaviour. Moreover, hygiene inspections are often irregular, with weak regulatory enforcement (Oluwafemi & Simisaye, 2012). The absence of formal training and certification further exacerbates these challenges.

**Effects of Improper Food Hygiene on Consumer Health**

Improper food hygiene significantly contributes to the global burden of foodborne illnesses. Common poor practices include insufficient hand hygiene, cross-contamination between raw and cooked foods, improper storage, and failure to maintain safe cooking temperatures (Smith et al., 2020). Such conditions facilitate contamination by pathogens like Salmonella, precipitating illnesses such as gastroenteritis and food poisoning. The Centers for Disease Control and Prevention (CDC, 2021) report that approximately 48 million people in the United States contract foodborne diseases annually, many linked to unsafe food handling.

These illnesses impose substantial economic costs through medical expenses, lost productivity, and damage to the food industry's reputation, with low- and middle-income countries bearing significant financial burdens (World Bank, 2019; Jaykus et al., 2021).

**Role of Proper Food Hygiene in Preventing Foodborne Illness**

Foodborne illnesses continue to represent a pressing public health concern worldwide, affecting millions each year. The implementation of core food safety measures and adherence to regulatory standards—such as those prescribed by the Food and Drug Administration (FDA) and the Codex Alimentarius Commission—are essential for consumer protection. Vulnerable populations, including children, the elderly, pregnant women, and immunocompromised individuals, benefit significantly from stringent hygiene practices encompassing thorough handwashing, safe food handling, adequate storage and cooking temperatures, and routine cleaning. Educational and awareness campaigns play a pivotal role in promoting these practices among consumers, food handlers, and the broader public (Paranthaman et al., 2022; Todd et al., 2021).

**2.2. Theoretical Framework**

The Health Belief Model (HBM) posits that individuals' perceptions of health risks and benefits influence their likelihood to adopt health behaviors. Regarding food hygiene, consumers' recognition of risks from poor vendor hygiene and belief in the benefits of choosing hygienic vendors shape their attitudes and behaviors.

Key HBM constructs include:

- Perceived Susceptibility: Individuals' beliefs about their chances of contracting illness.
- Perceived Severity: Beliefs about the seriousness and consequences of a health condition.
- Perceived Benefits: Belief in the effectiveness of recommended behaviors to reduce risk or seriousness.
- Perceived Barriers: Perceived costs or obstacles in performing health behaviors that might outweigh benefits.
- Self-Efficacy: Confidence in one's ability to perform the recommended behavior, which affects adherence.

The HBM has proven effective across many preventive health contexts, including dietary behaviors, by helping predict and influence health actions.


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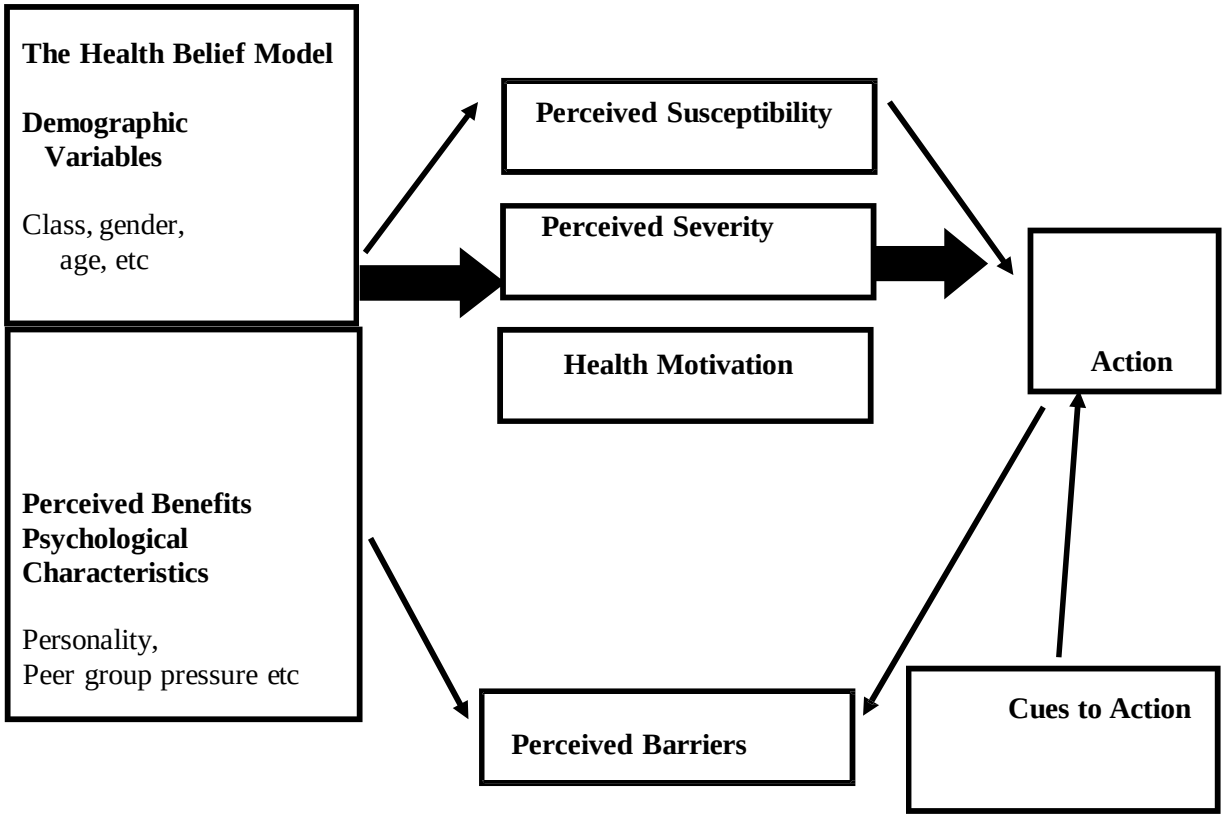


**Figure 1: Theoretical Frame work**

**Application to the Study**

The reviewed findings provide evidence that specific actions are being implemented to ensure food safety, primarily focusing on information seeking, food preparation, and food purchasing behaviors. The determinants of these actions are consistent with the constructs of the Health Belief Model (HBM), which include the perception that consuming unsafe food poses a personal health risk, the belief in one's ability to take preventive actions (self-efficacy), and the motivation to maintain good health. The interaction between perceived threat and self-efficacy was also explored, revealing that individuals who recognize a personal health threat and believe they can effectively mitigate it are more likely to adopt safe food-handling practices. Additionally, socio-demographic factors such as age, gender, and household size were found to influence food safety behaviors. The model further suggests that food hygiene practices can be enhanced by increasing individuals perceived susceptibility and severity of foodborne risks, emphasizing the benefits of proper hygiene, and minimizing perceived barriers to safe practices. Several studies have applied the Health Belief Model to predict food-handling behaviors, with Hanson et al. concluding that the model serves as a valuable framework for assessing food vendors' practices. Their findings indicated that while many participants exhibited awareness of food safety principles, significant gaps remained in their knowledge, beliefs, and implementation of proper food-handling behaviors.

**2.3 Empirical Review**


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**Perception of Market Women on Food Hygiene Practices among Food Vendors**

Kibret and Abera (2020) emphasized that perception plays a pivotal role in shaping attitudes and influencing behavioral practices. Their research demonstrated that food vendors' understanding of appropriate food handling procedures significantly impacts their adherence to hygiene standards. Vendors who recognize that improper food handling can result in food contamination are more inclined to adopt safe practices. Additionally, awareness of the reputational and health-related consequences associated with foodborne illnesses encourages vendors to implement preventive measures and maintain food safety standards. Based on their findings, the authors proposed several strategies to improve hygiene practices among food vendors, including:

1. The consistent use of Personal Protective Equipment (PPE) such as face masks, aprons, and head coverings during food preparation and service.
2. Regular handwashing at 20–30-minute intervals.
3. Frequent sanitization of work surfaces and proper cleaning of plates and utensils with adequate quantities of clean water.
4. Periodic sensitization and training programs, to be conducted at least twice annually by relevant food safety authorities.
5. Routine hygiene inspections—carried out bi-annually by regulatory agencies such as NAFDAC—accompanied by laboratory testing of vended food samples.
6. The provision of Water, Sanitation, and Hygiene (WASH) facilities by government bodies to enable vendors to conveniently maintain proper hygiene standards.

Similarly, Anthony et al. (2018) investigated the knowledge, attitudes, and practices of food hygiene among 200 food vendors in Owerri, Nigeria. The sample comprised individuals working in hotels, school and hospital cafeterias, fast-food outlets, and roadside food kiosks. More than half (59.5%) of the respondents were aged between 21 and 40 years, with a majority being female. The study found that 87% of respondents were aware of food hygiene principles, with 38.5% citing television, 36.2% health workers, and 35.1% radio as their main sources of information. Moreover, 55.5% accurately identified diarrheal diseases as foodborne, and 85.6% acknowledged that poor hygiene could cause illness. Overall, the study concluded that respondents exhibited substantial knowledge of food hygiene—a finding consistent with similar research conducted within Nigeria.

**Effects of Improper Food Hygiene Practices on Consumer Health**

In Ethiopia, Ketseladingle Lema (2019) conducted a study assessing food hygiene practices and their determinants among 645 food handlers employed in the University of Gondar cafeterias. The results revealed that 61.9% of participants demonstrated good knowledge, 54.8% maintained positive attitudes, but only 46.7% exhibited proper hygiene practices. Food handlers with at least a secondary education and over two years of work experience were 1.86 times more likely to practice appropriate hygiene compared to those with less education and limited experience. These findings indicate that fewer than half of the participants adhered to satisfactory hygiene standards. The study recommended strategies such as continuous supervision, skill enhancement, and targeted training—particularly for female food handlers—to improve compliance. Regular hygiene audits and follow-up assessments were also advised to prevent institutional foodborne disease outbreaks. In a related study, Chipabika (2019) evaluated food hygiene practices among 251 restaurant food handlers in Kabwe Urban District. The findings indicated that while all participants (100%) reported washing their hands before food handling, only 96.4% used soap—suggesting that 3.6% relied solely on water due to soap shortages. Additionally, 86% of handlers covered their hair, while 14% failed to do so, contravening the Food and Drugs Act. Regarding utensil cleaning, 85% of respondents used hot water, while 14.7% did not, despite the Act's stipulations requiring the use of hot water. Furthermore, 85% of handlers lacked designated changing rooms and did not change into work attire upon arrival, in contrast


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to findings by Safee (2010), where all respondents reported bathing and changing clothes daily before commencing work. Collectively, these empirical studies highlight that although food handlers and vendors possess general awareness of food hygiene principles, practical adherence remains inadequate, posing significant risks to consumer health.

Continuous capacity-building initiatives, stringent regulatory enforcement, and adequate provision of essential hygiene infrastructure are therefore imperative to strengthen food safety and prevent foodborne disease outbreaks in both formal and informal food vending environments.

## Chapter Three
## Methodology
### 3.0 Introduction
This chapter presents the methodological framework adopted for the study. It provides a detailed description of the research design, study area, target population, sampling procedure, sample size determination, data types, data collection methods, data analysis techniques, and ethical considerations that guided the research process.

### 3.1 Research Design
A descriptive research design was adopted for this study. This design was considered suitable as it enables the systematic description and interpretation of the characteristics, perceptions, and behaviors of the study population as they naturally occur, without any manipulation of variables. The design facilitates the accurate depiction of existing conditions and provides a foundation for understanding relationships among study variables.

### 3.2 Research Setting
The study was conducted among market women in Igando Market, located in the southwestern part of Alimosho Local Government Area, near the Alimosho General Hospital, Igando, Lagos State. The market serves as a major commercial center where a substantial number of women engage in the sale and handling of diverse food items. This setting was chosen because of its relevance to the study focus on food hygiene practices among women involved in food vending activities.

### 3.3 Target Population
The target population consisted of **market women operating in Igando Market**. These individuals were selected because they are directly involved in food handling, preparation, and sales, making them an essential group for evaluating food hygiene knowledge, perceptions, and practices within the marketplace environment.

### 3.4 Sampling
The sample size was determined using a statistical formula designed to ensure adequate population representation and to enhance the reliability and validity of the findings.

The sample size (n) was calculated using the formula:

$n=N/1+N(e)^2$

where:

- n = sample size
- N = population size
- e = margin of error (0.05)
- 1 = constant

Given N=200, the calculation is as follows:

$n=200/1+200(0.05)^2=133$

Thus, the determined sample size is 133.

### 3.5 Sampling Technique
A non-probability sampling technique, specifically convenience sampling, was utilized after defining the target population. This approach was considered appropriate as it enabled the researcher to select respondents who were readily accessible and willing to participate in the study.

**Inclusion Criteria:**

The study included only market women who regularly purchase food from vendors, as they possess relevant experiences and perceptions regarding food hygiene practices.

### 3.6 Instrument for Data Collection
Data were collected using a self-administered structured questionnaire developed by the researcher. The instrument comprised four sections, each designed to address specific research objectives:

- **Section A:** Socio-demographic characteristics of respondents


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- **Section B:** Perceptions of market women regarding proper food handling practices among food vendors
- **Section C:** Effects of improper food hygiene practices on consumer health
- **Section D:** Assessment of how proper food hygiene practices contribute to the prevention of food-borne illnesses

**3.7 Validity of Instrument**

Validity refers to the degree to which an instrument accurately measures what it is intended to measure. To ensure both face and content validity, the questionnaire was reviewed by an expert in research methodology. Feedback and recommendations from the expert were incorporated, and necessary modifications were made to enhance the instrument's accuracy and relevance before administration.

**3.8 Reliability of Instrument**

Reliability concerns the consistency of an instrument in producing stable results under similar conditions.

To determine the reliability of the questionnaire, a pilot test was conducted among a small group of market women who patronize food vendors. This pre-testing process helped to identify ambiguous items and ensure clarity and comprehensibility in the final version of the instrument.

**3.9 Method of Data Collection**

The researcher, with the assistance of two trained research aides, personally administered the structured questionnaires to the respondents. The objectives of the study were clearly explained to each participant prior to data collection. Informed consent was obtained, and participation was entirely voluntary. Respondents were assured of confidentiality and given sufficient time to complete the questionnaire without coercion.

**3.10 Method of Data Analysis**

Completed questionnaires were systematically organized, coded, and analyzed using descriptive statistical techniques. The data were presented in frequency tables and summarized using percentages, means, and standard deviations. These methods were employed to describe and interpret the respondents' demographic profiles and their responses to the research questions.

**3.11 Ethical Considerations**

Ethical approval for the study was obtained from the Lagos State College of Nursing Research Committee, Igando, Lagos State. Participants were adequately informed about the purpose, objectives, and significance of the research. Voluntary participation was ensured, and respondents' privacy was protected by maintaining anonymity—no names or identifiable personal information were recorded. Confidentiality was upheld throughout the research process in accordance with ethical standards for human subject research.

## Chapter Four

## Results

**4.1 Introduction**

This chapter presents the results obtained from the data analysis conducted for the study. The findings are organized and discussed according to the key variables and objectives outlined in the research.

**Description of Socio Demographic Data**

**Table 1: Socio demographic data of the respondent (N=133)**

| S/N | DATA | NO OF RESPONDENTS (FREQUENCY) | PERCENTAGE (%) |
|---|---|---|---|
| 1. | AGE | | |
| | 20-25 years | 53 | 39.8 |
| | 26-25 years | 18 | 13.5 |
| | 31-35 years | 44 | 33.1 |
| | Above 41 years | 18 | 13.5 |
| | Total | 133 | 100 |
| 2. | MARITAL STATUS | | |
| | Married | 56 | 42.1 |


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| | | | |
|---|---|---|---|
| | Single<br>Divorced<br>Separated<br>Total | 59<br>10<br>8<br>133 | 44.4<br>7.5<br>6.0<br>100 |
| 3. | Educational qualification<br>Non-formal<br>Primary School | <br>17<br>34 | <br>12.8<br>25.6 |
| | Secondary school<br>B.Sc.<br>HND<br>Master's degree<br>National diploma<br>Total | 39<br>33<br>4<br>1<br>5<br>133 | 29.3<br>24.8<br>3.0<br>0.8<br>3.7<br>100 |
| 4. | Religion<br>Islam<br>Christianity<br>Traditional | <br>49<br>81<br>3 | <br>36.8<br>60.9<br>2.3 |
| 5. | TOTAL | 133 | 100% |

Table 1above presents the socio-demographic characteristics of the respondents. The results show that the majority, 53 respondents (39.8%), were aged between 20 and 25 years, while 18 respondents (13.5%) were aged between 26 and 30 years. Additionally, 44 respondents (33.1%) fell within the 31–35 years age group, and 13.5% were aged above 41 years. Regarding marital status, 42.1% of the respondents were married, 44.4% were single, 7.5% were divorced, and 6.0% were separated. In terms of educational background, 12.8% of the respondents had no formal education, 25.6% had primary education, and 29.3% had secondary education, while 24.8% held a Bachelor's degree. A small proportion, 0.8%, possessed a Master's degree, and 3.7% had a National Diploma. With respect to religion, 36.8% of the respondents practiced Islam, 60.9% practiced Christianity, while 2.5% identified with traditional religion. Overall, the data indicate that the respondents were predominantly young adults, mostly Christians, with varying levels of education and marital status.

**Table 2: The perceived level of knowledge of market women on proper practices of food hygiene among food vendors**.

| S/N | ITEMS | YES | NO |
|---|---|---|---|
| 5. | Do food vendors believe they possess enough knowledge and skill to ensure the safe handling of food? | 110 (82.7%) | 23 (17.3%) |
| 6. | Do you think food vendors are aware of the potential risks associated with improper food hygiene such as food-borne illness? | 77 (57.9%) | 56 (42.1%) |


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| | | | |
|---|---|---|---|
| 7. | Do food vendors understand the importance of food hygiene such as hand washing in relation to food preparation? | 97 (72.9%) | 36 (27.1%) |
| 8. | Do food vendors know the recommended storage temperature for different types of foods? | 71 (53.4%) | 62 (46.6%) |
| 9. | Do food vendors understand the significance of properly cooking food to ensure it is safe for consumption? | 90 (67.9%) | 43 (32.3%) |
| 10. | Do foods vendors know how to respond effectively to customer complaints or concern related to food safety and hygiene? | 80 (60.2%) | 53 (39.8%) |
| 11. | Are food vendors familiar with the guidelines for preventing and controlling food borne illness during food handling and services? | 67 (50.4%) | 66 (49.6%) |

Table 2 above presents the respondents' perception of market women regarding the level of knowledge possessed by food vendors on proper food hygiene practices. The results indicate that a large majority, 82.7%, of respondents believed that food vendors possess adequate knowledge and skills necessary for ensuring the safe handling of food, while 17.3% disagreed with this view. More than half, 57.9%, of the respondents agreed that food vendors are aware of the potential risks associated with improper food hygiene practices—such as food-borne illnesses—while 42.1% disagreed. Additionally, 72.9% of the respondents believed that food vendors understand the importance of food hygiene, including regular handwashing during food preparation, whereas 27.1% disagreed. Regarding knowledge of food storage, 53.4% of the respondents agreed that food vendors are aware of the recommended storage temperatures for different types of food, while 46.6% did not share this opinion. Furthermore, 67.7% agreed that food vendors understand the importance of properly cooking food to ensure safety for consumption, while 32.3% disagreed. In terms of food safety response, 60.2% of respondents believed that food vendors know how to effectively handle customer complaints or concerns related to food safety and hygiene, whereas 39.8% disagreed. Lastly, 50.4% of the respondents agreed that food vendors are familiar with the guidelines for preventing and controlling food-borne illnesses during food handling and service, while 49.6% disagreed. Overall, the findings suggest that while most respondents perceive food vendors as having a reasonable level of knowledge about food hygiene, notable gaps still exist in specific areas such as temperature control and adherence to food safety guidelines.

**Table 3: The Effect of Improper Food Hygiene on Consumers Health.**

| S/N | ITEMS | YES | NO |
|---|---|---|---|
| 12. | Do consumers who consume food from food vendors with poor hygiene practices have a higher likelihood of experiencing food-borne illness? | 118 (88.7%) | 15 (11.3%) |
| 13. | Can improper food hygiene practices result in the contamination of food with harmful bacteria that causes food poisoning? | 105 (78.2%) | 28 (21.1%) |
| 14. | Does consuming food contaminated due to improper hygiene increase the risk of gastrointestinal infections such as diarrhea and cholera? | 113 (85.0%) | 20 (15.0%) |
| 15. | Is there direct link between improper food hygiene and the occurrence of food poisoning | 93 (74.4%) | 34 (25.6%) |
| 16 | Can improper hygiene practice lead to the transmission of food-borne diseases to consumer? | 113 (85.0%) | 20 15.0%) |


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| | | | |
|---|---|---|---|
| 17 | Do consumers who consume food from food vendors with good hygiene practice have a lower risk of developing food-borne diseases? | 102 (76.7%) | 31 (23.3%) |
| 18 | Is there higher chance of food borne illness outbreaks when improper food hygiene is prevalent in a market environment? | 111 (835%) | 22 (165%) |
| 19 | Can proper food hygiene practice significantly reduce the occurrence of food borne illness? | 103 (77.5%) | 30 (22.6%) |
| 20 | Does the adherence to food safety regulations by food vendors positively impact the health of consumers? | 115 (86.5%) | 18 (18.0%) |
| 21 | Can continuous education and on proper food hygiene practices for food vendors contribute to a lower incidence of food borne illnesses? | 109 (82.0%) | 24 (18.0%) |

Table 3 above presents respondents' opinions on the impact of poor food hygiene on consumers' health. The findings reveal that a significant majority, 88.7%, of the respondents agreed that consumers who purchase and consume food from vendors with inadequate hygiene practices are at a higher risk of developing food-borne illnesses. This indicates a strong consensus among respondents on the adverse health implications associated with improper food hygiene. The results presented indicate respondents' perceptions of the relationship between food hygiene practices and consumer health outcomes. A majority (78.2%) of the respondents agreed that improper food hygiene practices can result in the contamination of food with harmful bacteria capable of causing food poisoning. Furthermore, 85.0% of respondents believed that consuming food contaminated due to poor hygiene significantly increases the risk of gastrointestinal infections such as diarrhea and cholera. Similarly, 74.4% of the participants agreed that there is a direct relationship between improper food hygiene and the occurrence of food poisoning, while 25.6% either disagreed or were uncertain about this connection. In addition, 85.0% of respondents affirmed that poor hygiene practices can lead to the transmission of food-borne diseases to consumers, whereas 15.0% disagreed or were unsure. Lastly, 76.7% of the respondents agreed that consumers who purchase food from vendors maintaining good hygiene practices are less likely to develop food-borne diseases, while 23.3% did not share this view or were uncertain.

**Table 4: The Practice of Proper Food Hygiene Can Prevent Food Borne illness**.

| | | | |
|---|---|---|---|
| 22 | Does proper food hygiene, such as hand washing reduce risk of transmitting harmful bacteria and viruses that can cause food borne illness? | 119 (89.5%) | 15 (10.5%) |
| 23 | Does proper cleaning and sanitation of food preparation surfaces and utensils prevent cross-contamination pathogen and food borne illness? | 103 (77.4%) | 30 (22.6%) |
| 24 | Does cooking food to appropriate temperature kill harmful bacteria and parasites? | 108 (81.3%) | 25 (18.8%) |
| 25 | Can proper storage of food at the correct temperature inhibit the growth of bacteria and minimize the risk of food borne diseases? | 102 (72.7%) | 31 (23.3%) |
| 26 | Do regular and effective pest control measures in food establishments help prevent the transmission of food borne diseases. | 103 (77.5%) | 30 (22.6%) |
| 27 | Can implementation of HACCP (Hazard Analysis and Critical Control Points) system help identify and control potential hazards in food production process? | 104 (78.2%) | 29 (21.8%) |


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| | | | |
|---|---|---|---|
| 28 | Does the regular monitoring and inspection of food establishments for compliance with food hygiene standards practice contribute to preventing of food borne diseases? | 107 (80.5%) | 26 (19.5%) |

Based on the results presented in Table 4 above, the findings can be interpreted as follows:
A majority of respondents, 119 (89.5%), agreed that practicing proper food hygiene—such as regular hand washing—helps reduce the transmission of harmful bacteria and viruses that cause food-borne illnesses. However, a small proportion, 14 (10.5%), disagreed with this statement. Similarly, 77.4% of respondents recognized that maintaining proper cleaning and sanitation of food preparation surfaces and utensils prevents cross-contamination of pathogens and reduces the risk of food-borne diseases, while 22.6% did not fully agree or were uncertain. When asked whether cooking food to the appropriate temperature helps eliminate harmful bacteria and parasites, 108 (81.3%) of respondents affirmed this, whereas 25 (18.8%) were either unaware or disagreed. Regarding proper food storage, 102 (76.7%) of respondents acknowledged that storing food at the correct temperature inhibits bacterial growth and minimizes the risk of food-borne illnesses, while 31 (23.3%) did not share this view. Finally, 105 (79.0%) of respondents agreed that implementing regular and effective pest control measures in food establishments helps prevent the transmission of food-borne diseases. In contrast, 28 (21.1%) were either unaware of or unconvinced about the importance of pest control in maintaining food safety.

### 4.2. Answering of Research Question

**Research Question 1: What is the perceived level of knowledge of market women regarding proper food hygiene practices among food vendors?**

The perceived level of knowledge of market women on proper food hygiene practices among food vendors in Igando, Alimosho LGA, Lagos State, is presented in Table 2. The findings indicate that a majority of respondents (**82.7%**) believe that food vendors possess adequate knowledge and skills to ensure safe food handling. Additionally, **57.9%** of respondents agreed that food vendors are aware of the potential health risks associated with poor food hygiene, such as food-borne illnesses. Furthermore, **72.9%** of respondents acknowledged that food vendors understand the importance of hygienic practices such as hand washing in food preparation. These results suggest that the overall perceived level of knowledge of food vendors regarding proper food hygiene practices is relatively high among market women in the study area.

**Research Question 2: What is the effect of improper food hygiene on consumers' health?**

Table 3 above presents information on the effects of improper food hygiene on consumers' health. The findings show that the majority of respondents (**88.7%**) agreed that consuming food from vendors with poor hygiene practices increases the likelihood of experiencing food-borne illnesses. Furthermore, **78.2%** of respondents stated that inadequate food hygiene can lead to contamination of food with harmful bacteria responsible for food poisoning. In addition, **85.0%** agreed that consuming contaminated food resulting from poor hygiene increases the risk of gastrointestinal infections such as diarrhea and cholera. Lastly, **74.4%** of respondents affirmed that there is a direct relationship between improper food hygiene and the occurrence of food poisoning. These findings suggest that poor food hygiene has significant adverse effects on consumers' health.

**Research Question 3: How does proper food hygiene practice prevent food-borne illness?**

Proper food hygiene practices play a crucial role in preventing food-borne illnesses by minimizing the risk of contamination from harmful microorganisms. As shown in Table 4, **89.5%** of respondents agreed that hand washing and other hygienic practices reduce the transmission of harmful bacteria and viruses responsible for food-borne diseases. Similarly, **77.4%** of respondents affirmed that


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proper cleaning and sanitation of food preparation surfaces and utensils help prevent cross-contamination of pathogens. Furthermore, proper cooking and appropriate food storage were also identified as effective measures for eliminating or inhibiting the growth of harmful microorganisms. Therefore, adherence to proper food hygiene practices among food vendors is essential for reducing contamination risks and preventing the spread of food-borne illnesses.

**Test of Hypothesis**

**$H_{01}$:** There is no significant relationship between the perceived level of market women's knowledge and the practice of food hygiene among food vendors in Igando Market, Alimosho LGA, Lagos State.

**Table 5: Relationship between the perceived level of market women's knowledge and the practice of food hygiene among food vendors in Igando Market**.

| | | Perceived level of knowledge of market women | Practice of proper food hygiene |
|---|---|---|---|
| Perceived level of knowledge of market women | Pearson correlation | 1 | .064 |
| | Sig. (2-tailed) | | .467 |
| | N | 133 | 133 |
| Practice of proper food hygiene | Pearson correlation | .064 | 1 |
| | Sig. (2-tailed) | 464 | |
| | N | 133 | 133 |

Table 5 above presents the correlation between the perceived level of knowledge of market women and their practice of proper food hygiene. The results indicate an extremely weak positive correlation (r = 0.064) that is not statistically significant (p = 0.467). This suggests that there is no significant relationship between market women's perceived knowledge and their actual food hygiene practices. In other words, the level of knowledge that market women believe they possess regarding food hygiene does not appear to strongly influence how they apply proper hygiene practices in reality.

**$H_{02}$:** There is no significant relationship between improper food hygiene practices and the prevention of food-borne illnesses through proper food hygiene.

**Table 6: Relationship between improper food hygiene practices and the prevention of food-borne illnesses through proper food hygiene**.

| | Effect of improper food hygiene on consumers health | Practice of proper food hygiene |
|---|---|---|


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| | | | |
|---|---|---|---|
| Effect of improper food hygiene on consumers health | Pearson correlation | 1 | .725** |
| | Sig. (2-tailed) | | .000 |
| | N | 133 | 133 |
| Practice of proper food hygiene | Pearson correlation | .725** | 1 |
| | Sig. (2-tailed) | .000 | |
| | N | 133 | 133 |

Table 6 above presents the correlation between the effect of improper food hygiene on consumers' health and the practice of proper food hygiene. The correlation coefficient (r = 0.725) indicates a strong positive relationship, which is statistically significant (p = 0.000). This finding suggests that as awareness or concern about the adverse health effects of improper food hygiene increases, there is a corresponding improvement in the practice of proper food hygiene. In essence, greater understanding of the health risks associated with poor hygiene is linked to better adherence to safe food handling practices.

## Chapter Five

## Discussion of the Result, Summary and Conclusion

### 5.0 Introduction

This chapter presents a detailed discussion of the research findings, alongside a summary, conclusion, and recommendations derived from the study. The investigation aimed to scientifically assess the perceptions of market women regarding food hygiene practices among food vendors in Igando, Lagos State.

### 5.1 Discussion of Findings

This study explored the perceptions of market women toward food hygiene practices among food vendors in Igando, Lagos State. The research specifically examined (1) the perceived level of knowledge of market women regarding proper food hygiene practices among food vendors, (2) the effects of poor food hygiene practices on consumer health, and (3) the preventive potential of proper food hygiene in mitigating food-borne illnesses.

**Perceived Level of Knowledge of Market Women**

Findings presented in Table 2 revealed that the perceived level of market women's knowledge had no statistically significant influence on the hygiene practices of food vendors in Igando. This outcome differs from the findings of Heid and Ameh (2019), who reported that market women exhibited limited knowledge of food hygiene practices among food vendors. Conversely, the present study found that respondents demonstrated a high level of awareness and understanding of appropriate food handling and hygiene practices, suggesting an improvement in food safety awareness in the study area.

**Effect of Improper Food Hygiene on Consumer Health**

The results in Table 3 indicated that respondents were well informed about the adverse health consequences associated with inadequate food hygiene practices. This finding aligns with the work of Smith et al. (2010), who asserted that poor food hygiene practices are a significant global contributor to food-borne illnesses. Smith identified factors such as improper food storage and inadequate temperature regulation as common hygiene failures. Likewise, the Centers for Disease Control and Prevention (CDC, 2021) reported that approximately 48 million Americans suffer from food-borne diseases annually, emphasizing the global burden of food safety lapses.

**Proper Food Hygiene Practices and the Prevention of Food-borne Illnesses**


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Data presented in Table 4 showed that adherence to proper food hygiene practices substantially reduces the incidence of food-borne illnesses. This observation corroborates the findings of Todd et al. (2021), who noted that compliance with food safety regulations, standard hygiene protocols, and evidence-based handling practices can significantly lower the prevalence of food-borne diseases.

**5.2 Implications of Findings for the Nursing Profession**

The outcomes of this research hold significant implications for the nursing profession. The results indicate that market women possess substantial awareness of proper food hygiene and are cognizant of the health risks associated with poor hygiene. Consequently, nurses are strategically positioned to collaborate with market women to promote safe food handling practices through community-based education and advocacy. Furthermore, nurses can utilize these findings to design and implement health education programs that emphasize preventive measures against food-borne diseases. By integrating food hygiene education into community health outreach programs, nurses can enhance public health outcomes. The study also underscores the importance of continuous professional development for nurses, ensuring that they remain knowledgeable about food safety standards to effectively deliver evidence-based health promotion and disease prevention interventions.

**5.3 Limitations of the Study**

This study was not without limitations:

- The research was conducted in a single location (Igando, Lagos State), limiting the generalizability of the findings to other regions.
- The cross-sectional design precludes causal inference between variables.
- Data collection was based on self-reported responses, which may have been influenced by social desirability bias and may not accurately reflect actual practices.
- The study did not examine socio-cultural factors that might shape food hygiene behaviors among food vendors.

**5.4 Summary**

This study examined the perceptions, knowledge, and attitudes of market women regarding food hygiene practices among food vendors in Igando, Lagos State.

**Chapter One** introduced the background of the study, emphasizing the critical importance of food hygiene in ensuring food safety and quality. It highlighted the challenges associated with unhygienic food handling, particularly in developing contexts where access to clean water and sanitation is inadequate.

**Chapter Two** reviewed existing literature on the perceptions of market women toward food hygiene, revealing that consumer perceptions influence purchasing behavior and trust. Factors such as vendor cleanliness, environmental sanitation, and food presentation were identified as determinants of consumer preference.

The literature also pointed to the role of cultural beliefs in shaping hygiene perceptions, emphasizing the need for targeted public health education.

**Chapter Three** detailed the methodological framework, which employed a descriptive design and a structured questionnaire to collect data from 133 market women in Igando Market.

Key findings of the study include:

1. A strong positive relationship exists between awareness of the effects of poor food hygiene and adherence to hygienic practices.
2. The correlation between perceived knowledge and actual practice of food hygiene among market women was weak but positive.
3. A strong consensus emerged that consuming food from unhygienic vendors increases the risk of food-borne illnesses.
4. Most respondents acknowledged that poor hygiene could result in contamination and food poisoning.

**5.5 Conclusion**

The study concludes that improper food hygiene practices significantly elevate the risk of food-borne illnesses and gastrointestinal infections among consumers. The findings affirm that maintaining good hygiene—


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including frequent handwashing, thorough cooking, and effective pest control—plays a pivotal role in mitigating these risks. However, the study also demonstrated that knowledge alone does not necessarily translate into consistent hygienic behavior, suggesting that behavioral reinforcement and environmental support are necessary to sustain safe practices.

**5.6 Recommendations**

Based on the findings, the following recommendations are proposed to enhance food hygiene practices among food vendors in Igando Market:

1. **Education and Awareness Campaigns:** Continuous public health campaigns should be conducted to sensitize market women and food vendors on the significance of safe food handling and hygiene.
2. **Training and Capacity Building:** Periodic training workshops should be organized to strengthen food vendors' knowledge and skills in hygiene, sanitation, and environmental health.
3. **Monitoring and Enforcement:** Regulatory agencies should conduct regular hygiene inspections and enforce compliance with food safety standards through appropriate sanctions for non-compliance.
4. **Infrastructure Improvement:** Provision of essential facilities such as potable water, waste management systems, and functional handwashing stations within markets will facilitate adherence to hygienic practices.
5. **Stakeholder Collaboration:** Effective partnerships among public health authorities, market associations, and local government agencies should be established to ensure a coordinated approach to food safety promotion.

These interventions are intended to enhance food safety, protect consumers, and promote sustainable public health within the Igando community.

**5.7 Suggestions for Further Research**

To expand upon the findings of this study, future research should consider the following areas:

- **Comparative Studies:** Conduct comparative analyses of food hygiene perceptions and practices across different regions or countries to explore cultural and regulatory variations.
- **Effective Communication Strategies:** Investigate communication approaches that can effectively convey food hygiene messages to vendors and consumers.
- **Longitudinal Studies:** Implement longitudinal research to monitor behavioral changes in food hygiene practices over time and to identify determinants of sustained improvement.

**References**

Adebayo, A. A., Ojo, O. E., & Adejumo, A. O. (2018). Assessment of food hygiene practices among food vendors in Oyo Town, Nigeria. Journal of Applied Sciences and Environmental Management, 22(5), 754–759.

Adepoju, A. O., Akintunde, O. A., & Ogunsola, K. (2018). Consumers' perception of food hygiene practices among roadside food vendors in Lagos State, Nigeria. International Journal of Food Safety, Nutrition and Public Health, 11(2), 102–113.

Afolaranmi, T. O., Hassan, Z. I., Bello, D. A., & Misari, Z. (2015). Knowledge and practice of food safety and hygiene among food vendors in primary schools in Jos, Plateau State, Nigeria. Journal of Medical Research and Health Sciences, 4(1), 1–6.

Akabanda, F., Hlortsi, E. H., & Owusu-Kwarteng, J. (2017). Food safety knowledge, attitudes, and practices of institutional food-handlers in Ghana. BMC Public Health, 17(1), 40.

Cheng, S. H., & Wu, D. C. (2019). Consumer perceptions of food hygiene and safety practices: A case study of night markets in Taiwan. International Journal of Environmental Research and Public Health, 16(5), 781.

Chukuezi, C. O. (2010). Food safety and hygienic practices of street food vendors in Owerri, Nigeria. Studies in Sociology of Science, 1(1), 50–57.


DOI: https://doi.org/10.5281/zenodo.17563660

Crystal, L. P., Kulkarni, B., Bukachi, S. A., Ngutu, M., & Blake, C. E. (n.d.). How perspectives on food safety of vendors and consumers translate into food-choice behaviors in six African and Asian countries.

Department of Health, Victorian Government, Australia. (2021). Food safety guidelines.

Eneji, C. V., Williams, J. J., & Bassey, E. J. (2017). Health and food hygiene practices of street food vendors in Calabar, Nigeria. IOSR Journal of Environmental Science, Toxicology and Food Technology, 11(5), 40–47. https://doi.org/10.9790/2402-1105044047

Haji-Sheikhi, F., Alavi, N. M., & Sheikhzadeh, M. (2018). Evaluation of hygiene and safety practices among fast food vendors in Bandar Abbas, Iran. Journal of Food Quality and Hazards Control, 5(2), 55–61.

Heid, A. A., & Ameh, S. O. (2019). Consumer perception and behavior towards food safety in street food vending in Nigeria. British Food Journal, 121(3), 701–715. https://doi.org/10.1108/BFJ-01-2018-0036

Henseler, J., Ringle, C. M., & Sarstedt, M. (2019). Experience-oriented and product-oriented satisfaction: Identifying perceived product and service quality for different stages of the customer journey. Journal of Business Research, 94, 396–409.

Jabbar, S., Zuberi, R. W., & Mehdi, S. M. (2019). Hygienic practices and health-related conditions of street food vendors in Karachi, Pakistan. Journal of Epidemiology and Global Health, 9(1), 38–42.

Kamau, C. N., Kariuki, S. M., & Kimotho, J. G. (2020). Knowledge, attitude, and practices of street food vendors on food safety and hygiene in Nakuru Town, Kenya. Journal of Food Protection, 83(1), 121–127.

Kannan, G. (2018). Sustainable consumption and production in the food industry. International Journal of Production Economics, 195, 419–431.

Kibret, M., & Abera, B. (n.d.). The sanitary conditions of food service establishments and food safety practices in Ethiopia. [Journal name not specified.]

Lin, C. F., & Roh, S. (2019). Consumer perceptions of food safety and preferences for food safety labels: A case study of ready-to-eat meals in Taiwan. Food Control, 86, 237–244.

Mensah, P., & Julien, R. (2019). Street foods in Africa: Safety and socio-economic importance. Food Control, 98, 186–192. https://doi.org/10.1016/j.foodcont.2018.11.045

Nkongho, M., & Nicholas, G. (2022). Assessing public health perspectives on food hygiene and safety in Cameroon. Archives of Public Health, 80(1), 1–12.

Nasaruddin, F. H., Noor, N. M., & Ahmad, A. (2018). Consumer perception on food safety practices among street food vendors in Malaysia. International Journal of Business and Society, 19(3), 611–628.

Okojie, O. H., & Isah, E. C. (2014). Sanitary conditions of food vending sites and food handling practices of street food vendors in Benin City, Nigeria: Implications for food hygiene and safety. Journal of Environmental and Public Health, 2014, 1–6. https://doi.org/10.1155/2014/701316

Oluwafemi, F., & Simisaye, M. (2012). Extent of microbial contamination of sausages sold in Lagos Metropolis, Nigeria. African Journal of Food, Agriculture, Nutrition and Development, 12(5), 6533–6546.

Omemu, A. M., & Aderoju, S. T. (2008). Food safety knowledge and practices of street food vendors in the city of Abeokuta, Nigeria. Food Control, 19(4), 396–402. https://doi.org/10.1016/j.foodcont.2007.04.021

Penelope, T. C. (2019). Assessing the knowledge, attitudes, and practices of street food vendors in the City of Johannesburg regarding food hygiene and safety. [Master's thesis, University of Johannesburg].

Siemieniako, D., Pientak, Z., & Verbeke, W. (2020). Consumer attitude towards food safety, street food consumption, and food safety incidents: A case study in Bangkok, Thailand. Food Control, 108, 10685543.

World Health Organization. (2020). Food safety: Key facts. https://www.who.int/news-room/fact-sheets/detail/food-safety

World Health Organization. (2021). Foodborne diseases: Global burden. https://www.who.int/publications/i/item/9789240018888