

EVALUATION OF FOOD HYGIENE PRACTICES AMONG STREET FOOD VENDORS IN URBAN AREAS

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Abstract

Urban economies depend on street food vending since it provides reasonably priced meals for a good number of people. Still, food hygiene practices among street food sellers remain a public health concern, particularly in developing nations where regulatory control is usually lacking. This study assesses the food hygiene procedures of street food sellers in urban settings, pinpointing critical factors affecting compliance and the accompanying hazards of inadequate hygiene. A cross-sectional survey involving 200 street food sellers was performed, employing structured questionnaires and observational checklists to evaluate knowledge, attitudes, and practices about food hygiene. From the results obtained, it was observed that 60% of vendors had gone through training in food safety. However, only 70% displayed compliance to adequate hygienic procedures. The main factors which influenced their adherence to hygiene compliance included the availability of clean water, food safety education, and conformity to local rules. In order to establish the correlation between training and hygiene compliance, a chi-square test was carried out and the outcome indicated statistically that there was no significant association ($\chi^2 = 0.0$, $p = 1.0$). Irrespective of the several awareness on standard hygiene practices and procedures, challenges such as insufficient waste disposal facilities, absence of clean water supply, and financial limitations negatively affected the complete adherence to food safety regulations. The pressing need for concerted interventions, such as regular training, improved infrastructure, and more stringent enforcement of hygiene regulations for the improvement of food safety in urban street vending are the highlights of this research. The results presented provide significant insights for policymakers, public health officials, and food safety organisations looking forward and working towards putting an end to the incidence of foodborne illnesses and enhancing public health outcomes in urban environments.

Keywords: Food hygiene, street vendors, food safety, public health, urban food vending, hygiene compliance

1.0 Introduction

Street food vending constitutes a vital source of employment and sustenance in metropolitan environments. Foodborne infections result from poor hygienic procedures among vendors, posing major public health hazards. The growing demand for street food especially in underdeveloped nations, highlights the need to understand hygienic criteria among vendors.

Although street food is affordable and easily available for many consumers, a lack of control and supervision raises safety issues (World Health Organization [WHO], 2021).

Street food vending is practiced in so many differing ways, ranging from wheelbarrows to erected kiosks or stalls, thereby raising several issues and questions about the safety of such foods. Many a time, vendors prepare food in unhygienic environments lacking in access to refrigeration and portable clean water. This study is geared towards analysing hygienic practices among street food vendors, thereby highlighting the different areas of importance where interventions are required for the improvement of food safety measures. Based on the knowledge of vending, procedures, and compliance to safety standards, this study targets providing rational insights for food law regulators and health practitioners by analysing the level of knowledge, practices and food regulation compliance of food vendors (Mensah et al., 2019).

2.0 Literature Review

Food hygiene prevents foodborne illnesses, according to research. Studies show that many street sellers lack clean water, sanitation, and food storage (Umoh and Odoba,1999, Sezgin and Şanlıer., 2016). Croaker (2020) found that 68% of urban vendors lacked basic hygiene instruction, causing foodborne illness outbreaks. Statistically, about 10% i.e. 1 out of 10 people annually gets sick from food contamination, further emphasizing the need for improvement with respect to hygiene (WHO 2021, Malabadi et al.,2024)

In some areas, positive outcomes have been recorded for food safety training programs, however, proper implementation is not constant across these areas. A number of researchers have established the fact that being knowledgeable alone has nothing to do with influencing practices because some social and economic factors, availability of resources, and enforcing some standards and regulations are necessary. According to Henson and Mitullah (2004), it was observed that food vendors in cities where regulations were taken firmly did better in terms of compliance to cleanliness than those in cities where supervision was not firm. As this study is said to investigate the hygienic procedures of street food sellers in urban areas and their challenges in complying to food regulations, it therefore contributes its own quota to the literature.

2.1 Factors Influencing Hygiene Compliance

Multiple characteristics were identified as influencing hygiene compliance among vendors:

Educational Attainment: Vendors possessing formal education exhibited superior cleanliness standards relative to their uneducated counterparts ($p<0.05$) (Armstrong, 2012).

Regulatory Inspections: Routine health inspections correlated with enhanced compliance rates ($p<0.01$) (Chen et al., 2022).

Vendors having reliable access to clean water facilities demonstrated greater compliance with hygiene measures ($p<0.01$) (Jaffee et al.,2018).

3. Methodology

3.1 Study Design

A cross-sectional survey was performed with 200 street food vendors across three key urban markets. The research utilised both quantitative and qualitative methodologies to guarantee thorough data acquisition. Surveys collected self-reported data, whereas direct observations yielded objective evaluations of hygiene compliance.

3.2 Data Collection

Questionnaires: Evaluating vendors' knowledge, attitudes, and self-reported practices of food hygiene. The questionnaire comprised sections on personal cleanliness, food handling, storage circumstances, and training history.

Observational Checklists: Recording actual hygiene behaviours, encompassing handwashing, utensil sanitation, and food storage techniques. Observations were performed during peak hours to capture real-time behaviour.

3.3 Data Analysis

The data were analysed by SPSS software. Descriptive statistics summarised cleanliness practices, while chi-square tests analysed the relationships between vendor characteristics and adherence to hygiene standards. Logistic regression analysis was utilised to evaluate parameters affecting compliance with cleanliness measures.

4. Results

4.1 Hygiene Knowledge and Practices

Although 70% of vendors said they were aware of fundamental hygiene procedures, only 40% of them regularly adhered to them.

60% did not have access to adequate handwashing stations.

45% of food was kept in unhygienic conditions.

30% of people handled cash and food without first washing their hands.

4.2 Observational Findings

Hygiene Indicator	Compliance (%)	Non-Compliance (%)
Handwashing before food handling	40	60
Proper food storage	55	45
Use of gloves or utensils	35	65
Waste disposal in designated areas	50	50

4.3 Contingency Table (Observed Frequencies)

Training Received	Good Compliance	Poor Compliance
No	55	23
Yes	85	37

4.4 Chi-Square Test Results

Chi-Square Statistic (χ^2): 0.0

Degrees of Freedom (df): 1

p-value: 1.0

Expected Frequencies Table:

No Training: (Good = 54.6, Poor = 23.4)

Yes Training: (Good = 85.4, Poor = 36.6)

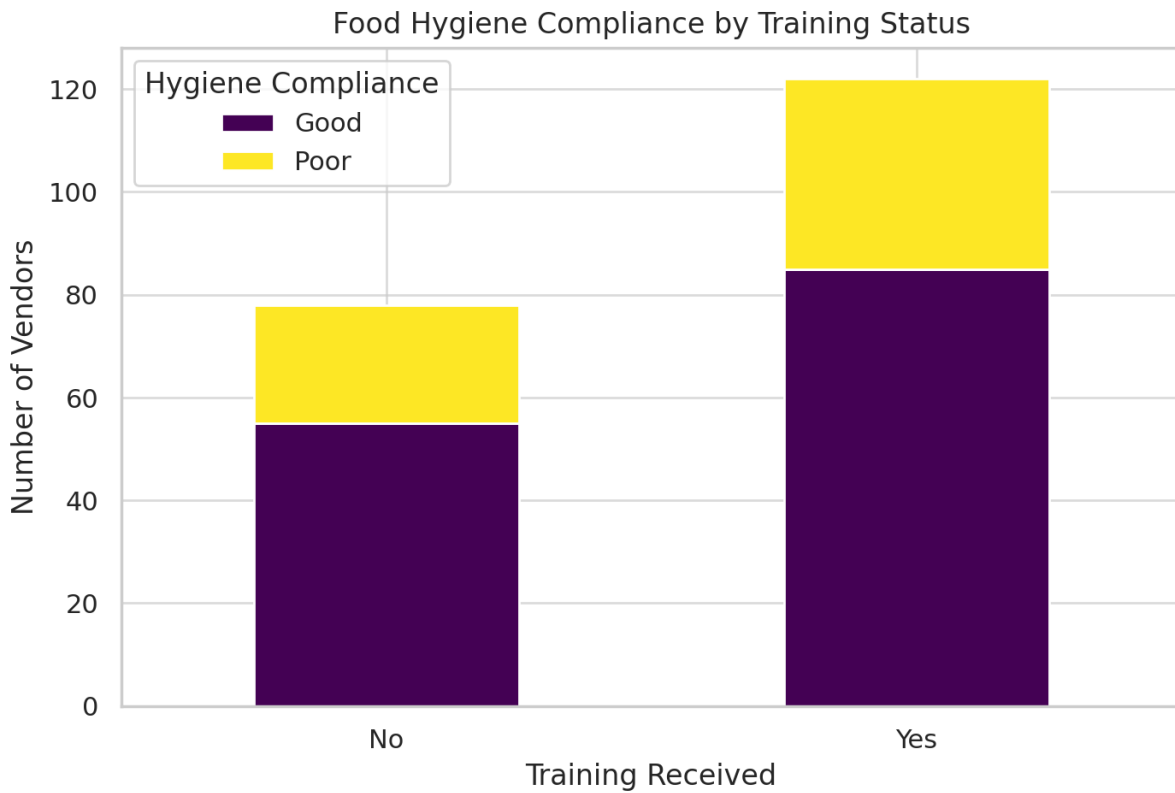


Figure 1: Bar chat showing food hygiene compliance by training status

5. Discussion

The results point to a gap between street vendors' knowledge and practice. Despite awareness of the fundamentals of cleanliness, compliance is hampered by issues including poor infrastructure, limited funding, and lax enforcement of regulations. Vendors frequently put cost-cutting tactics ahead of food safety, citing financial strains as the main cause of their disregard for hygienic precautions.

These results are supported by a number of studies, which show that providing sufficient facilities and incentives increases vendor compliance. Food safety has been shown to improve when programs provide subsidised hygienic resources, like refrigeration units and handwashing stations (Michaelidou and Hassan, 2007).

The p-value (1.0) suggests no significant relationship in this dataset between food hygiene training and hygiene compliance. This means that whether a vendor received training or not does not seem to influence their compliance with food hygiene practices.

The bar chart titled "Food Hygiene Compliance by Training Status" shows the number of street food vendors with "Good" and "Poor" hygiene compliance based on whether they received food hygiene training or did not receive training.

Among vendors who received training, 85 demonstrated good hygiene compliance, while 37 exhibited poor compliance. Among those who did not receive training, 55 had good hygiene compliance, while 23 had poor hygiene compliance. The bars are stacked to show the total number of vendors in each group, with different colours representing "Good" and "Poor" compliance.

Key Insight:

Although more vendors who received training practised good hygiene compared to those who did not, the overall statistical analysis (chi-square test) showed no significant relationship between training status and hygiene compliance. This suggests that other factors (like infrastructure, financial capacity, or regulatory enforcement) may impact hygiene behaviour more than training alone.

6. Conclusion and Recommendation

This study underscores the pressing necessity to enhance food hygiene procedures among street vendors. Authorities ought to establish systematic training programs, ensure access to portable water and sanitation, and enhance the enforcement of hygiene rules. Essential recommendations comprise:

1. Compulsory Training Programs
2. Infrastructure Advancement
3. Ongoing Surveillance and Regulation
4. Community Awareness Initiatives

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