



Daffodil
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**PRACTICES OF FOOD SAFETY AND HYGIENE AMONG
STREET FOOD VENDORS IN DHAKA**

**A PROJECT REPORT
BY
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Submitted to the Department of Nutrition and Food Engineering in the partial
fulfillment of B.Sc. in Nutrition and Food Engineering

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NOVEMBER 2024**

APPROVAL

This Thesis titled “**Practices of Food Safety and Hygiene Among Street Food Vendors in Dhaka**”, submitted by Peu Dhar, ID No: 201-34-1055 to the Department of Nutrition and Food Engineering, Daffodil International University, has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Nutrition and Food Engineering and approved as to its style and contents. The presentation has been held on November 30, 2024.

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DECLARATION

I hereby declare that this thesis paper has been done by me under the supervision of **Dr. Nizam Uddin** Associate Professor and Head, **Department of Nutrition and Food Engineering**, Daffodil International University. I also declare that neither this paper nor any part of this paper has been submitted elsewhere for the award of any degree or diploma.

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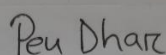
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ACKNOWLEDGEMENTS

First, I express my heartiest thanks and gratefulness to almighty God for His divine blessing makes it possible for me to complete the thesis paper successfully.

I really am grateful and wish my profound indebtedness to **Dr. Nizam Uddin, Associate Professor and Head** Department of Nutrition and Food Engineering, Daffodil International University, Dhaka. The deep knowledge & keen interest of my supervisor in the field of “**Food Safety**” has enthused me greatly to carry out this thesis paper. His endless patience, scholarly guidance, continual encouragement, energetic supervision, constructive criticism, valuable advice, and patience in reading many inferior drafts and correcting them at all stages have made it possible for me to complete this paper.

I would like to express my heartiest gratitude to **Dr. Nizam Uddin, Associate Professor** and Head, Department of Nutrition and Food Engineering, for his kind help in completing my thesis paper. I am also grateful to **Ms. Israth Jahan Rimu, Lecturer** and other faculty members and the staff of the Nutrition and Food Engineering department of Daffodil International University for their kind support and help.

I would like to thank my entire course mate at Daffodil International University, who took part in many discussions and help me to complete this paper.

Finally, I must acknowledge, with due respect, the constant support, encouragement, and patients of my parents.

ABSTRACT

Street food plays a significant role in Dhaka's culinary landscape, catering to its inhabitants' diverse tastes. However, concerns regarding food safety and hygiene practices among street food vendors persist. This study aims to assess food safety and hygiene practices among street food vendors in Dhaka. A mixed-methods approach, including surveys and observational assessments, was employed to gather data on vendors' practices towards food safety and hygiene. A cross-sectional study was conducted among 300 street food vendors from March 2024 to June 2024. Data were collected through personal interviews and observation through a structured questionnaire. SPSS, MS Excel, CSV, and other tools were used to compare the variables. Results indicate a varied adherence to food safety measures, with a notable gap in hygiene practice. While vendors generally possess adequate knowledge of food safety practice, implementation in practice often falls short due to various factors such as lack of resources, infrastructure, and awareness. The cross-tabulations of different variables to examine the relationships between five attributes (Gender, Age, Education, Work Experience, and Monthly Income) and ten additional attributes were done to analyze the food vendor workers hygiene practices. Some bar graph was used to visualize the data. The results show that 43.6% have no formal education, 33% never wash their hands properly, 88% never clean utensils, 56% never wear gloves, 81% never use soap, 89% reuse oil, 67.67% do not clean their work area, 82.33% work with diarrhea, among them 59.67% of food vendors suffer from some infectious disease, 65.67% of vending site conditions are dirty, 97% of street food vendors have no food safety training.

Keywords: Food safety, Dhaka, Street food vendor, Practice, Hygiene.

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CHAPTER 1

INTRODUCTION

1.1 Introduction

Street food refers to the variety of food and water sold on the side of the road. These foods are usually sold at low prices from various stalls on the footpaths of Dhaka's busy streets. People of different classes, and different areas especially the poor and lower-class people come to Dhaka city in search of good income. When they come to Dhaka city, they work as day laborers, rickshaw drivers, hawkers, sellers, etc. They cannot afford to go to a restaurant to eat. So, they depend on street food. Moreover, students eat street food because of its attractive appearance and taste. Due to heavy traffic jams in Dhaka city, many depend on street food to satisfy their hunger. So, the demand for street food is increasing day by day.

Furthermore, because of their hectic schedules and lack of free time to prepare meals at home, people frequently have to rely on food from the street (Md. Khairuzzaman, 08 April 2014). Street food vendors support the economy and way of life of the poor in low- and middle-income countries (Mueena Jahan, 14 July 2018). Nevertheless, street food vending machines are not subject to the oversight, control, or regulation of the relevant authorities in these nations, including Bangladesh (Khaliduzzaman, 2020). Street food vendors frequently lack knowledge and are ignorant of proper food handling practices, hygiene standards for vending sites, and other related topics (Călin Jianu a, August 2014) (Laís Mariano Zanin a, October 2017). Safe vending operations are made difficult by the vendors' lack of understanding of the microbiological hazards (such as the availability of safe water, diversity, and mobility) associated with street food, as well as by inadequate infrastructure and facilities (Nasser Abdulatif Al-Shabib a, January 2016). Furthermore, untreated water used by street food vendors, unsanitary serving utensils (such as paper, plastic plates, spoons, etc.), inadequate personal hygiene practices, and a lack of sanitary measures at or around the vending site can all contribute to the spread of pathogenic microorganisms from food to people (Md. Hasan Al Banna, August 2021). Rapid urbanization and changing consumer preferences have led to significant growth in the street food industry in developing countries. Still,

concerns about health hazards associated with unlicensed practices are not going away. Street food vendors are common in developing countries, especially in Asia, Africa, and Latin America. Being a component of this unregulated industry, it is part of the informal food supply chain. To prevent the spread of infection from food handlers to consumers, it is essential to maintain good personal hygiene and food handling techniques. Food handlers have generally been found to have inadequate standards for food safety. Poor food security systems can be attributed to many factors such as attitude toward food security, working environment, gender, monthly income, and government monitoring.

Microbial foodborne diseases represent a significant public health concern associated with street food consumption (Khaliduzzaman, 2020). Furthermore, multidrug resistance of foodborne bacteria has increased the vulnerability of the food safety situation in terms of public health (Nasser Abdulatif Al-Shabib a, January 2016). More than 30 million people are affected by foodborne diseases in Bangladesh every year (Victoria Stephen Kwol a b, April 2020). In Bangladesh, diarrheal illnesses are the most common form of food poisoning, and they can sometimes be fatal. Either the toxin of the bacteria or the human body's reaction to the organism causes this disorder. Some of the primary causes of street food contamination are improper storage temperatures, the use of conventional processing techniques during preparation, and inadequate personal hygiene practices among food handlers (Mohammad Tazrian Abid, 29 July 2022).

People who live in cities these days are overly preoccupied with their jobs in the employment sectors. They don't have enough time to cook at home, women are making economic contributions to the country, and fast-paced lifestyles have altered eating habits. People are now more inclined to eat outside of their homes as a result of these developments, and they even prefer food from the street over that from a restaurant. Underlying this ingrained behavior are several conditions. Easy access to street food is one of the most significant problems. However, the majority of the vendors lack formal training in proper food handling, sanitation, and hygiene, as well as the usage of potable water.

Street food is also thought to be a vector for microbial-caused foodborne diseases, which pose a serious threat to public health. A survey reveals that over 30 million individuals in Bangladesh suffer from foodborne illnesses annually. There are advantages to street food in addition to its drawbacks. Street food is particularly valued for its distinct flavor, taste, and benefits. It also plays a significant role in the nation's economy by helping customers satisfy their dietary and nutritional needs at a relatively cheap cost, particularly for lower- and middle-class family members (Mueena Jahan, 14 July 2018).

In addition, the seller is prepared to provide their clients with ready-to-eat food and drinks that may be made at home or right there on the sidewalk and enjoyed curbside (Laís Mariano Zanin a, October 2017). In Bangladesh, research indicates that younger people are more likely than older people to eat street cuisine. Protecting public health, guaranteeing regulatory compliance, increasing consumer knowledge, assisting vendors in maintaining their livelihoods, and comprehending the cultural background all depend on an in-depth study of food safety and hygiene procedures among Dhaka's street food sellers. Enhancing food safety standards, safeguarding public health, and promoting sustainable urban food systems in Dhaka are the goals of the research by tackling these factors.

1.2 Objective

A research objective is generally a clear, concise, and specific statement that defines what a researcher intends to achieve through a research project. It also outlines the goal or purpose of the research and guides the direction of the intended study. In this section, specific and general objectives of this study will be discussed.

1.2.1 Specific Objective

- To evaluate the food safety and hygienic practice percentages of food vendors in Dhaka.

1.2.2 General Objectives

- To assess the variety and healthy food items by street vendors.
- To increase awareness of food vendors.
- To check the vendor's use of utensils and the preparation area for hygiene issues.
- To determine how to effectively apply the National Hygiene Regulation (R638) to include street meals and to improve the rules pertaining to food sold on the street.

1.3 Research Questions

When thinking about turning the idea into a reality, the following questions came to mind:

1. What is the percentages of food safety practices and hygienic conditions among street food vendors in Dhaka?
2. What are the sanitation facilities available to street food vendors, and how do they impact food safety?
3. What are the main challenges and obstacles in maintaining the hygiene of street food vendors?

This inquiry enables an examination of Dhaka's street food sellers' present levels of food safety and cleanliness as well as the underlying variables that could have an impact on their adherence to these standards.

CHAPTER 2

LITERATURE REVIEW

2.1 Literature Review

The purpose of this study is to assess street food practices regarding food safety. With particular emphasis on Dhaka, the literature review provides a thorough examination of research and data on cleanliness and food safety practices of street food vendors. This section seeks to provide a theoretical foundation for the research, highlight gaps in the existing literature, and situate the study within the broader field.

The primary aim of the Dhaka Street Food Vendor Cleanliness and Food Safety Study was to address serious public health issues. In Dhaka, selling street food is a common and economically important business that feeds a large segment of the population with quick and reasonably priced meals. However, it also presented serious dangers to food safety because of factors such as poor infrastructure, limited access to clean water, and vendors' lack of awareness of proper hygiene practices. This study aimed to investigate and evaluate practice percentages, identify problem areas, and guide policy responses. This chapter explained the study's setting, population, sampling locations, size, constraints, methods for gathering and analyzing data, and ethical considerations. In Dhaka, the capital city of Bangladesh, street food is becoming popular day by day, and yet it has its pros and cons. While street food provides accessible and reasonably priced food options to city dwellers, it also raises serious issues regarding food safety and hygiene. This study was done to explore the food safety and hygiene practices of street food vendors in Dhaka, identify practice gaps, and suggest ways to improve these practices for improved public health outcomes.

In Islam, Tanjia's (2024) study, a cross-sectional survey design was described which constituted a specific questionnaire where data were collected from 350 street food vendors from different areas of Dhaka. The study found that 85 percent of street food vendors had no food safety training, 48 percent had secondary education and 89 percent were found hand exercising washing practice (Islam, July, 2024).

In Hossen's study (2020), they used a descriptive survey design where the questionnaire was covered by income level, education, food safety training and hygiene practices. It was conducted in low-income areas where data were collected from 200 street vendor. 72.5% of vendors had good knowledge of food safety, and 0.5% had good food safety practice. 28 percent of street vendors reused oil (Hossen M. T., 2020).

MJ Ahmed, M Ali (2024) presented a case study that focused on public health. They collected data from 400 food vendors. According to the survey, 12 % had food safety practice knowledge. 93.50% of street vendors had no training in food safety and hygiene. They found that street food vendors practiced poor hygiene including lack of cleanliness (MJ Ahmed, 2024).

Muzaffar et al. (2009) aimed to assess food safety and hygiene practices of street food vendors in Dhaka. He found that 70% of vendors had no formal education and no training on food safety. The results showed that 85% of vendors handled food improperly and in unsanitary settings (Muzaffar, February 2009).

Mohammad Al Mamun's (2013) study represented a cross-sectional study that helped to find out the hygiene practices of street food vendors for school children's food safety. They collected data from 250 street food vendors. They found that 43.6 % had no formal education, and 68% had no knowledge about food safety. So, they had poor practice in hygiene maintenance (Mohammad Al Mamun, 2013).

In MT Hossen (2020) study, 200 food vendors participated in a cross-sectional study on food safety KAP. While 4.5% of vendors had diarrhea, 8.5% did not wash their hands after using the restroom and 28.5% reused previously used oil. Among vendors, 90% did not use personal protective equipment. 72.5% street food vendors had good knowledge about food safety. The data indicate that suppliers in the Jessore region generally have a high perception of food safety, but practices still need to be improved (Hossen M. T., 2020).

CHAPTER 3

RESEARCH METHODOLOGY

An entity involved in research is referred to as a research subject. My research subjects are food vendors. Research on food safety and hygiene practices among street food vendors in Dhaka covered a wide range of topics and reviewed current practices to examine the impact of socioeconomic variables and regulatory frameworks. A thorough investigation into this topic was essential to develop effective approaches to increase food safety, protect public health, and strengthen Dhaka's street food sector. An instrument used for collecting, measuring, visualizing, and analyzing data relevant to the research objective is called a research instrument.

A questionnaire was created first, and then in-person interviews were conducted around the Dhaka district. To assess the state of the current scenario, this survey was conducted at major intersections, bus terminals, train stations, offices, colleges, and schools. Motijheel, Kamalapur, Shyamoli, Palton, Gulistan, Mogbazar, Karwan Bazar, Shahbagh, Laxmi Bazar, Chokbazar, Mirpur, Gabtoli, Jatrabari areas were chosen to collect information about street food. During the interview, the vendors were asked various questions. Food handlers would be questioned using a standardized questionnaire as part of the study. Figure 3.1 represents the research methodology framework.

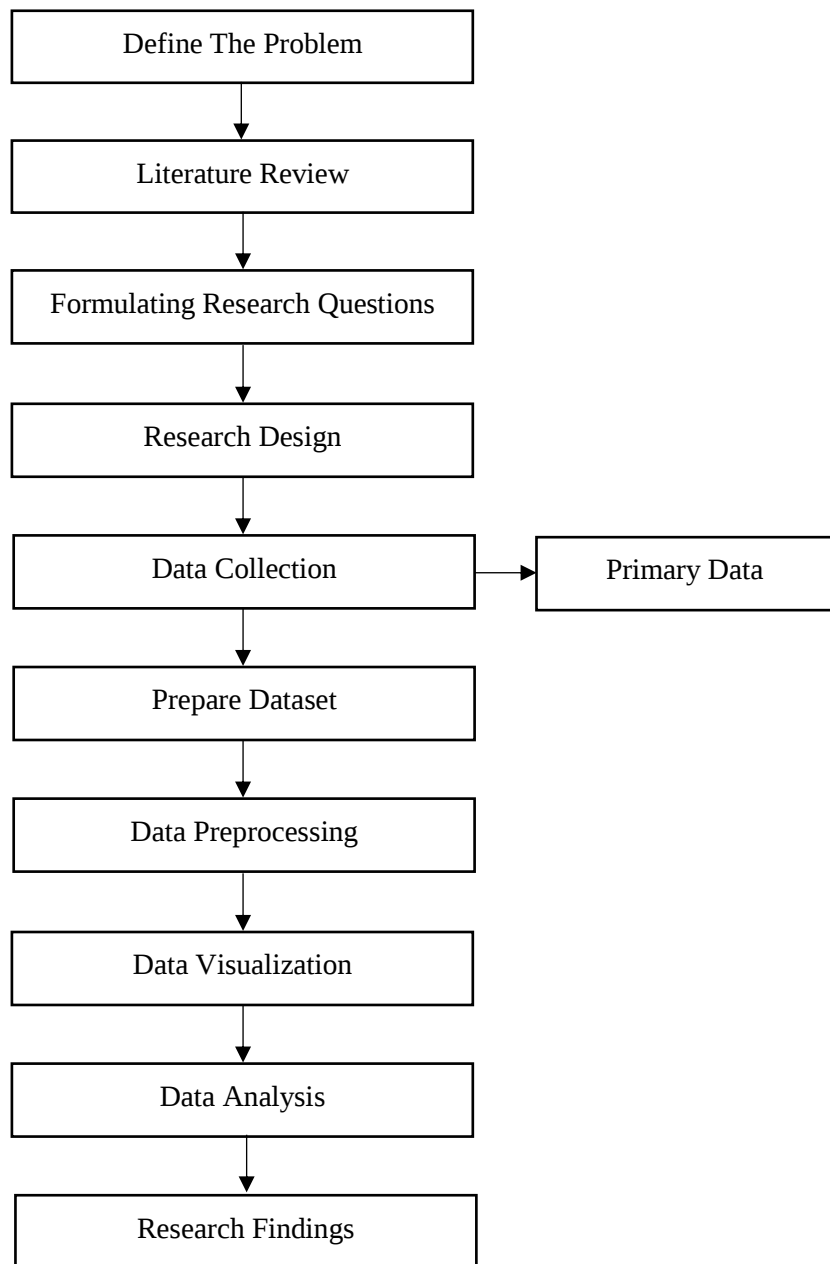


Figure 3.1: Methodological Framework

3.1 Study Design

The present study used a research methodology that aimed to thoroughly assess the existing status of practice percentages street food vendors in Dhaka regarding food safety and hygiene. This thorough technique blended qualitative and quantitative methods to provide a complete and concise understanding of the subject. It indicated the target demographic, which can include street food sellers in Dhaka.

3.2 Sample Size

The number of individual observations or data points included in a study or survey was referred to as sample size. Sample size plays an important role in determining the validity and reliability of results in statistical analysis. The sample size was determined using the formula mentioned below-

$$\text{Sample Size (n)} = N / (1 + N * e^2)$$

$$n = 30000 / (1 + 30000 * (0.05)^2)$$

$$= 394.74$$

$$= 395$$

n = Required Sample Size

e = Margin of Error (expressed as a decimal; e.g., 0.05 for 5%).

N = Population Size

According to this formula, the sample size should be 395; however, data from only 300 food vendors were collected for this study. This is because most vendors are not interested in providing data. Some vendors provided data but other did not. Also, some food vendors gave almost the same answer. To remain within limited resource constant, 332 pieces of data were collected. However, due to some unanswered questions, the final total of usable data points was 300. This is why it was not possible to collect 395 data.

3.3 Data Preprocessing

An important stage in the data analysis process is data preparation, which transforms unstructured, raw data into a neat, organized, and usable format. It guarantees data quality and integrity by enabling modeling and analysis. The tools used in the study to clean, analyze, and display the data as well as evaluate the results, including SPSS, MS Excel, MS Word, CSV, and other tools.

3.4 Data Cleaning

Partial record deletion or missing values using statistical techniques or professional judgment are two ways to deal with missing data. Find and correct any inconsistent or incorrect data entries. Look for any outliers that could distort the study, then consider their impact and context to determine whether to eliminate or correct them.

3.5 Data Transformation

Standardization is the first step of data transformation. The data was converted from continuous variables to a shared scale without variation across value ranges.

3.6 Data Collection Methods

A systematic survey questionnaire was created to gather quantitative information on vendor demographics, socioeconomic variables, food safety and hygiene standards. Face-to-face interviews were taken to learn more about vendors' attitudes, viewpoints, and difficulties with food safety and cleanliness and conducted semi-structured interviews with them. The vendors' food handling procedures, hygienic practices, and adherence to standards of cleanliness were observed. The questions that were asked in the interview is given in the Appendix Section of this paper.

Exploratory Data Analysis: Reading data from a dataset and then exploring its characteristics is called exploratory analysis. It is crucial to understand the total number of attributes and records in the dataset, the type of data they include, and how many values each variable can have. The selected dataset contained 300 records with 15 attributes. The description of all attributes is summarized in the table 3.1.

TABLE 3.1: SELECTED ATTRIBUTES' DESCRIPTION

Attribute	Description	Type
Gender	Food Vendor Employee's Gender. Values: 0(Female), 1(Male)	Nominal
Age	Food Vendor Employee's Gender.	Continuous
Education	Food Vendor Employee's Education Level. Values: NO, PR(Primary), and UG(Undergraduate)	Categorical
Work Experience	Food Vendor Employee's Education Level.	Continuous
Wash Hand	Food Vendor Employee's Hand Wash Practice. Values: YES, NO, ST(Sometimes)	Categorical
Cleaning Utensil	Food Vendor Employee's Cleaning Utensil Practice. Values: YES, NO	Nominal
Wear Gloves	Food Vendor Employee's Gloves Wearing Practice. Values: YES, NO	Nominal
Use Soap	Food Vendor Employee's Soap Using Practice. Values: YES, NO	Nominal
Monthly Income	Food Vendor Employee's Monthly Income.	Continuous
Reuse Oil	Food Vendor Employee's Oil Reuse Practice. Values: YES, NO	Nominal
Clean Work Area	Food Vendor Employee's Work Area Cleaning Practice. Values: YES, NO	Nominal

Work During Diarrhea	Food Vendor Employee's Diarrhea Status. Values: YES, NO	Nominal
Infectious Diseases	Food Vendor Employee's Infectious Diseases Status. Values: YES, NO	Nominal
Vending Site Condition	Food Vendor Employee's Vending Site Condition. Values: CN(Clean), DR(Dirty)	Nominal
Food Safety Training	Food Vendor Employee's Food Safety Training Status. Values: YES, NO	Nominal

3.7 Data Analysis

The relationships and connections between variables were identified and also statistical software were used to analyze survey data. This included descriptive statistics such as frequency, different graphs and charts, and p-value. The SPSS software (Version 27) was used for statistical analysis. Themes, patterns, and emerging notions regarding food safety and hygiene practices among street food sellers were identified.

3.8 Ethical Considerations

Before collecting any data, it was important to get the permission of every participant by outlining the study's objectives, asking for their voluntary involvement, and outlining confidentiality policies. The data were collected from food vendors who agreed to participate after being informed about the research objectives.

3.9 Challenges and Restrictions

The study and inquiry were quite challenging. It was challenging at times, but these challenges were successfully overcome. There are usually many street food vendors. However, it became very difficult to find and contact street food vendors for data collection. Some food vendors had trust issues regarding the provision of accurate information. So, they were reluctant to provide data.

3.10 Study Period

The timeline of this study spanned about 10 months (approximately), allowing enough time for each phase of the research. However, the timeline might vary depending on factors such as the complexity of the study, resource availability, and logistical constraints. It took approximately ten months, from January 2024 to October 2024, to complete this research.

3.11 Expected Output

This research allows for an understanding of what percentage of street food vendors in the Dhaka city prepare food in accordance with health regulations, as well as the food safety and hygiene practices percentages among these vendors. This will help common people understand the health risks of consuming unhygienic food, creating awareness among them. The outcome of this research on food safety and hygiene procedures among the street food sellers in the Dhaka city should include a thorough analysis of present practices, identification of influencing variables and difficulties, assessment of health risks, and practical suggestions. With an eventual objective of enhancing public health and safety, this thesis attempts to offer fresh perspectives based on current information about food safety and cleanliness in urban settings, with a particular focus on street food vending in Dhaka.

CHAPTER 4

RESULTS AND DISCUSSION

4.1 Result

The frequency of all attributes' categorical data is analyzed. The percentage is also been calculated. Then five attributes were taken as main attributes. They are: Gender, Age, Education, Work Experience, and Monthly Income. After that cross-tabulations of different variables to examine the relationships between five attributes (Gender, Age, Education, Work Experience, and Monthly Income) and ten additional attributes (Washing Hands, Cleaning Utensil, Wear Gloves, Use Soap, Reuse Oil, Work During Diarrhea, Infectious Diseases, Clean Work Area, Vending Site Condition, and Food Safety Training) were done to analyze the data deeply to understand the food vendor workers hygiene practices. Bar Graph was used to visualize the data.

TABLE 4.1: ATTRIBUTES' DATA ANALYSIS

Characteristics	Frequency	Percentage
Gender		
Male	235	78.33
Female	65	21.67
Age		
<25	52	17.33
25-50	225	75
>50	23	7.67
Education		
No Formal Education	125	41.67
Primary	132	44
Under graduation	43	14.33
Work Experience		
<5	82	27.33
5-9	156	52
10-15	62	20.67
Wash Hand		
Always	56	18.67
Sometime	145	48.33
Never	99	33

Clean Utensil		
Yes	36	12
No	264	88
Wear Gloves/Caps		
Yes	132	44
No	168	56
Use soap/detergent		
Yes	57	19
No	243	81
Monthly Income		
<10,000	48	16
10,000-20,000	127	42.33
>20,000	125	41.67
Reuse oil		
Yes	267	89
No	33	11
Clean work area		
Yes	97	32.33
No	203	67.67
Work during Diarrhea		
Yes	247	82.33
No	53	17.67
Affected infectious diseases		
Yes	179	59.67
No	121	40.33
Vending site condition		
Clean	76	25.33
Dirty	224	65.67
Food safety training		
Yes	9	3
No	291	97

The characteristics of the food vendors among the 300 participants are presented in Table 1. Most of the participants were male 78.33%, aged between 25-50 years 75%, and overall, 44% had primary education. More than half of the group (52%) has 5-9 years of work experience. Hygiene practices seem inadequate, with only 18.67% always washing their hands and 88% not cleaning their dishes. Additionally, 81% do not use soap or detergent, and 65.67% work in dirty areas. The majority (82.33%)

worked during diarrhea and about 60% contracted infectious diseases. Furthermore, only 3% received food safety training, highlighting significant gaps in public health practice among this population.

TABLE 4.2: DISTRIBUTION OF FOOD SAFETY BEHAVIORS BY GENDER

Behavior	Female (n=65)	Male (n=235)	Total (n=300)	p-value
Wash Hands Before/After Food Process Food				
Yes	4 (6.15%)	52 (22.13%)	56	.002
No	31 (47.69%)	68 (28.94%)	99	
Sometimes	30 (46.15%)	115 (48.94%)	145	
Cleaning Utensils				
Yes	6 (9.23%)	30 (12.77%)	36	.438
No	59 (90.77%)	205 (87.23%)	264	
Wear Gloves				
Yes	21 (32.31%)	111 (47.23%)	132	.032
No	44 (67.69%)	124 (52.77%)	168	
Use Soap				
Yes	7 (10.77%)	50 (21.28%)	57	.056
No	58 (89.23%)	185 (78.72%)	243	
Reuse Oil				
Yes	61 (93.85%)	206 (87.66%)	267	.158
No	4 (6.15%)	29 (12.34%)	33	
Work During Diarrhea				
Yes	54 (83.08%)	193 (82.13%)	247	.859
No	11 (16.92%)	42 (17.87%)	53	
Infectious Diseases				
Yes	35 (53.85%)	144 (61.28%)	179	.280
No	30 (46.15%)	91 (38.72%)	121	
Clean Work Area				
Yes	18 (27.69%)	79 (33.62%)	97	.366
No	47 (72.31%)	156 (66.38%)	203	

Vending Site Condition				
Clean	17 (26.15%)	59 (25.11%)	76	.864
Dirty	48 (73.85%)	176 (74.89%)	224	
Food Safety Training				
Yes	1 (1.54%)	8 (3.40%)	9	.435
No	64 (98.46%)	227 (96.60%)	291	

The table shows the distribution of the same food safety behaviors between female and male gender groups and compares the two with corresponding measures from the chi square test. These behaviors are use of gloves, hand washing before and after food processing, cleaning utensils, use of soap, reuse of oil, infectious diseases, vending site conditions, food safety training, and going to work during diarrhea. About 32.3% of females and 47.2% of males reported reading gloves with a p value of 0.032 indicating a statistically significant relationship between their use of gloves where males were more likely to use gloves than females. Consistent hand washing was reported by 6.2% of women and 22.1% of men with the majority reporting sometimes. Their p value is 0.002 which indicates that men are more consistent in their hand washing habits than women. They are shown in figure 4.1 and 4.2.

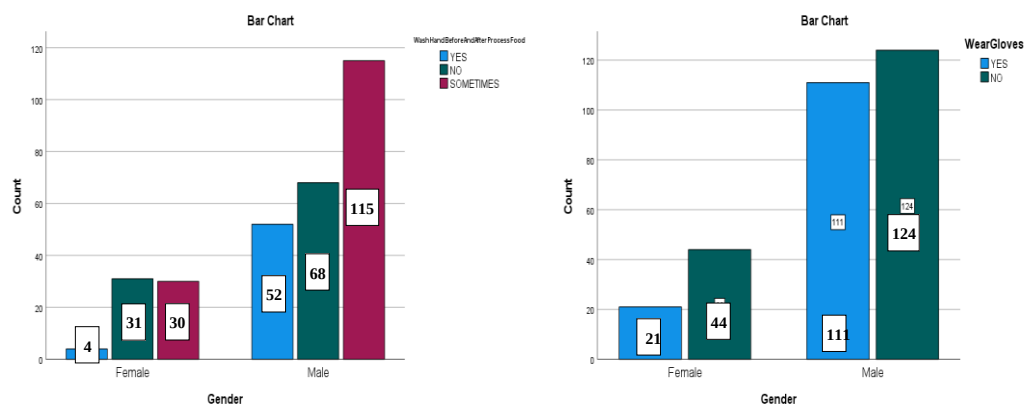


Figure 4.1: Frequencies of significant attributes of Gender

9.23 percent of females and 12.8% of males clean utensils correctly. 10.8% of women and 21.3% of men use soap. Besides, the P-value of cleaning utensils, use of soap, reuse of oil, infectious diseases, vending site conditions, food safety training, and going to work during diarrhea are not significant.

TABLE 4.3: DISTRIBUTION OF FOOD SAFETY BEHAVIORS BY AGE

Behavior	Young (n=56)	Adults (n=221)	Seniors (n=23)	Total (n=300)	p-value
Wash Hands Before/After Food Process Food					
Yes	9 (16.07%)	47 (21.27%)	0 (0.00%)	56	.001
No	15 (26.79%)	68 (30.77%)	16 (69.57%)	99	
Sometimes	32 (57.14%)	106 (47.96%)	7 (30.43%)	145	
Cleaning Utensils					
Yes	7 (12.50%)	29 (13.12%)	0 (0.00%)	36	.181
No	49 (87.50%)	192 (86.88%)	23 (100%)	264	
Wear Gloves					
Yes	27 (48.21%)	102 (46.15%)	3 (13.04%)	132	.008
No	29 (51.79%)	119 (53.85%)	20 (86.96%)	168	
Use Soap					
Yes	7 (12.50%)	50 (22.62%)	0 (0.00%)	57	.012
No	49 (87.50%)	171 (77.38%)	23 (100%)	243	
Reuse Oil					
Yes	53 (94.64%)	192 (86.88%)	22 (95.65%)	267	.144
No	3 (5.36%)	29 (13.12%)	1 (4.35%)	33	
Work During Diarrhea					
Yes	54 (96.43%)	176 (79.64%)	17 (73.91%)	247	.007
No	2 (3.57%)	45 (20.36%)	6 (26.09%)	53	
Infectious Diseases					
Yes	40 (71.43%)	126 (57.01%)	13 (56.52%)	179	.138
No	16 (28.57%)	95 (42.99%)	10 (43.48%)	121	
Clean Work Area					
Yes	8 (14.29%)	77 (34.84%)	12 (52.17%)	97	.001
No	48 (85.71%)	144 (65.16%)	11 (47.83%)	203	
Vending Site Condition					
Clean	11 (19.64%)	59 (26.70%)	6 (26.09%)	76	.554
Dirty	45 (80.36%)	162 (73.30%)	17 (73.91%)	224	

Food Safety Training

Yes	2 (3.57%)	7 (3.17%)	0 (0.00%)	9	.672
No	54 (96.43%)	214 (96.83%)	23 (100%)	291	

This table provides a description of food safety behavior by age group youth, adult and elderly, highlighting significant and non-significant associations with food safety practices. 48.2% of youth, 46.2% of adults and 13% of seniors wear gloves. 16.1% of youth and 21.3% of adults wash hands before and after handling food. Their p value indicates that younger and older vendors wash their hands more than older ones. Besides, use of soap, working during diarrhea, clean workplace has their p value significance. The significance diagrams are given in the next page.

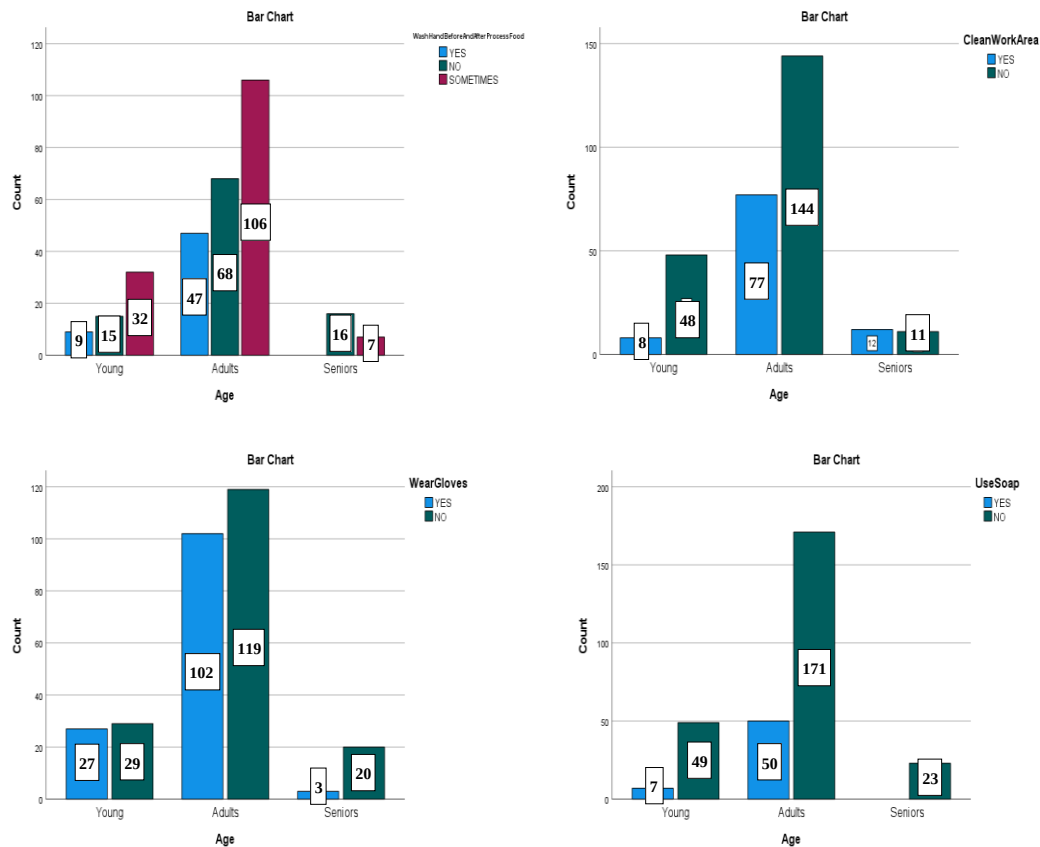


Figure 4.2(a): Frequencies of significant attributes of Age

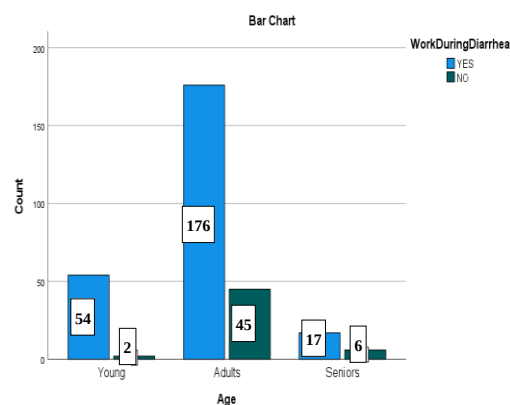


Figure 4.2(b): Frequencies of significant attributes of Age

12.5% of young vendors and 13.1% of adults clean utensils properly. But none of the elders clean the utensils properly. Their p value is 0.181 indicating no significant difference between age groups. Also, p value of reuse oil, infectious disease, vending side condition, food safety training is not significant

TABL4.4 DISTRIBUTION OF FOOD SAFETY BEHAVIORS BY EDUCATION

Behavior	No (n=125)	Primary (n=132)	Undergradu ate (n=43)	Total (n=300)	p- value
Wash Hands Before/After Food Process Food					
Yes	4 (3.20%)	30 (22.73%)	22 (51.16%)	56	<.001
No	67 (53.60%)	32 (24.24%)	0 (0.00%)	99	
Sometimes	54 (43.20%)	70 (53.03%)	21 (48.84%)	145	
Cleaning Utensils					
Yes	1 (0.80%)	12 (9.09%)	23 (53.49%)	36	<.001
No	124 (99.20%)	120 (90.91%)	20 (46.51%)	264	
Wear Gloves					
Yes	20 (16.00%)	71 (53.79%)	41 (95.35%)	132	<.001
No	105 (84.00%)	61 (46.21%)	2 (4.65%)	168	
Use Soap					
Yes	2 (1.60%)	28 (21.21%)	27 (62.79%)	57	<.001
No	123 (98.40%)	104 (78.79%)	16 (37.21%)	243	

Reuse Oil					
Yes	122 (97.60%)	125 (94.70%)	20 (46.51%)	267	<.001
No	3 (2.40%)	7 (5.30%)	23 (53.49%)	33	
Work During Diarrhea					
Yes	103 (82.40%)	122 (92.42%)	22 (51.16%)	247	<.001
No	22 (17.60%)	10 (7.18%)	21 (48.84%)	53	
Infectious Diseases					
Yes	77 (61.60%)	83 (62.88%)	19 (44.19%)	179	.080
No	48 (38.40%)	49 (37.12%)	24 (55.81%)	121	
Clean Work Area					
Yes	39 (31.20%)	30 (22.73%)	28 (65.12%)	97	<.001
No	86 (68.80%)	102 (77.27%)	15 (34.88%)	203	
Vending Site Condition					
Clean	25 (20.00%)	33 (25%)	18 (41.86%)	76	.017
Dirty	100 (80.00%)	99 (75%)	25 (58.14%)	224	
Food Safety Training					
Yes	0 (0.00%)	2 (1.52%)	7 (16.28%)	9	<.001
No	125 (100%)	130 (98.48%)	36 (83.72%)	291	

This table examines the relationship between education level such as no education, primary, graduate and food safety practices among them highlighting a significant and non-significant relationship. Among uneducated sellers only 1.6% use soap 21.2% primary and 62.8% graduates use soap. Their p value is 0.001 which suggests a strong positive relationship between education and soap use. 82.4% no education 92.4% with primary education and 51.2% graduates work while having diarrhea. A p value of less than 0.001 shows that education level significantly affects the probability of working during illness and that lower education is associated with more frequent work during illness. Also, wearing gloves, handwashing, cleaning utensils have a p value and a strong positive correlation with education. Positive correlations are shown in the figure below.

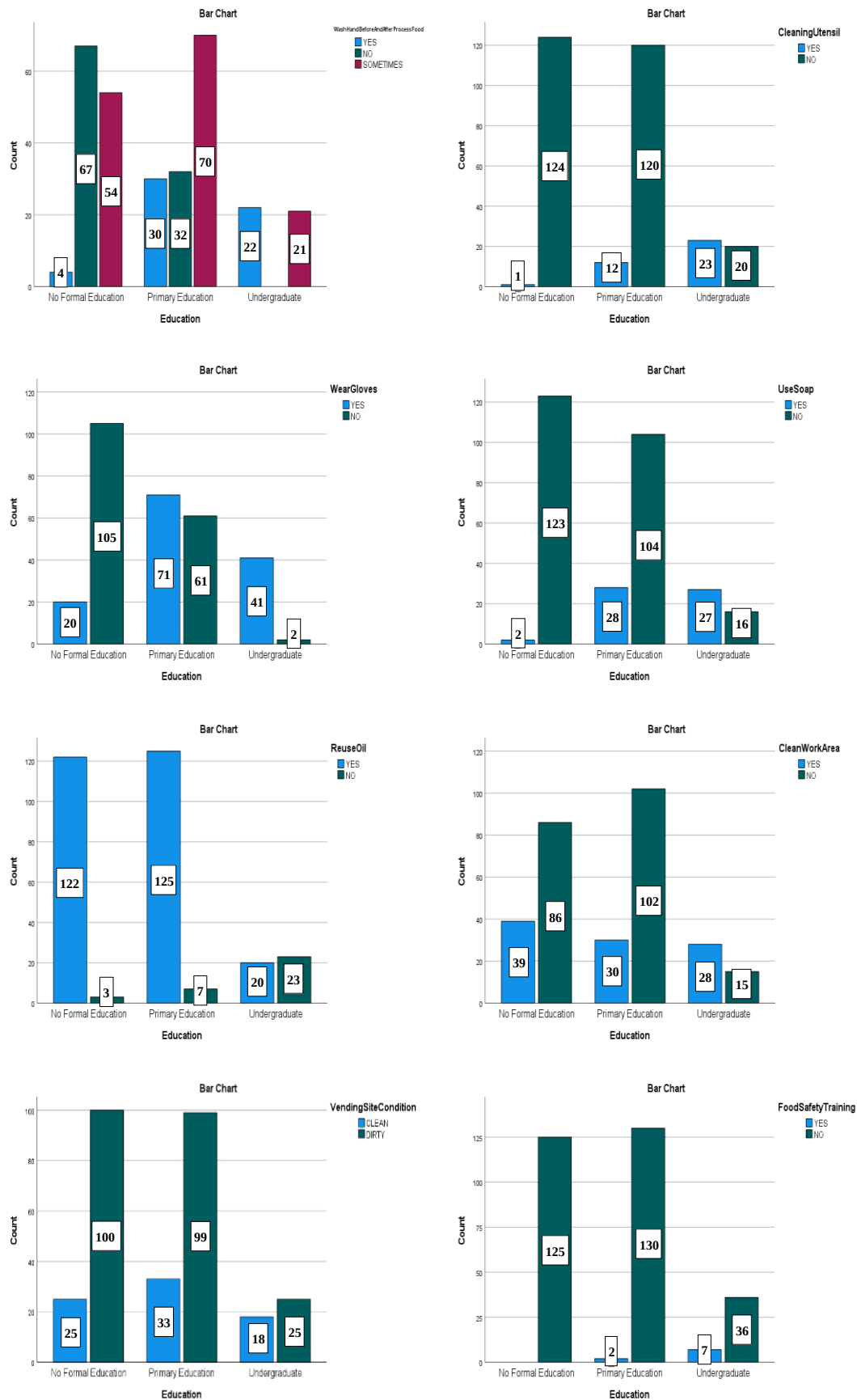


Figure 4.3: Frequencies of significant attributes of Education

There was no significant relationship between educational levels in infectious disease, vending site conditions and food safety training.

TABLE 4.5: DISTRIBUTION OF FOOD SAFETY BEHAVIORS BY WORK EXPERIENCE

Behavior	Junior (n=83)	Mid-Level (n=156)	Veteran (n=61)	Total (n=300)	p- value
Wash Hands Before/After Food Process Food					
Yes	21 (25.30%)	34 (21.79%)	1 (1.64%)	56	<.001
No	17 (20.48%)	47 (30.13%)	35 (57.38%)	99	
Sometimes	45 (54.22%)	75 (48.08%)	25 (40.98%)	145	
Cleaning Utensils					
Yes	12 (14.46%)	24 (15.38%)	0 (0.00%)	36	.005
No	71 (85.54%)	132 (84.62%)	61 (100%)	264	
Wear Gloves					
Yes	50 (60.24%)	73 (46.79%)	9 (14.75%)	132	<.001
No	33 (39.76%)	83 (53.21%)	52 (85.25%)	168	
Use Soap					
Yes	19 (22.89%)	36 (23.08%)	2 (3.28%)	57	.002
No	64 (77.11%)	120 (76.92%)	59 (96.72%)	243	
Reuse Oil					
Yes	75 (90.36%)	135 (86.54%)	57 (93.44%)	267	.308
No	8 (9.64%)	21 (13.46%)	4 (6.56%)	33	
Work During Diarrhea					
Yes	78 (93.98%)	121 (77.56%)	48 (78.69%)	247	.005
No	5 (6.02%)	35 (22.44%)	13 (21.31%)	53	
Infectious Diseases					
Yes	57 (68.67%)	89 (57.05%)	33 (54.10%)	179	.133
No	26 (31.33%)	67 (42.95%)	28 (45.90%)	121	
Clean Work Area					
Yes	13 (15.66%)	60 (38.46%)	24 (39.34%)	97	<.001
No	70 (84.34%)	96 (61.65%)	37 (60.66%)	203	

Vending Site Condition					
Clean	17 (20.48%)	46 (29.49%)	13 (21.31%)	76	.226
Dirty	66 (79.52%)	110 (70.51%)	48 (78.69%)	224	
Food Safety Training					
Yes	4 (4.82%)	5 (3.21%)	0 (0.00%)	9	.240
No	79 (95.18%)	151 (96.79%)	61 (100%)	291	

This table details food safety practices across work experience levels such as junior, mid-level, veteran with significant and non-significant correlations noted. 60.2 percent of juniors, 46.8% of mid-level and 14.8% of experienced vendors wear gloves. A p value of less than 0.001 indicates a significant relationship. Besides handwashing, use soap, diarrhea during working their p value provides a significant relationship with work experience. Shown in the following figure below.

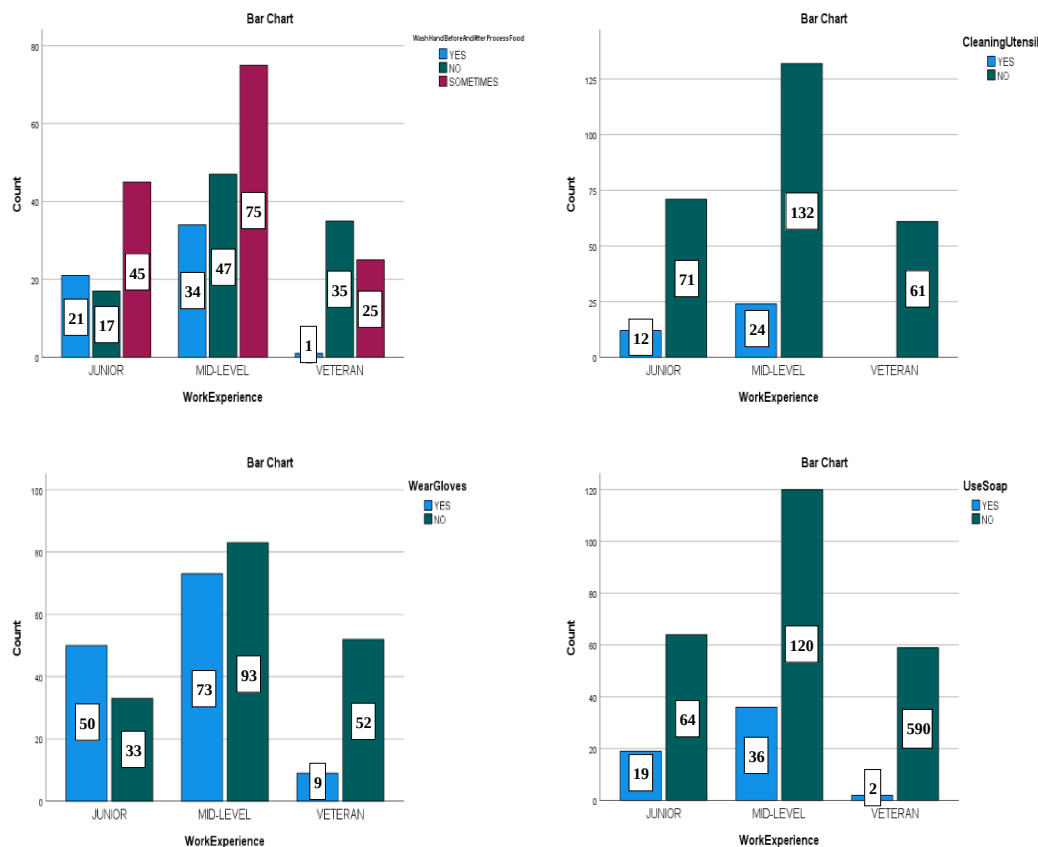


Figure 4.4(a): Frequencies of significant attributes of Work Experience

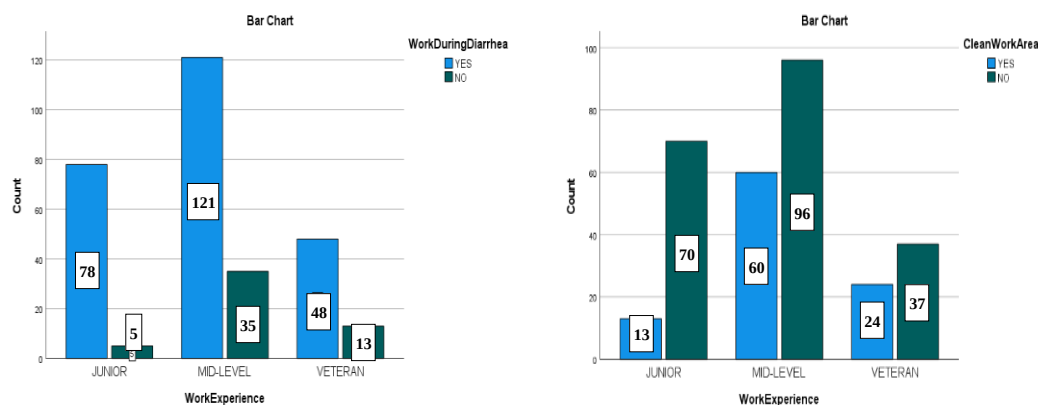


Figure 4.4(b): Frequencies of significant attributes of Work Experience

Cleaning utensil, reuse oil, infectious disease, vending site condition, food safety training have no significant relationship with work experience.

TABLE 4.6: DISTRIBUTION OF FOOD SAFETY BEHAVIORS BY MONTHLY INCOME

Behavior	Low-Income (n=48)	Mid-Range (n=127)	Upper- Range (n=125)	Total (n=300)	p- value
Wash Hands Before/After Food Process Food					
Yes	2 (4.17%)	31 (24.41%)	23 (18.40%)	56	.046
No	18 (37.50%)	41 (32.28%)	40 (32.00%)	99	
Sometimes	28 (58.33%)	55 (43.31%)	62 (49.60%)	145	
Cleaning Utensils					
Yes	1 (2.08%)	16 (12.60%)	19 (15.20%)	36	.057
No	47 (97.92%)	111 (87.40%)	106 (84.80%)	264	
Wear Gloves					
Yes	17 (35.42%)	62 (48.82%)	53 (42.40%)	132	.251
No	31 (64.58%)	65 (51.18%)	72 (57.60%)	168	
Use Soap					
Yes	4 (8.33%)	28 (22.05%)	25 (20.00%)	57	.111
No	44 (91.67%)	99 (77.95%)	100(80.00%)	243	
Reuse Oil					
Yes	48 (100.00%)	123(96.85%)	96 (76.80%)	267	<.001
No	0 (0.00%)	4 (3.15%)	29 (23.20%)	33	

Work During Diarrhea					
Yes	47 (97.92%)	123 (96.85%)	77 (61.60%)	247	<.001
No	1 (2.08%)	4 (3.15%)	48 (38.40%)	53	
Infectious Diseases					
Yes	37 (77.08%)	84 (66.14%)	58 (46.40%)	179	<.001
No	11 (22.92%)	43 (33.86%)	67 (53.60%)	121	
Clean Work Area					
Yes	3 (6.25%)	26 (20.47%)	68 (54.40%)	97	<.001
No	45 (93.75%)	101 (79.53%)	57 (45.60%)	203	
Vending Site Condition					
Clean	8 (16.67%)	29 (22.83%)	39 (31.20%)	76	.100
Dirty	40 (83.33%)	98 (77.17%)	86 (68.80%)	224	
Food Safety Training					
Yes	0 (0.00%)	4 (3.15%)	5 (4.00%)	9	.382
No	48 (100%)	123 (96.85%)	120 (96.00%)	291	

This table outlines the food security practices by income level i.e. low, middle, high range and mentions the significant and non-significant relationships. Only 4.2% of low-income vendors wash their hands, while 24.4% of middle-income vendors and 18.4% of upper-income vendors wash their hands. Their p value is 0.046 suggesting a significant relationship with higher income being associated with better hand washing. Also Reusing oil and Working during Diarrhea with p value are less than 0.001 which gives a significant positive relation.

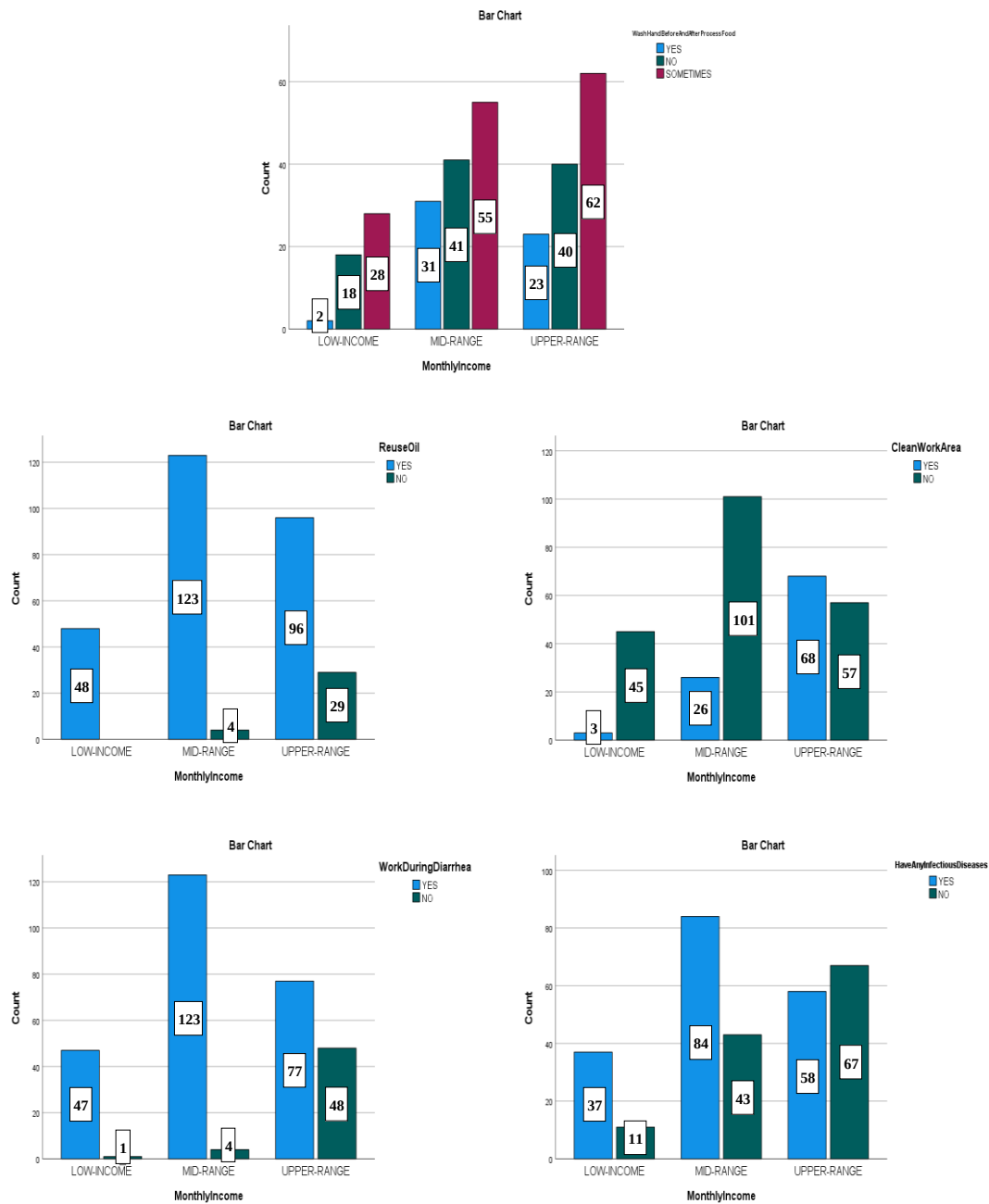


Figure 4.5: Frequencies of significant attributes of Monthly Income

Besides, wearing gloves, cleaning utensils, infectious diseases, clean work area, vending site conditions, food safety training, there are no significance relationship between them with income level.

4.2 Discussion

The results point to a serious public health concern due to the lack of cleanliness of street food vendors, unsafe practices often caused by lack of information, inadequate training on food safety, and unfavorable working conditions. According to the report, Dhaka's street food vendors have serious food safety and hygiene issues that pose serious risks to public health. One of the most important results is that only a small fraction of salespeople follows the important practice of regular handshakes. Frequent hand washing is essential to reduce cross contamination and stop the spread of dangerous bacteria, lack of understanding and lack of these basic hygiene standards including soap and water directly endangers their health and increases the chance of infection. Additionally, vendors must work in uncomfortable conditions, including diarrhea, as this can spread dangerous illnesses. The findings of this study on food safety and hygiene practices among street food vendors in Dhaka highlight significant gaps that may pose serious health risks. Of all vendors, only 18.67% regularly cleaned their hands as an early precaution against cross-contamination. It refers to a lack of knowledge or unwillingness to adhere to basic hygienic practices. Low compliance may be attributed to time constraints during busy vending hours, limited access to soap and water, or insufficient understanding of the importance of hand washing.

Since dirty dishes can carry dangerous viruses, it is particularly disturbing that 88% of vendors do not wash their dishes properly. Vendors' lack of adequate cleaning facilities or their preference for quick service over cleanliness may increase the risk of foodborne infection. The study found that 81% of vendors do not clean utensils with soap or detergent, indicating inadequate hygiene knowledge and the need for education about the important role of chemical cleaning in eliminating dangerous microorganisms. Grease, food particles, and bacteria cannot be completely removed by washing with water alone, which poses a serious obstacle to ensuring food safety. The most alarming statistic is that 82.33% of vendors went to work during diarrhea. This is worrisome because it directly increases the risk of infectious disease transmission. The cyclical nature of inadequate hygiene measures is further shown by the 60% of vendors who developed infectious diseases. In addition to being at risk of getting sick, vendors can potentially spread such illnesses to customers. In this study, the result of other researchers' findings will be compared with this papers' findings. This will give an

overview of the summary of all the researchers' findings and this papers' findings to everyone. At last, the best result that was found of this research was trained using the SPSS which is a statical analytical software.

The findings of this study on food safety and hygiene practices among street food vendors in Dhaka are compared with other studies. Where common problems of different geographical areas are highlighted. A significant commonality is the widespread lack of food safety training for vendors. Similar to Ahmed and Ali's findings which showed that 93.5% of vendors lacked food safety training, 97% of vendors in this study admitted to having no formal training. The fact that these studies point to a larger regional problem where lack of awareness of food safety regulations can threaten public health. Readily available training programs are an urgent need because vendors may inadvertently increase the risk of foodborne illness if they are not formally educated on operating procedures.

Another recurring observation is that the utensils are not adequately cleaned. According to this study, eighty-eight percent of the vendors do not clean their utensils well, which is consistent with the findings of Muzaffar et al., who found that vendors operate in an unhygienic environment. The impact of inadequate sanitary infrastructure on food safety practices is highlighted by observations in both investigations of the absence of adequate cleaning supplies such as soap or detergent. The ongoing risk of contamination is exacerbated by the apparent preference of vendors in both cases. Perhaps they do this for quick service due to time and financial constraints.

The apparent lack of proper hand hygiene is another obvious similarity. Only 18.67% of traders in Dhaka clean their hands regularly which is much lower than Hossain's study. Despite increased handwashing rates of 89%, Islam and Tanzia's study still shows a general lack of regular handwashing practices, possibly due to barriers such as lack of awareness or availability of resources.

82.33% of the vendors work during diarrhea which is encouraging as it helps the spread of infectious diseases. This finding is reinforced by Md. Al Mamun's research which simultaneously reported lack of hygiene awareness and absence of formal hygiene rules for street vendors.

Levels of formal education of sellers differ from each other Mozaffar et al. A slightly lower trend was reported in Dhaka with about 70% of vendors lacking formal education. But this research shows that a significant portion of vendors lack formal education.

TABLE 4.7: COMPARATIVE ANALYSIS

Author	Attributes	Percentage
Islam, Tanjia IX	No Food Safety Training	85%
	Secondary Education	48%
	Hand Exercising Washing Practice	89%
Hossen	Food Safety Knowledge (Good)	72.5%
	Food Safety Practice (Good)	0.5%
MJ Ahmed, M Ali	Food Safety Knowledge (Good)	12%
	No Food Safety Training	93.5%
Muzaffar et al.	No Formal Education	70%
	Improper Food Handle and Unsanitary Setting	85%
Mohammad Al Mamun	No Formal Education	43.6%
	No Food Safety Knowledge	68%
This Result	No Formal Education	41.67%
	Never Wash Hand	33%
	Do Not Clean Utensil	88%
	Not Wear Gloves	56%
	Not Use Soap	81%
	Reuse oil	89%
	Not Clean Work Area	67.67%
	Work during Diarrhea	82.33%
	Affected Infectious Diseases	59.67%
	Dirty Vending Site Condition	65.67%
	No Food Safety Training	97%

CHAPTER 5

LIMITATIONS & RECOMMENDATIONS

5.1 Limitations

As a result, the study and research were quite limitation. It was really challenging at times, but thanks to God, we overcame these limitations. Some are the difficulties in collecting data on hygiene and food safety practices of street food vendors. Approaching and communicating with street food vendors for the purpose of data collection may be difficult as they may operate in different locations and in temporary environments. On the other hand, some vendors may be reluctant to participate because they are concerned about privacy issues or regulatory fallout. Vendor behavior during data collection may be influenced by researchers or observers, resulting in altered or inflated answers about their cleanliness standards.

5.2 Recommendations

Some recommendations to enhance food safety, hygiene, and sustainability among street food vendors in the Dhaka City are given below:

1. Training and Capacity Building

- **Regular Workshops:** Establish ongoing training programs focusing on food safety, hygiene practices, and sustainability.
- **Certification Programs:** Create a certification system for vendors who complete food safety training, boosting their credibility and attracting more customers.

2. Improved Hygiene Practices

- **Handwashing Stations:** Install portable handwashing stations at vending sites to promote regular hand hygiene.
- **Sanitary Equipment:** Provide vendors with access to clean cooking utensils, containers, and storage solutions to prevent contamination.

3. Waste Management Initiatives

- **Waste Separation:** Encourage vendors to implement a waste separation system and provide them with designated bins for recycling, compost, and general waste.
- **Composting Education:** Teach vendors about composting food scraps to reduce waste and create organic fertilizers.

4. Sustainable Sourcing

- **Local Partnerships:** Facilitate connections between vendors and local farmers to source fresh, seasonal ingredients, supporting the local economy and reducing transportation emissions.
- **Promote Eco-friendly Products:** Encourage the use of biodegradable or reusable packaging and utensils to minimize plastic waste.

5. Community Engagement

- **Public Awareness Campaigns:** Launch initiatives to educate consumers about the importance of food safety and the benefits of choosing sustainably sourced street food.
- **Feedback Mechanisms:** Create platforms for customers to provide feedback on food safety and hygiene, empowering them to make informed choices.

6. Collaboration with Local Authorities

- **Policy Advocacy:** Work with local government to develop policies that support food safety standards for street vendors and provide them with necessary resources.
- **Inspection Programs:** Implement regular inspections to ensure compliance with food safety standards, paired with guidance and support for vendors.

7. Monitoring and Reporting

- **Data Collection:** Establish a system for tracking food safety incidents and vendor practices to identify trends and areas for improvement.
- **Regular Reviews:** Conduct annual reviews of practices and policies to assess effectiveness and make necessary adjustments.

8. Financial Support

- **Microfinance Options:** Explore partnerships with financial institutions to offer microloans for vendors to invest in better equipment and practices.
- **Subsidies for Training and Equipment:** Advocate for government or NGO subsidies to support vendors in implementing food safety and sustainability initiatives.

CHAPTER 6

CONCLUSION

6.1 Conclusion

In general, this study revealed that street food sellers in the Dhaka city had poor to moderate levels of food safety and hygiene practices, low levels of food safety awareness, and unfavorable attitudes about food safety. Food safety training, awareness campaigns, and financial support to improve street food vendors' knowledge and practices of food safety are just a few of the targeted strategies and intervention programs that are necessary given the associated public health concerns that can result from inadequate or a lack of food safety, including poor food handling or preparation practices.

6.2 Implication for Further Study

Future research can be done on this topic including how to increase consumer awareness and understanding of food safety and hygiene. Prevalence and identification of foodborne diseases among street food consumers. Besides, implementing food safety rules and policies on how street food vendors can develop hygiene practice habits.

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APPENDICES

Questionnaire

Dear Participant,

You are invited to join a study titled "Practices of Food Safety and Hygiene among Street Food Vendors in Dhaka". This 10-minute questionnaire aims to assess the food safety and hygiene practice knowledge level of vendors.

Your participation is voluntary, and you can withdraw at any time. Your responses will be anonymous and confidential, used solely for research. There are no known risks.

1. Do you have consent to provide your data for this study?

- a. Yes
- b. No

2. Gender

- a. Male
- b. Female

3. How old are you?

- a. < 25
- b. 25 – 50
- c. > 50

4. What is your educational qualification?

- a. No formal education
- b. Primary
- c. Under graduation

5. How much work experience do you have?

- a. < 5
- b. 5 – 9
- c. 10 – 15

6. Do you wash your hands before and after work?

- a. Always
- b. Sometime
- c. Never

7. Do you wash utensil properly?

- a. Yes
- b. No

8. During work, do you wear apron, cap and gloves?

- a. Yes
- b. No

9. After using the toilet, do you wash your hands with soap or detergent?

- a. Yes
- b. No

10. What is your monthly income?

- a. < 10000
- b. 10000 – 20000
- c. > 20000

11. Do you reuse oil?

- a. Yes
- b. No

12. Do you clean the work area before starting work?

- a. Yes
- b. No

13. Do you handle food at work when you have diarrhea?

- a. Yes
- b. No

14. Do you have any infectious diseases?

- a. Yes
- b. No

15. What is the condition of the area surrounding the vending site?

- a. Clean
- b. Dirty

16. Have you completed the food safety training?

- a. Yes
- b. No

Thank you for your valuable contribution.

Some pictures of street food vendor in Dhaka.





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**Synopsis of Proposed Research Projects for Daffodil International University
Thesis 2024**

Name: Peu Dhar

Id: 201-34-1055

1. Project Title: Practices of Food Safety and Hygiene Among Street Food Vendors in Dhaka

2. Background and justification: Ready meals and a range of drinks are commonly offered for sale at stations, markets, parks, and zones concentrated in regions used for industrial and educational purposes. This is known as street-vended food (S. SamapundoR. Climat, April 2015). Street food vending is widespread in Bangladesh and other developing countries. A large section of the population of the capital city of Bangladesh, Dhaka, relies heavily on street food for convenient and reasonably priced meals. These vendors attract locals and visitors with their wide selection of regional specialties. However, the fast-expanding street food market also has drawbacks, particularly regarding food safety and hygiene. Street food's availability, affordability, and flavor have made it a staple of diet culture, particularly in cities (Temeche, Neela, & Dibaba, 2016). Street foods are defined as ready-to-eat meals and drinks that are made and/or sold by vendors and hawkers, particularly on streets and other public areas. It was defined by the Food and Agriculture Organization of the United Nations (FAO). In developing nations, selling street food is a common practice in metropolitan centers. It offers an affordable source of nutrition, particularly for the low-income urban poor workers. A FAO survey conducted in 2007 estimates that 2.5 billion people worldwide consume street food daily (Agnes Hanashiro, 2005), (Aybuke Ceyhun Sezgin, October 2016). Since it is evident that the sanitary quality of food sold on the street is

questionable, this might result in food-borne illnesses, which are still a major worldwide public health problem, particularly regarding diarrhea diseases. Therefore, the most crucial factor in the area of nutrition security is the safety of street meals. It has been acknowledged that ensuring food safety is crucial to preserving public health. Dhaka is a populous city. It is the capital of Bangladesh with a population of over 20 million and a density of 23,234 people per square mile (Md. Nazmul Haque, 2023). Banna et al. demonstrated that higher food safety knowledge is associated with a good level of food safety practices among food handlers (Md. Hasan Al Banna, August 2021). Previous studies reported that the level of awareness, attitude, and food safety training were significantly related to the hygienic practices of the street food vendors. Microbial foodborne diseases represent a significant public health concern associated with street food consumption (Khaliduzzaman, 2020). Furthermore, multidrug resistance of foodborne bacteria has increased the vulnerability of the food safety situation in terms of public health (Nasser Abdulatif Al-Shabib a, January 2016). More than 30 million people are affected by foodborne diseases in Bangladesh every year (Victoria Stephen Kwol a b, April 2020). Street food is particularly valued for its distinct flavor, taste, and benefits. It also plays a significant role in the nation's economy by helping customers satisfy their dietary and nutritional needs at a relatively cheap cost, particularly for lower- and middle-class family members (Mueena Jahan, 14 July 2018).

3. Objective:

3.1 Specific Objective:

- To evaluate the food safety and hygienic practice percentages of food vendors in Dhaka.

3.2 General Objective:

- To assess the variety and healthy food items by street vendors.
- To increase awareness of food vendors.
- To check the vendor's use of utensils and the preparation area for hygiene issues.
- To determine how to effectively apply the National Hygiene Regulation (R638) to include street meals and to improve the rules pertaining to food sold on the street.

4. Research Questions:

When thinking about turning the idea into a reality, the following questions came to mind:

1. What is the percentages of food safety practices and hygienic conditions among street food vendors in Dhaka?
2. What are the sanitation facilities available to street food vendors, and how do they impact food safety?
3. What are the main challenges and obstacles in maintaining the hygiene of street food vendors?

4. Methodology: This chapter explains the study's setting, population, sampling locations, size, constraints, methods for gathering and analyzing data, and ethical considerations. Statistical packages for SPSS and MS Excel were used for data analysis. I'll create a questionnaire first, and then I'll conduct in-person interviews around the Dhaka district. In order to assess the state of the current scenario, I will conduct this survey at major intersections, bus terminals, train stations, offices, colleges, and schools. Motijheel, Kamalapur, Mouchak, Palton, Gulistan, Mogbazar, Karwan Bazar, Shahbagh, Laxmi bazar, Chokbazar, Mirpur, Gabtoli, Jatrabari, area will choose to collect information about street food. During the interview, the vendors will be asked various questions. Food handlers will be questioned using a standardized questionnaire as part of the study.

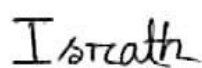
5. Expected Outcome and socio-economic impact of the study: By doing this research, we can understand what percentage of street food vendors in Dhaka City prepare food according to health regulations and the food safety practice level of street food vendors can also be found. This will help common people to understand the health risks of consuming unhygienic food which will create awareness among them.

6. Timeline: The timeline covers around a year, giving enough time for every phase of the research process. But the schedule can change depending on factors such as the complexity of the study, availability of resources, and logistical constraints.

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