



A Study On The Influence Of Socioeconomic Factors On Food Safety Practices Among Street Vendors In Andheri (East)

Mr. Aditya Kedarnath Shukla

Assistant Professor, Shri G.P.M. Degree College of Science and Commerce, Andheri-East

Abstract

Street food vendors are of vital importance in the urban economies, especially for high-density places like Andheri (East), Mumbai. But street food preparations often depend on socioeconomic conditions that have the potential to affect food safety. This paper analyses the relationship between infrastructure support like pure water and sanitation with food safety practice and socioeconomic pressures at street food vendors. Using a mixed-methods approach with 112 vendor responses, findings suggest a moderate positive correlation between infrastructure and hygiene practices, stressing its importance in ensuring food safety. In contrast, financial constraints were not found to have a statistically direct impact on hygiene maintenance. These results indicate that targeted interventions like improved infrastructure and sector-specific training programs can contribute to better public health outcomes through overcoming pertinent barriers to street food production.

Keywords: Street food safety, socioeconomic factors, urban public health, food hygiene practices, street vendors, infrastructure impact, foodborne diseases, informal food sector.

Introduction

Informal food sectors serve an important role in urban economies, offering simple and accessible meal options to millions of people, mostly in highly populated cities like Mumbai. Among such urban hubs, Andheri (East) is distinguished as one of the bustling suburbs of the city, with commercial spaces, transit hubs, and diverse street-food culture. This diversity of street food vendors allows clients with divergent interests to sample from

the recent offerings and the traditional, ranging from the office workers and commuters to the residents and visitors in the area. However, the popularity of street food raises concerns over food safety because socio-economic challenges spur and directly influence vendors' hygiene and food safety standards.

Socioeconomic factors include income, education level, access to sanitation facilities, and social capital; these factors have greatly dictated food safety practices among street vendors. The situations of Andheri (East) are typified by congested places to sell, where mostly there is no easy access to basic facilities like clean water, waste disposal, and storage that all the street vendors require to ensure food safety. Vendors belonging to the lower-income groups are further limited by financial constraints, which leads to cost-cutting measures required to compromise on hygiene--unclean water or reusing disposable utensils, for example. Education also plays a part because of the vendors, who may lack knowledge related to food safety protocols do not recognize even the most basic hygiene practices, such as handwashing, separation of raw and cooked food, or temperature control.

Because street vendors in Andheri (East) contribute to the local economy by providing themselves and their community with a source of revenue as well as a basic meal at relatively low prices, they do so outside proper regulatory frameworks. Therefore, there is an opportunity for food safety standards not to be met in the areas or regions controlled by vendors, since they may lack appropriate food safety training and resources necessary to operate based on best practices. Despite the efforts of the government and initiatives from local health departments, socioeconomic factors often construe vendors from implementing food safety practices that are recommended. Thus, there is a need to understand how these factors impact on food safety as a means of identifying targeted interventions for improving the safety of street food in the urban context of Andheri (East).

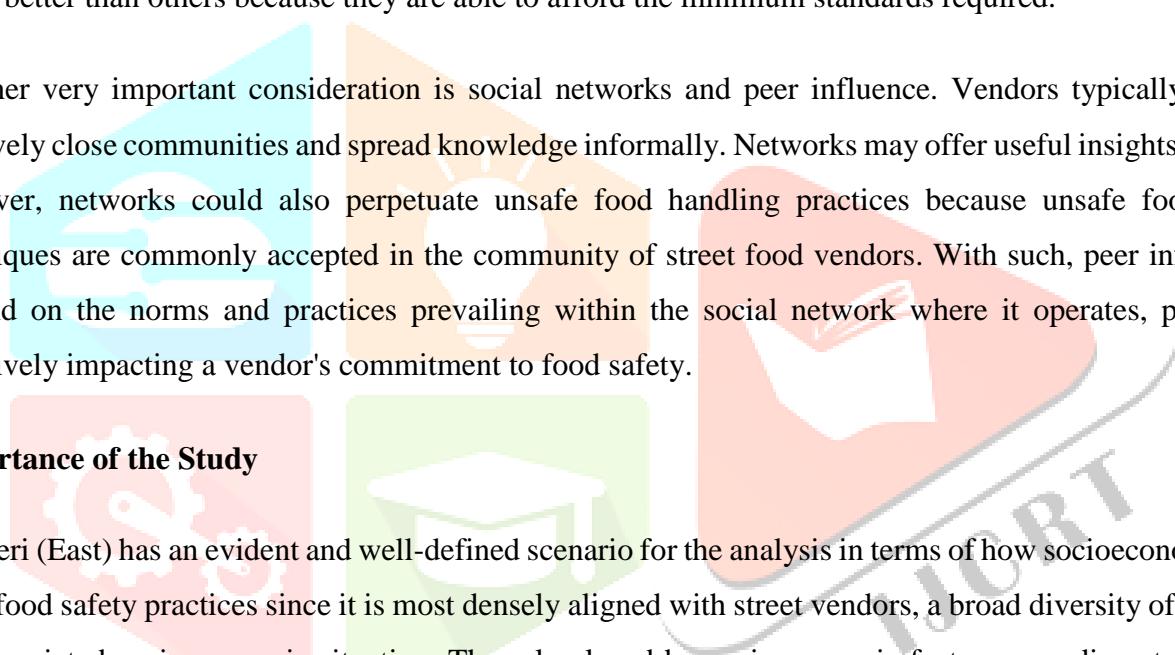
The Role of Socioeconomic Factors in Food Safety Practices

Socioeconomic factors: These encompass earning level, education, resource access, and social connections. These combine to affect attitudes, behavior, and practice of street-food vendors toward food safety. For example, their ability to afford provisions such as clean water, sanitised gloves, or proper facilities for food storage greatly depends on income. In the competitive street-food market of Andheri (East), vendors are continually balancing their costs against profitability. The poorer one may not be able to afford very much in way of safe food handling, and the relatively affluent may have the opportunity to invest in hygiene, storage, and transportation, which should enhance safety across their range.

Education is another major influencer of the food safety practice. The lesser educated, for example, the vendor might be, and the less aware they are of potential hazards of specific food handling practices like cross-contamination or food storage. Most street vendors are engaging in informal learning mechanisms through peer networks or first-hand experience, which means they never acquire continuity or comprehensiveness in their knowledge of food safety. Once again, vendors with lower education may not have tapped into proper

educational or training facilities, which could deny them the essential knowledge to acquire safe handling habits. Others are street vendors who received more formal education or were exposed to training programs, thus having a higher chance of possessing food-safety-related knowledge, hence imposing preventive practices that reduce foodborne-illness risk.

Resource access to clean water, proper waste disposal, and sanitary washroom facilities has a direct impact on the food safety practices of street vendors in Andheri (East). In areas with less infrastructural development, vendors may find it relatively difficult to remain hygienic because they depend more on makeshift arrangements to wash and dispose of waste. Without the availability of these resources, even the best-meaning vendor finds it rather challenging to follow food safety standards. More, the traders whose operation areas are near pure water sources or have a chance to install basic toilet facilities will be more likely to practice hygiene much better than others because they are able to afford the minimum standards required.



Another very important consideration is social networks and peer influence. Vendors typically operate in relatively close communities and spread knowledge informally. Networks may offer useful insights and advice; however, networks could also perpetuate unsafe food handling practices because unsafe food handling techniques are commonly accepted in the community of street food vendors. With such, peer influence will depend on the norms and practices prevailing within the social network where it operates, positively or negatively impacting a vendor's commitment to food safety.

Importance of the Study

Andheri (East) has an evident and well-defined scenario for the analysis in terms of how socioeconomic factors meet food safety practices since it is most densely aligned with street vendors, a broad diversity of clients, and the associated socioeconomic situation. The role played by socioeconomic factors regarding street vendors' food safety practices here can be identified, which is a step forward in assessing the challenges and opportunities for improving public health outcomes in the urban context. Street hawkers tend to serve all kinds of customers, and even the smallest food handling negligence creates major public health concerns among the consumers within the local community and the wider society.

Such research may be helpful to identify significant socioeconomic barriers to applying safe food handling practices among vendors. This information could go a long way in the provision of targeted interventions, low-cost training programs, subsidies for essential supplies or infrastructure improvements that may empower the vendors to enhance food safety. The study findings may therefore be applied in policy recommendations that advocate for a balanced approach to food safety regulation of informal sectors that addresses the needs and limitations of street vendors without compromising public health.

Review of Literature

The following are the few researches that do exist on measuring the efficacy of Street food:

Das et al. (2020) conducted a study on "Factors Influencing Food Safety Knowledge and Hygiene Practices among Street Vendors in India." The study researched the socioeconomic influencers that affect food safety awareness and practices among vendors in diverse cities in India. It was realized that income levels, educational status, and means of access to varied resource outlets were some of the factors shaping their food safety practices. Interventions targeting food vendors who earn more money and also have higher educational backgrounds are likely to adopt safe food handling practices, whereas vendors who have relatively lower incomes and often lack education tend to compromise on hygiene. Such interventions may remove these socioeconomic barriers to achieve better food safety in the street-food sector of India, says Das et al.

Abdul-Mutalib et al. (2012) focused on "Food Safety Knowledge, Attitude, and Hygiene Practices among Street Vendors in Malaysia." It examined the awareness of street vendors with food handling practices. The authors determined that most of the vendors had no formal training on food safety. Therefore, there were variable patterns on practice from the vendors, including the high microbial contamination of the food samples. The authors argued that targeted food safety training and continued monitoring should be initiated to increase safe practices and reduce the incidence of foodborne diseases in street foods.

Rane's (2011) research, "Street Vended Food in Developing Countries: Hazard Analyses and Implications for Public Health," Reviewed the problems of street-food vendors in developing countries, which face various food safety challenges. The findings indicated that major obstacles for street vendors in their food safety practices were socioeconomic constraints, bad infrastructure, and inadequate access to clean water and sanitation. The author emphasized that affordable, contextual interventions like low-cost hygiene kits and basic training are required to improve food safety practices among street vendors and secure public health.

Lucca and Torres (2006) conducted study on "Street Food Quality in Latin America: The Case of Street Vendors in São Paulo, Brazil," Lucca and Torres (2006) assessed the street-vended foods within São Paulo, Brazil, on food safety practices and microbial quality. There were indicated results that most of the vendors lack proper hygiene facilities and knowledge of food safety standards. This study reveals that a direct relation can be established between food safety practices and socioeconomic conditions. Poorer vendors face more difficulties in managing hygiene. The authors suggested a public health program to continue and enhance vendor education with improved accessibility of sanitation for safe consumable food.

Muinde and Kuria (2005) investigated "Hygienic and Sanitary Practices of Vendors in Nairobi, Kenya" and their research evaluated knowledge and practices regarding food safety among street-food vendors. Overall, the vendors surveyed in this research were not aware of hygiene and sanitation standards, largely due to their

low levels of education and lack of formal training. The knowledge gap translated to unsanitary practices, such as food not stored properly or cross-contaminated, which heighten the danger of foodborne diseases. The authors suggested that policymakers implement hygiene training specifically targeted to street vendors and sanitation facilities that can be reasonably afforded by street vendors.

Mensah et al. (2002) conducted study on "Street Food Safety in Urban Ghana," Mensah et al. (2002) The researchers looked into the microbiological quality of street foods in Accra, Ghana, as well as the high public health risks posed by poor hygiene. Studies showed that street food samples had been contaminated mainly because of poor handling practices, lack of sanitation facilities, and relatively little regulatory control. They believed that food safety training programs, in addition to improved access to hygiene facilities, might minimize the current street food-related risks for diseases caused by the consumption of street food in urban areas.

Statement of the Problem

Especially in high-density urban settings such as Andheri (East) in Mumbai, the safety of street-vended food has become a serious concern in relation to public health. Street vendors are often disadvantaged in terms of their socio-economic conditions-low incomes, little or no access to toilets, and minimal or no training in food safety. Such factors hinder the high standards one should always strive for in food hygiene, and this can give rise to foodborne diseases among the consumers and even the community at large. The problem becomes more unbearable when not even supervised by the regulatory bodies, since the shop owners do not receive any form of assistance for them to initiate proper safety measures. Though street food happens to be a huge backbone of the local economy and provides cheap meals, unsafe practice causes a grave health hazard. The present study aims to identify specific factors of socioeconomic and barriers that prevent street food vendors in Andheri (East) from practicing hygiene practices. This is important in order for barriers to be overcome so that street food sectors can be sustained, ensuring improved public health.

Research Gap

Very few studies have addressed ways in which specific socioeconomic factors affect vendors directly in terms of income, education, or access to resources as it specifically applies to food safety practices among vendors in crowded urban settings such as Andheri (East), Mumbai. Mainly, these studies fail to consider those factors, and thus not much is known about these barriers related to a vendor's adoption of safe food handling. The gap limits the ability to develop effective, targeted interventions needed to enhance food safety within the informal food sector. This paper fills the knowledge gap by reviewing socio-economic factors shaping food safety practices of street vendors.

Objectives of the Study

1. To assess whether the infrastructure availability of sanitation and clean water determines food safety practices of vendors.
2. To Identify Barriers and Socioeconomic Constraints to these Vendors in Practicing Proper Food Handling Practices.

Hypotheses of the Study

1. H_{01} : The availability of infrastructure, such as sanitation and clean water, does not significantly determine the food safety practices of street vendors.

H_{11} : The availability of infrastructure, such as sanitation and clean water, significantly determines the food safety practices of street vendors.

2. H_{02} : Socioeconomic constraints and barriers have no significant effect on the ability of vendors to practice proper food handling.

H_{12} : Socioeconomic constraints and barriers have a significant effect on the ability of vendors to practice proper food handling.

Limitations of the Study

1. The results might only apply to Andheri (East) and not be entirely transferable to other areas or demographics.
2. The study might not have included every factor that could affect the safety of Street food.
3. The findings of the study are based on the expressed opinions of the respondents, which may have their own limitations.

Research Methodology

This study is based on a descriptive research design, which gathers data using questionnaires. Responses to the structured questionnaire are being gathered. A total of 112 replies from various street vendors have been gathered. Qualitative methods such as interviews, focus groups are utilized to delve into the intricacies of street vendor's decision-making processes and their behaviour towards food safety practices. On the other hand, quantitative surveys and data analysis techniques are employed to quantify and analyze street vendor's preferences. The samples were chosen by a Convenience sampling. 112 street vendors will make up the study's sample. A total of 112 questionnaires were originally circulated in order to get the necessary sample size. 112

completely completed surveys were chosen for the purpose of the study. The data have been analyzed using the Correlation method.

Data Analysis

The structured questionnaire is prepared and responses collected. Total 112 responses have been collected from the different street vendors regarding various aspects of food safety practices.

Hypothesis of the Study

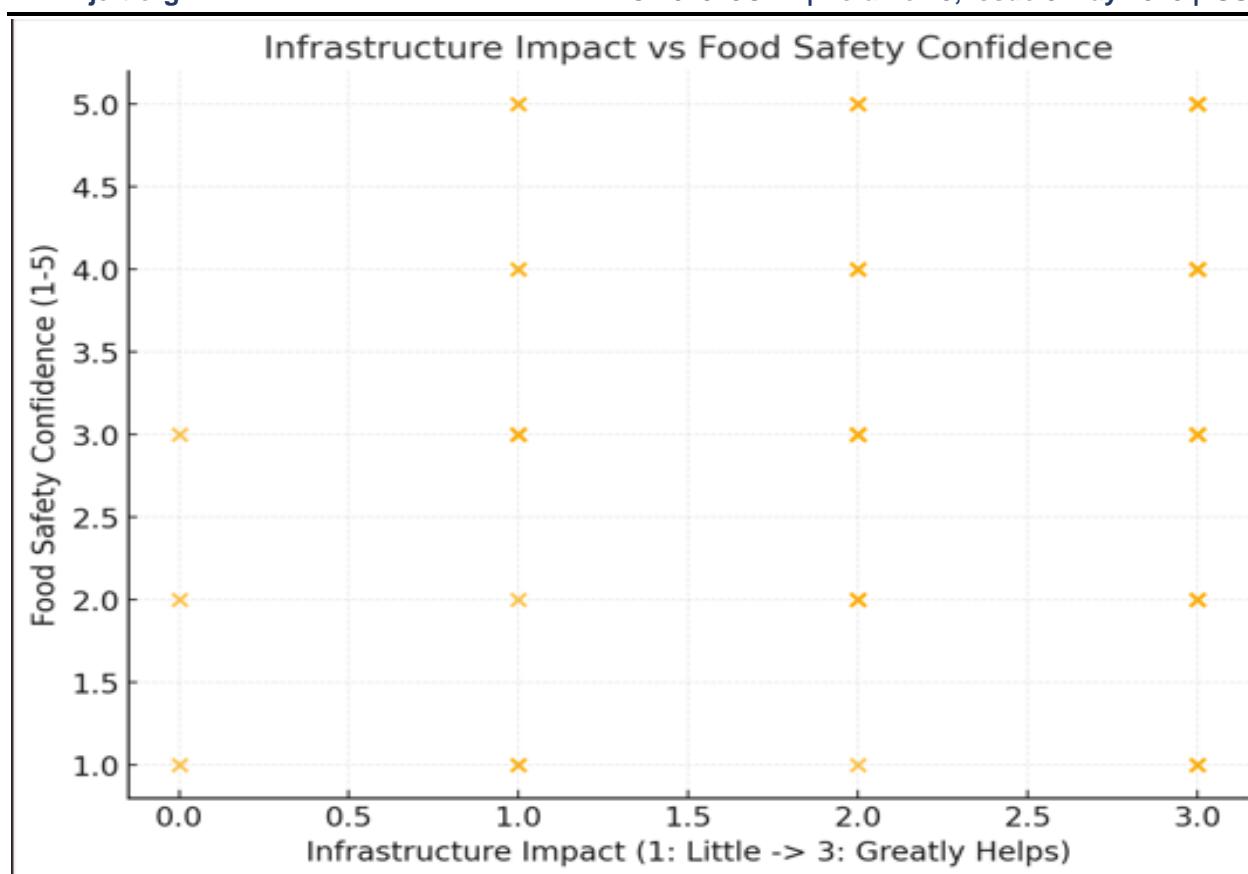
1. H_01 : The availability of infrastructure, such as sanitation and clean water, does not significantly determine the food safety practices of street vendors.

H_{11} : The availability of infrastructure, such as sanitation and clean water, significantly determines the food safety practices of street vendors.

Infrastructure and Food Safety Practices

- **Correlation:** $r=0.33$
- **Interpretation:** There is a moderate positive correlation between the availability of infrastructure (clean water and sanitation) and confidence in maintaining food safety practices. This supports the alternative hypothesis (H_1) that infrastructure availability significantly influences food safety practices.

How does the availability of infrastructure like clean water and sanitation impact your ability to maintain hygiene standards?	Count	Percentage
Greatly helps	66	60.00
Has little impact	13	11.82
Has no impact	3	2.73
Helps somewhat	28	25.45
Grand Total	110	100.00



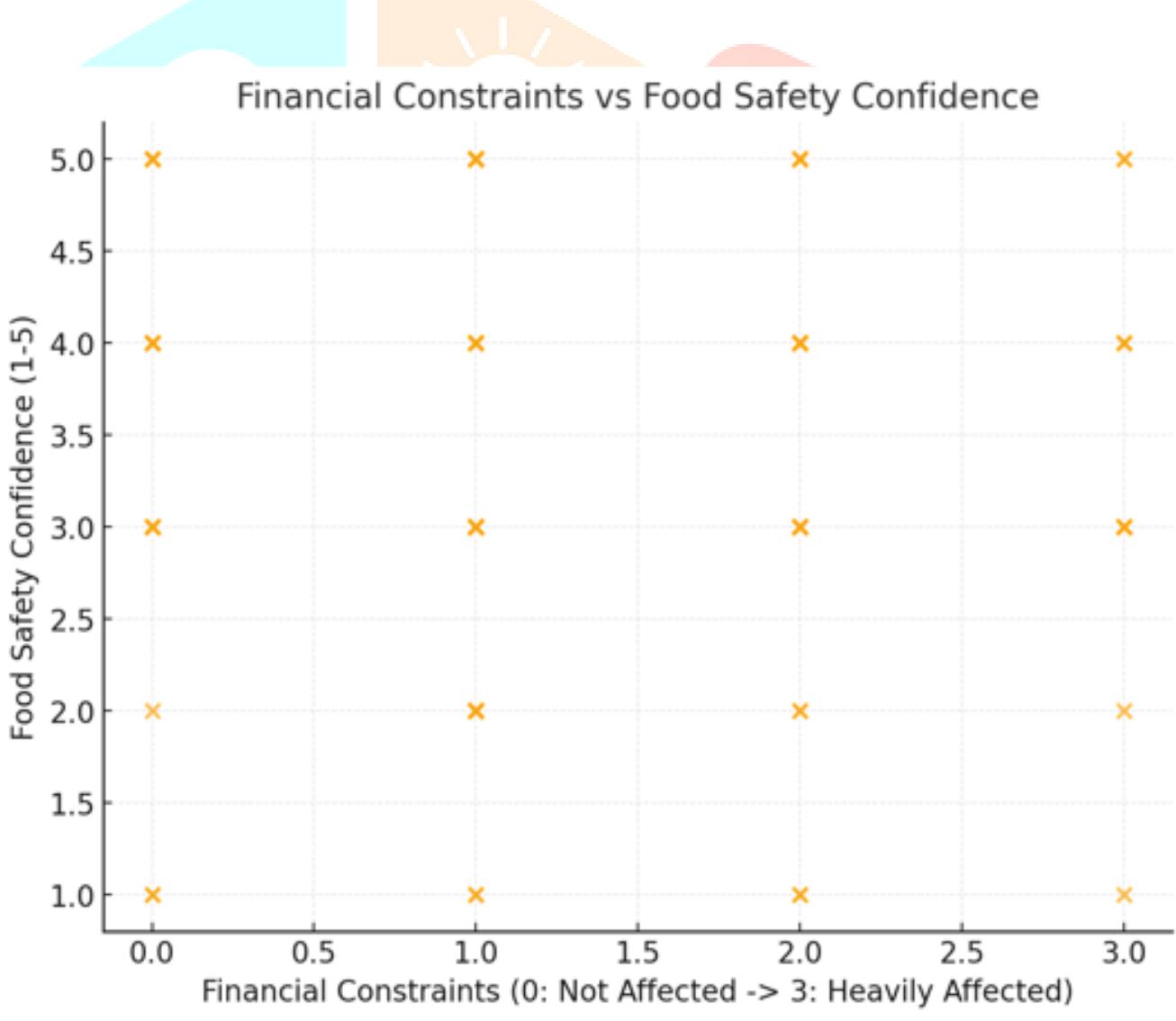
2. H_{02} : Socioeconomic constraints and barriers have no significant effect on the ability of vendors to practice proper food handling.

H_{12} : Socioeconomic constraints and barriers have a significant effect on the ability of vendors to practice proper food handling.

Financial Constraints and Food Safety Practices

- **Correlation:** $r=-0.036$
- **Interpretation:** The correlation is near zero, indicating no significant relationship between financial constraints and confidence in maintaining food safety practices. This supports the null hypothesis (H_{02}) that socioeconomic constraints do not significantly affect food safety practices.

To what extent do financial constraints affect your ability to use disposable or clean utensils regularly?	Count	Percentage
Heavily affected	12	11.11
Moderately affected	31	28.70
Not affected	21	19.44
Slightly affected	44	40.74
Grand Total	108	100.00



How confident are you in your ability to maintain proper food safety practices rate your current resources and knowledge (1-5)?	Count	Percentage
1	7	6.25
2	12	10.71
3	39	34.82
4	29	25.89
5	25	22.32
Grand Total	112	100.00

- Interpretation:** The data indicates varying levels of confidence in maintaining proper food safety practices among the street vendors. About 34.82% rate their confidence at a moderate level (3), while 25.89% rate it high (4), and 22.32% rate it very high (5). Conversely, 16.96% express lower confidence, with 6.25% rating it very low (1) and 10.71% rating it low (2). This pattern indicates that, although most of the street vendors are moderately to highly confident, a great proportion might require more support or training.

Conclusion

This study highlights the significance of availability of infrastructures, such as clean water and sanitation facilities, in food safety practice carried out by street vendors in Andheri (East), Mumbai. A moderate positive correlation was derived from analysis suggesting that vendors of infrastructure requirements of pure water and sanitation are significantly better equipped to maintain hygiene standards. Substantial percentages responded that it significantly enhances their abilities toward following appropriate food safety protocols. It will validate the hypothesis that infrastructural improvement is a transformative trigger to ensure that street-vended food becomes safer for public consumption and less hazardous to the public.

On the other hand, socioeconomic constraints, which include financial restrictions, were not found to have a direct statistically significant impact on food safety practices since the correlation was near zero. Although some vendors reported being moderately or slightly affected by financial challenges in acquiring hygienic supplies, the overall data suggests that such constraints do not directly hinder their ability to maintain hygiene. But such indirect effects of socio-economic conditions, such as less education and dependence on informal learning networks, contribute to the continued practice of unsafe food handling without appropriate knowledge or resources.

Challenges identified suggest that problems met at the point of vending are indeed complex, and specific interventions are required. Infrastructure inputs would be necessary, for example, water and sanitation facilities in vending areas, to directly remove foundational barriers to food safety. Low-cost tailor-made training programs could fill knowledge gaps and direct vendors toward practical skills on handling of food to improve

conditions. Access to hygienic supplies such as disposable utensils and cleaning materials at subsidized rates may further ease indirect socioeconomic constraints on vendors and allow them to maintain better standards of food safety.

In conclusion, improving street food safety practices is a multifaceted effort that must account for infrastructural development, educational initiatives, and community engagement. Addressing these factors allows policymakers and stakeholders to improve public health outcomes while ensuring sustainability in the street food sector and protecting vendors' livelihoods. This presents the basis on which future interventions can be made to balance public health priorities with the socio-economic realities of informal food vendors in the high-density urban settings such as Andheri (East).

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