



Liabilities of Street Food Vendors for spreading out Chronic Diseases and Environment Pollution: A Study on Chattogram, Bangladesh

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Abstract: *The study aims to investigate the potential legal responsibilities of street food vendors in spreading chronic diseases and contributing to environmental pollution. The problem statement highlights the complex nature of the issue, combining concerns about public health and environmental sustainability. The objectives of the research are outlined, focusing on pinpointing liabilities related to chronic diseases, evaluating hygiene practices of vendors, and assessing environmental pollution. The rationality of the study is justified by the significance of street food culture in Chattogram and the need to balance its benefits with public health and environmental preservation. The conceptual framework illustrates the dynamic interaction between street food vendors, consumers, public health, and environmental pollution. The study has been conducted in Chattogram, Bangladesh, investigates the dynamics between street food vendors and consumers, with a focus on 25 vendors and 100 consumers as respondents. The findings indicate significant concerns about the spread of chronic diseases due to poor hygiene practices among vendors and highlight the environmental impact of waste disposal practices. The study recommends comprehensive interventions to address these issues, including educational campaigns for consumers, training programs for vendors, improved access to purified water, and stricter regulations for waste disposal. Collaborative efforts with local authorities, research for sustainable solutions,*

and infrastructural improvements are also suggested to promote a healthier and more sustainable street food culture in Chattogram.

Keywords: Street Food Vendors, Chattogram, Street Food Consumers, Chronic Diseases, Environment Pollution

1. Introduction

Street food vendors are people or small companies who set up shop in public areas and cook and sell food and drinks. Usually, they do this from stalls, carts, or improvised setups near busy streets, sidewalks, or marketplaces. These vendors are essential in giving individuals on the go access to reasonably priced meal options. Street food vendors can be a very diverse group of people, from small-time company owners and local entrepreneurs to culinary enthusiasts.

People that sell a range of products and services, including food, beverages, apparel, and gadgets, on the streets of cities all over the world are known as street food vendors. They frequently work in the unofficial economy and are vulnerable in many ways (Schoenecker, 2023). A street food vendor is someone who operates a mobile stand or temporary static structure on a public roadway and sells meals (Nizame et al., 2019). When it comes to providing city dwellers with the food and nourishment they need at costs that are affordable for those with lower and intermediate incomes, street foods play a significant social role (Khairuzzaman et al., 2014). Even though frequent bathing and hand washing are linked to a number of ailments, many Chattogram neighborhoods still do not adequately practice hand washing (M. J. Islam et al., 2020). Poor food safety methods, attitudes, and expertise were displayed by street food sellers in Chattogram City, Bangladesh. For street food sellers to enhance food safety and lower foodborne illness rates, there is a need for tactics and intervention programs such financial support, food safety training, and awareness campaigns (Abid et al., 2022). Nonetheless, only a small percentage of vendors showed favorable views on personal cleanliness (1.2%), hand washing before handling raw or cooked food (3.7%), and other food safety attitudes (less than 1%) (S. Islam et al., 2023). Just 3% of the cooks used soap to wash their hands prior to preparing meals, 8% after chopping fish, meat, or vegetables, 4% prior to serving, and 0% prior to hand-mashing food or preparing salads. During food handling events, none of the street food vendors cleaned their hands with soap (Nizame et al., 2019).

The previous studies elucidate the obstacles encountered by street food vendors in Chattogram, Bangladesh, particularly in the realm of food safety and hygiene practices. However, there exists a research deficit in comprehending the potential legal responsibilities of street food vendors in disseminating chronic ailments and contributing to ecological contamination within the specific context of Chattogram. Although the existing research concentrates on the substandard food safety methods, attitudes, and hygiene practices among street food vendors, there exists a dearth of information regarding the broader health repercussions for consumers. Contaminated or unhygienic food can be linked to chronic diseases, thus warranting an investigation into whether

the practices of street food vendors in Chattogram have a notable impact on public health. Furthermore, the paragraph neglects to thoroughly examine the prospective environmental ramifications of street food vending in Chattogram. Given the makeshift setups and the manipulation of diverse materials in accessible public spaces, concerns may arise regarding environmental pollution. Research should explore the environmental practices of street food vendors, including waste disposal and the utilization of materials that may contribute to pollution within the city. This present study focused the liabilities of street food Vendors for spreading out chronic diseases and environment pollution in Chattogram, Bangladesh

2. Problem Statement

The issue at hand is complex, combining environmental effects with worries about public health. Although they provide a substantial contribution to the area's thriving food culture, street food sellers run the risk of unintentionally spreading diseases because of their poor hygiene habits. Inadequate food handling, storage, and sanitation procedures can increase the incidence of chronic illnesses, posing serious concerns for public health and safety. An additional layer to the problem is the environmental impact of street food vendors, including pollution and inappropriate garbage disposal. In order to shed light on the potential risks street food sellers may have to public health and environmental sustainability, the research attempts to untangle the complexity surrounding them in Chattogram.

3. Objectives

1. To pinpoint the liabilities of street food vendors in the context of spreading chronic diseases in Chattogram, Bangladesh.
2. To evaluate the hygiene practices and food handling methods of street food vendors in Chattogram.
3. To evaluate the environmental pollution caused by street food vendors, considering waste disposal practices, use of disposable materials, etc.

4. Rationality

The research topic on the liabilities of street food vendors in Chattogram, Bangladesh, regarding the spread of chronic diseases and environmental pollution is highly rational and pertinent. Chattogram, being a bustling city with a vibrant street food culture, raises critical concerns about public health and environmental sustainability. Street food vendors play a significant role in providing affordable and accessible food options, but their practices may also contribute to the spread of chronic diseases due to hygiene issues. Moreover, the environmental impact of street food operations, such as improper waste disposal and the use of non-biodegradable materials, poses a threat to the local ecosystem. This study aims to shed light on these issues, offering valuable insights that can inform policy decisions and interventions to balance the benefits of street food culture with the need for public health and environmental preservation.

5. Conceptual Framework

At the core of this framework is the dynamic interaction between street food vendors and consumers. Street food vendors play a crucial role in providing accessible and affordable food options to consumers. However, the quality and hygiene of street food can have implications for public health, potentially leading to chronic diseases if not properly managed.

The next layer of the framework involves the impact on public health, specifically the potential correlation between consuming street food and the development of chronic diseases. Poorly handled or contaminated street food may contribute to the spread of foodborne illnesses, affecting the health of consumers over time.

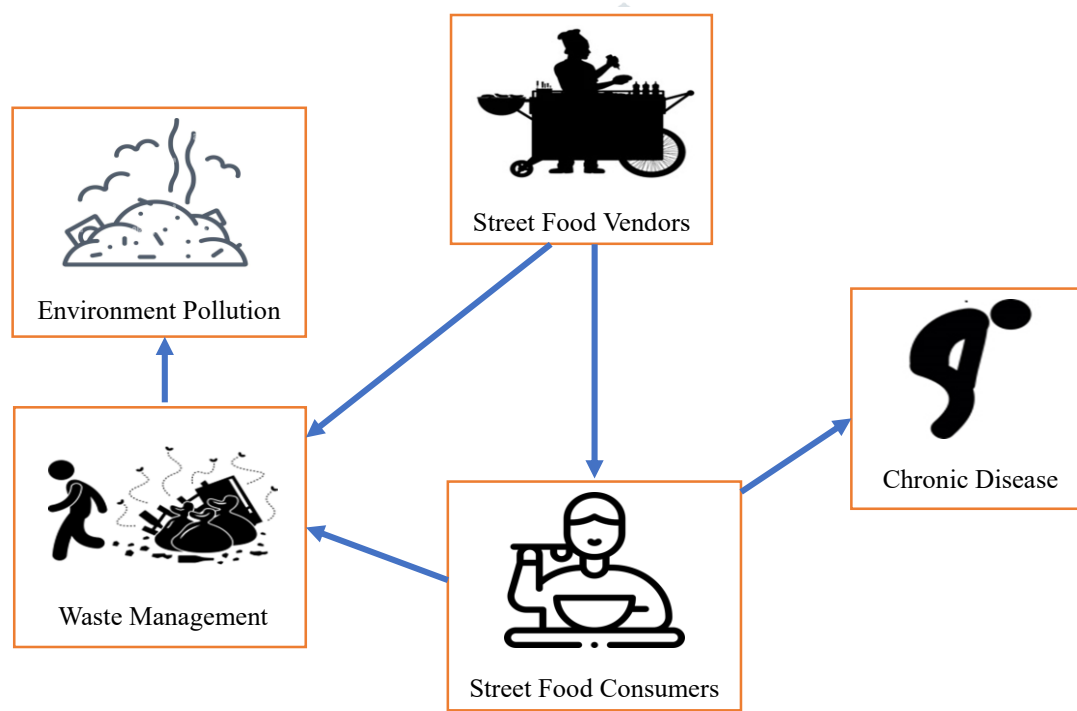


Figure 1: Effect of Street Food Vendors

Additionally, the framework extends to the environmental aspect, focusing on waste generated by street food vendors and consumers. Packaging materials, disposable utensils, and food waste contribute to overall waste production. Effective waste management strategies are crucial to mitigate the environmental impact, as improper disposal can lead to pollution, affecting both urban and natural environments.

The final layer of the conceptual framework emphasizes the interconnectedness of environmental pollution and public health. Improper waste management contributes to pollution, which can have adverse effects on air, water, and soil quality. This, in turn, may exacerbate health issues, creating a feedback loop between environmental pollution and the well-being of the community.

In summary, the conceptual framework illustrates the complex web of relationships between street food vendors, consumers, chronic diseases, waste management, and environmental pollution. It emphasizes the importance of addressing these elements holistically, considering the interdependencies to promote a healthier and more sustainable urban environment.

6. Literature Review

Abd El-Latief & Abouelenein (2020) revealed that unhealthy behaviors, inadequate infrastructure at the locations where street food is sold, and a lack of sanitation awareness among street food sellers are the main causes of the dangers associated with street food hygiene. According to Gichunge et al. (2023), university students' exposure to SFVs' unhygienic vending settings and careless food handling procedures may be a factor in the spread of respiratory illnesses including COVID-19 and influenza. The attainment of sustainable development objectives concerning poverty, hunger, health, economic expansion, and diminished disparities is complicated by this. The study conducted by Njaya (2014) aims to examine the characteristics and operations of street food vendors, including the socio-economic factors that influence the spatial distribution of street food vending. Additionally, the study seeks to explore the impact of street food vending on the local environment and urban life within the context of sustainable development. Street foods hold significant importance in meeting the food and nutritional needs of city consumers, particularly those with lower and middle incomes, as they provide affordable options. Khairuzzaman et al. (2014) provide a comprehensive description of the sociodemographic characteristics of street food vendors, as well as the common hazards and occupational risks they face. The authors also discuss the microbial risks associated with street food and propose interventions and control measures for ensuring food safety. Furthermore, the study examines the regulatory aspects and legal requirements related to street food vending, financial constraints faced by vendors, and their attitudes towards their occupation. Hassan et al. (2017) conducted a study to describe the vending sites used by street food vendors, as well as the stalls and equipment involved in food preparation. The authors also assess the vendors' current level of knowledge regarding food safety and their practices in food preparation. The study aims to understand the risks of food contamination and identify opportunities for prevention. The prevalence of respiratory symptoms among female street food vendors in Mansoura city was found to be high (86.2%) based on a study conducted by Hassan et al. (2017). The study also investigates the effect of the outdoor work environment on pulmonary function measurements among these vendors. Farhana et al. (2020) conducted a study to evaluate the level of environmental awareness and food safety practices among food vendors. The aim of the study is to provide recommendations for improving the campus environment. The authors suggest measures such as designating specific vending places, registering all street food vendors, establishing an improved monitoring system, and implementing non-formal environmental education programs to enhance food safety and environmental awareness among vendors.

Due to contamination by both pathogenic and non-pathogenic bacteria, eating food from the street can increase the risk of contracting foodborne illnesses (Nonato et al., 2016). Only knowledge that a water source can influence

food hygiene was revealed to be a factor of food hygiene practice when confounders were taken into account (Dun-Dery & Addo, 2016). After using the restroom, about one-fifth of the vendors (18.4%) did not wash their hands with soap and water. The level of education of the food vendors was significantly positively correlated with good hand hygiene habits (GHARTEY & ANTWI, 2019). Foodborne illnesses are frequently caused by foods sold on the street, where organisms like Salmonella, Clostridium, Escherichia, Listeria, Shigella, Yersinia, Vibrio, Staphylococcus, and Norovirus are frequently found (Ajayi & Oluwoye, 2015). The prevalence of foodborne illnesses brought on by microbial contamination has made street food vendors a public health problem. It has been determined that Salmonella, Bacillus, Staphylococcus, Clostridium, Vibrio, Campylobacter, and Listeria are the main causes of food safety problems in street meals (Rane, 2011). The degree of food safety awareness exhibited by vendors varied, as demonstrated by their dangerous and filthy operations and inadequate observance of food handling and storage protocols (Wallace et al., 2022). For travelers, employees, students, immigrants, and commuters alike, street food has become a basic diet (Malhotra, 2017). In the future, there will probably be more street food vendors, which could worsen environmental problems and food safety (Farhana et al., 2020). The bulk of SFVs lacked food safety and food preparation/preservation training, which suggests a deficiency in knowledge and instruction in these areas (Meher et al., 2022).

7. Methodology

Chattogram of Bangladesh has been selected as study area of this research. The street food Vendors and the Consumers of street foods were considered as the respondents of this study. In this regard 25 street food Vendors and 100 street food Consumers were selected for this study. Primary data were collected from the respondents with a structured questionnaire containing few open handed and few static questions. Data are formulated and analyze with SPSS statistical tools.



Figure 2: Study Area

8. Analysis

8.1 Demographic Profile of the Respondents

The gender and age of street food Vendors and gender, age and profession of the street food Consumers are given in the following tables:

Table 1: Profile of Street Food Vendors

Gender		Age	
Male	20	15-25	5
Female	5	25-35	15
		35-45	3
		45-55	2

Table 2: Profile of Street Food Consumers

Gender		Age		Profession	
Male	50	10-20	45	Students	35
Female	50	20-30	35	Business	20
		30-40	10	Service Holder	10
		40-50	10	Daily Labor	35

Table 1 presents the profile of street food vendors, categorizing them based on gender and age ranges. It shows that there are 20 male vendors aged between 15 and 25, while there are 5 female vendors within the same age range. Additionally, the table breaks down the number of vendors in each gender-age category, revealing the distribution across different age groups.

Table 2 provides insights into the demographics of street food consumers, considering gender, age, and profession. The data indicates that 50 male consumers fall into the 10-20 age group, with the majority being students (45). Similarly, 50 female consumers are distributed across age brackets, with a significant portion falling into the 20-30 age range. The table also outlines the professions of female consumers in different age groups, such as business, service holders, and daily laborers, along with the corresponding numbers. Overall, these tables offer a comprehensive snapshot of the demographics among street food vendors and consumers.

8.2 Places of Street Food Shops

Stated differently, it suggests an emphasis on the particular locations or environments that house street food sellers or vendors. Following table explores the various places across the Chattogram where street food shops are mostly situated:

Table 3: Place of Shop

Particulars	No. of Vendors (N= 25)
Shops are situated in Streets	10
Shops are situated in roof top of Drain	10
Floating shops	5

Table 3 provides information on the location of street food vendors' shops, with a total of 25 vendors considered in the analysis. The table categorizes the place of shops into three distinct types. Firstly, 10 vendors have their shops situated in streets, indicating an on-ground presence. Secondly, an equal number of vendors (10) operate their establishments on the rooftop of drains, suggesting a unique and elevated setting. Lastly, there are 5 vendors with floating shops, which could imply a dynamic and potentially mobile aspect to their business. This table sheds

light on the diverse and creative locations where street food vendors set up shop, showcasing the adaptability and varied environments in which street food is made available to consumers.

8.3 Places of Preparing Street Foods

It implies a discussion about the specific places where vendors or cooks create and serve street food. The content of the following table includes information about diverse settings such as streets, roadside stalls, home, or open-air kitchens where street food vendors operate:

Table 4: Place of Preparing Foods

Particulars	No. of Vendors (N= 25)
Foods are prepared in Streets	8
Foods are prepared in Streets in roof top of Drain	8
Foods are prepared at Home	6
Foods are supplied by third Party	3

Table 4 outlines the places where street food vendors prepare their offerings, considering a total of 25 vendors. The table presents four distinct categories. Firstly, 8 vendors prepare their foods directly in the streets, highlighting an open-air cooking approach. Another 8 vendors adopt a similar street cooking method but specifically on the rooftop of drains, showcasing a creative use of space. Additionally, 6 vendors prepare their foods at home, indicating a decentralized cooking setup. Lastly, 3 vendors source their foods from a third party, suggesting a unique model where the vendors may focus more on selling and serving than on the actual food preparation. This table illuminates the varied approaches taken by street food vendors in terms of where and how they prepare their offerings, reflecting a mix of traditional street-side cooking and alternative methods.

8.4 Water of Preparing Street Foods

Typically, street food vendors use water in various stages of food preparation. They might use it for cleaning ingredients, boiling or steaming, making dough or batter, and even for washing utensils. The quality of water is crucial to ensure the safety and hygiene of the food. In many cases, vendors may use tap water, but the safety depends on the local water quality standards. Some vendors might also use bottled or purified water to avoid any potential contamination. Such contents are encountered in table 5:

Table 5: Use of Water in Preparing Foods

Particulars	No. of Vendors (N= 25)
Food vendors use purified/filtered water	1
Food vendors use supplies (Tap) water from WASA/Others	13
Food vendors use water from deep Tubewell	2
Food vendors use water that are supplied by third Party	9

Table 5 provides insights into the water sources used by street food vendors in preparing their foods, considering a total of 25 vendors. The table categorizes the vendors based on their water supply choices. Only 1 vendor opts for purified or filtered water, emphasizing a commitment to using clean and treated water. On the other hand, the majority of vendors, 13 in total, rely on water supplied by entities like WASA (Water and Sanitation Agency) or other sources. Additionally, 2 vendors use water from deep tube wells, showcasing an alternative water source. Another 9 vendors opt for water supplied by a third party, highlighting a diverse range of water procurement methods. This table underscores the varied approaches taken by street food vendors in ensuring the safety and quality of the water used in the preparation of their food items.

8.5 Food Safety & Hygiene Practices by Street Food Vendors

Street food vendors play a crucial role in providing convenient and delicious meals, but ensuring food safety and hygiene practices is essential to prevent health risks. Firstly, vendors should maintain a clean and organized workspace, regularly washing their hands and using gloves to avoid contamination. Proper storage of raw and cooked ingredients separately helps prevent cross-contamination. Cooking equipment must be regularly cleaned and sanitized to eliminate bacteria. Additionally, ensuring that food is cooked thoroughly and served at the right temperatures is vital. Vendors should also source their ingredients from reputable suppliers to guarantee quality. The few questions on these are formatted in table 6:

Table 6: Food Safety & Hygiene Practices by Vendors

Questions	No. of Vendors (N= 25)	
	Yes	No
Do you clean the surrounding of the food Shop?	5	20
Do you wash hand every time while serve the foods to Consumers?	2	23
Do you use hand gloves while serve and prepare Foods?	1	24
Do you follow proper guideline to store and prepare Foods?	1	24
Do you use food grade Equipment and Cookware?	3	22

Table 6 delves into the food safety and hygiene practices adopted by street food vendors, surveying a total of 25 vendors. The table poses several questions regarding their practices, with responses categorized into "Yes" or "No." The results indicate that a mere 5 vendors clean the surroundings of their food shop, while the majority (20) do not prioritize this aspect of cleanliness. When it comes to hand hygiene, only 2 vendors wash their hands consistently while serving food, contrasting with 23 vendors who do not follow this practice. Additionally, a minimal number of vendors (1) use hand gloves during both food preparation and serving, whereas the majority

(24) do not employ this protective measure. Similarly, the majority of vendors (24) do not follow proper guidelines for storing and preparing food, contrasting with the 1 vendor who adheres to these guidelines. Lastly, 3 vendors use food-grade equipment and cookware, while the majority (22) do not prioritize this aspect of food safety. This table underscores the need for increased awareness and adherence to food safety and hygiene practices among street food vendors.

8.6 Waste Management by Street Food Vendors

Waste management by street food vendors is a crucial aspect of maintaining environmental hygiene and public health in urban areas. Street food vendors play a significant role in providing convenient and affordable food options, contributing to the vibrancy of local food cultures. However, the popularity of street food also generates a considerable amount of waste, including packaging materials, food scraps, and disposable utensils. Effective waste management by street food vendors involves implementing practices to minimize, segregate, and properly dispose of waste. In this sections, frequencies of waste management by Vendors are focused:

Table 7: Waste Management by Vendors

Particulars	No. of Vendors (N= 25)
Food vendors dust bin to keep the wastages like, Tissues, Bottles, Packaging Materials & Leftover Foods etc.	2
Food vendors throw away the wastages like, Tissues, Bottles, Packaging Materials & Leftover Foods etc. in Drain	11
Food vendors throw away the wastages like, Tissues, Bottles, Packaging Materials & Leftover Foods etc. in Street	12

Table 7 provides insights into the waste management practices employed by street food vendors, considering a total of 25 vendors. The table categorizes vendors based on how they handle various types of waste, including tissues, bottles, packaging materials, and leftover foods. Only 2 vendors utilize a dustbin to collect and manage their waste. In contrast, a significant portion of vendors (11) dispose of their waste by throwing it into drains, while an additional 12 vendors opt to discard their waste directly onto the streets. This table highlights the varied approaches taken by street food vendors in managing their waste, indicating a need for increased awareness and adoption of responsible waste disposal practices within this community. Effective waste management is crucial not only for the cleanliness of the vendor's surroundings but also for the overall environmental impact of street food operations.

8.7 Actions of Street Food Consumers

Street food consumers often share common observations and experiences when it comes to interacting with street food vendors. One notable aspect is the vibrant and diverse culinary offerings that street vendors provide, showcasing a rich tapestry of local flavors and traditional dishes. Consumers appreciate the authenticity and

uniqueness of these street food options, which often reflect the cultural identity of the region. Additionally, the informal and communal atmosphere created by street food vendors fosters a sense of connection among consumers, as they gather to enjoy tasty treats in a shared public space. However, concerns about hygiene and food safety may also arise, prompting consumers to be discerning about the cleanliness's and handling practices of street food vendors. Few observations of consumers are pointed out in table

Table 8: Observations from Street Food Consumers

Questions	No. of Vendors (N= 100)	
	Yes	No
Do you think, street Foods are hygiene enough?	30	70
Do you think, street food Vendors maintain proper food safety & hygiene practices?	20	80
Do you think, street foods may cause chronic Diseases?	85	15
Have you ever suffered from chronic Diseases because of street Foods?	50	50
Are you provided dust bin by the street food Vendors?	10	90
Do you think, street food Vendors are mostly liable for Environmental Pollution?	70	30

Table 8 reflects the observations and opinions of street food consumers, with a total of 100 respondents. The table presents various questions related to hygiene, food safety, health concerns, and environmental impact. The results indicate that 30 consumers believe street foods are hygienic, while a larger majority of 70 respondents express concerns about the hygiene of street foods. Similarly, 20 consumers believe that street food vendors maintain proper food safety and hygiene practices, contrasting with 80 respondents who hold the opposite view.

A significant portion of consumers, 85 in total, express concerns that street foods may cause chronic diseases, while 15 respondents do not share this apprehension. Interestingly, an equal number of consumers (50 each) claim to have suffered from chronic diseases due to street foods and those who haven't. When it comes to waste management, only 10 consumers report being provided with a dustbin by street food vendors, while the majority (90) state otherwise. Moreover, 70 consumers believe that street food vendors are mostly responsible for environmental pollution, while 30 respondents do not attribute this responsibility to them. Overall, this table indicates a mixed perception among street food consumers, highlighting the need for improvements in hygiene, food safety practices, and environmental responsibility within the street food industry.

9. Discussion

9.1 Liabilities of Street Food Vendors for spreading out Chronic Diseases

The analysis of street food vendors in Chattogram, Bangladesh, sheds light on various aspects of their demographics, operating locations, food preparation practices, water sources, food safety and hygiene practices, waste management, and consumer perceptions. One critical concern that emerges from the data is the potential liability of street food vendors in spreading chronic diseases.

The data reveals that a substantial portion of street food consumers (85 out of 100) express concerns that street foods may cause chronic diseases. Additionally, 50 consumers claim to have suffered from chronic diseases due to street foods. These findings raise questions about the safety and hygiene practices followed by street food vendors, as well as the quality of ingredients used in their food preparation.

The tables outlining food safety and hygiene practices among vendors indicate some concerning trends. For instance, a majority of vendors do not consistently clean the surroundings of their shops, wash their hands while serving, use hand gloves during food preparation and serving, follow proper guidelines for storing and preparing foods, or use food-grade equipment and cookware. These practices, or lack thereof, could contribute to the contamination of street food and the potential spread of diseases.

Furthermore, the limited use of purified or filtered water by vendors (only 1 out of 25) raises concerns about the water quality in food preparation, a crucial factor in ensuring food safety. The majority of vendors rely on tap water supplied by entities like WASA or other sources, which may not meet stringent quality standards.

Finally, while street food is an integral part of the vibrant food culture in Chattogram, there are legitimate concerns about the potential liabilities of street food vendors in spreading chronic diseases. Improvements in food safety and hygiene practices, water quality management, and overall awareness among vendors about the consequences of suboptimal practices are essential to mitigate these risks and ensure the well-being of consumers in the local community. Regulatory measures and educational initiatives may be necessary to enhance the overall standards of the street food industry in Chattogram.

9.2 Liabilities of Street Food Vendors for Environment Pollution

The analysis of street food vendors in Chattogram, Bangladesh, reveals a nuanced picture of their practices and their impact on environmental pollution. The data from Table 7 indicates that a considerable number of vendors (12 out of 25) dispose of their waste directly onto the streets, while another significant portion (11 out of 25) throws waste into drains. This raises concerns about the environmental liabilities of street food vendors in Chattogram.

The common practice of discarding waste on streets and into drains can lead to environmental pollution, affecting not only the immediate surroundings but also contributing to broader ecological issues. The informal and

communal atmosphere created by street food vendors, as highlighted in the observations of consumers (Table 8), fosters a sense of connection among consumers. However, this sense of community needs to be balanced with a responsibility towards the environment.

While 70% of consumers believe that street food vendors are mostly liable for environmental pollution, it signifies a widespread perception of the environmental impact caused by their practices. This perception aligns with the data from Table 7, which illustrates that a majority of vendors contribute to pollution by not effectively managing their waste.

To address the environmental liabilities of street food vendors in Chattogram, there is a need for awareness campaigns and initiatives focusing on responsible waste disposal practices. Collaboration between local authorities, vendors, and consumers can play a pivotal role in implementing sustainable waste management strategies. Encouraging the use of dustbins, promoting recycling, and providing education on the environmental consequences of improper waste disposal can contribute to mitigating the impact of street food operations on the environment. Ultimately, fostering a sense of environmental responsibility within the street food industry is crucial for maintaining the vibrancy of local food cultures while minimizing adverse effects on the environment.

10. Findings

The major findings of this study are highlighted as under:

1. A significant portion of street food consumers (85 out of 100) express concerns about street foods causing chronic diseases. Among 100 consumers 50 consumers claim to have suffered from chronic diseases due to street foods.
2. Concerning trends in food safety and hygiene practices among vendors, such as inadequate cleaning of surroundings, lack of handwashing, and insufficient use of protective gear during food preparation.
3. Very poor number of Vendors use purified or filtered water in food preparation and the majority Vendors rely on potentially lower-quality tap water.
4. A considerable number of vendors dispose of waste directly onto the streets (12 out of 25), while others throw waste into drains (11 out of 25). This practice raises concerns about environmental pollution and its broader ecological impact.
5. 70% of consumers believe that street food vendors are mostly liable for environmental pollution, indicating a widespread perception of the environmental impact caused by their practices.

11. Recommendations

Based on the findings, it seems like there are several areas that need improvement in terms of both public health and environmental impact. Here are some recommendations:

1. Launch campaigns to educate street food consumers about safe food practices and the importance of choosing vendors who prioritize hygiene.
2. Implement training programs for street food vendors on proper food safety and hygiene practices. This could include regular workshops and inspections to ensure compliance.
3. Facilitate access to purified or filtered water for street food vendors. This might involve partnerships with local authorities or NGOs to install water purification systems in common street food areas.
4. Develop and enforce strict waste disposal regulations for street food vendors. Provide easily accessible waste disposal facilities and educate vendors on proper waste management practices to minimize environmental pollution.
5. Strengthen regulations regarding street food hygiene and environmental impact. Regular inspections and penalties for non-compliance can incentivize vendors to adhere to higher standards.
6. Invest in research to develop affordable and sustainable solutions for street food vendors, such as portable water purification devices or eco-friendly packaging to reduce environmental impact.
7. Collaborate with local government authorities to ensure that the infrastructure in street food areas supports safe and hygienic practices. This could include improvements in water supply, waste management systems, and public facilities.

12. Conclusion

The study on street food vendors in Chattogram, Bangladesh, reveals significant concerns regarding both public health and environmental impact. Consumers express worries about the potential spread of chronic diseases through street foods, and it also highlighted inadequate food safety and hygiene practices among vendors. Additionally, the disposal of waste directly onto streets and into drains raises environmental pollution concerns. There is an urgent need for comprehensive measures to improve the safety and hygiene practices of street food vendors, ensure access to clean water, and implement effective waste management strategies. Regulatory initiatives, public awareness campaigns, and collaboration between stakeholders can contribute to fostering a healthier and more sustainable street food environment in Chattogram.

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