

YANGON UNIVERSITY OF ECONOMICS
DEPARTMENT OF ECONOMICS
MASTER OF DEVELOPMENT STUDIES PROGRAMME

**AN ASSESSMENT ON FOOD SAFETY KNOWLEDGE,
ATTITUDE AND PRACTICES OF STREET FOOD VENDORS IN
SANCHAUNG TOWNSHIP, YANGON REGION**

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EMDevS – 5 (17th BATCH)

OCTOBER, 2022

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**A thesis submitted as a partial fulfillment towards the requirement for the
Degree of Master of Development Studies (MDevS)**

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ABSTRACT

Street food vendors are considered legal businesses without a license, but are under the control of the Yangon City Development Committee (YCDC). Temporary sales are allowed from 3pm to 8pm without registration fee and zone restrictions. The main objectives of the study are to examine the level of knowledge, attitude and practice on food safety of street food vendors in Sanchaung Township, Yangon Region. The quantitative technique used for this investigation is simple random sampling method. In order to preserve personal hygiene, all street food vendors believed in hand washing before work. Surprisingly, mostly street food vendors knew that personal protective equipment such as mask, gloves, and caps are the parts of personal hygiene. The mean value shows that mostly respondents have agreed to the knowledge questions, attitude questions and most of the respondents have sometimes practice. The study suggested that public health department, and the Yangon City Development Committee to conduct special food safety training for street food vendors in line with global health guidelines. The local authorities should implement food safety promotion programs targeting street food vendors to encourage the use of hygienic practices.

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LIST OF ABBREVIATIONS

CDCs	-	City Development Committees
FAO	-	Food and Agriculture Organization
FDA	-	Food and Drug Administration
FQCL	-	Food Quality Control Laboratory
GMPs	-	Good Manufacturing Practices
HACCP	-	Hazard Analysis Critical Control Point
IEC	-	Information, Education and Communication
MFDBA	-	Myanmar Food and Drug Board Authority
MAS	-	Myanmar Agricultural Service
MoC	-	Ministry of Commerce
MoH	-	Ministry of Health
MSTRD	-	Myanmar Scientific and Technological Research Department
NFL	-	National Food Law
SMEs	-	Small and Medium-sized Enterprises
YCDC	-	Yangon City Development Committee

CHAPTER I

INTRODUCTION

1.1 Rationale of the Study

The term street food refers to a variety of ready-to-eat foods and beverages, sometimes served in public places. Street food can be eaten at the point of purchase or taken away and eaten elsewhere (WHO, 1996).

Street food selling is a popular and unique part of a large informal sector. Increasing unemployment and poverty around the world are the main reasons why people need little experience and capital to set up a street food business (Addo, Gyimah, Vampere, 2020).

Street food plays an important role in the socioeconomic sector by providing food and nutritional support valued for the unique taste of its food products at affordable prices. Around 2.5 billion people around the world eat street food every day (Fellows & Hilmi, 2011).

There are different types of street food vendors including mobile shops, roadside stands and depending upon the wisdom of the individual, available resources, type of food sold and the availability of other items.

As more people eat out, it has become a major public health priority. As a result, food stalls, Restaurants and street food vendors have faced outbreaks of foodborne illnesses.

The World Health Organization (WHO) estimates that 70% of diarrheal diseases in developing countries are thought to originate from food (WHO, 2002). WHO recognizes that foodborne diseases are among a wide range of illnesses that are a growing public health problem worldwide and it causes low disease resistance and loss of productivity. According to the latest WHO data released in 2020, diarrheal deaths in Myanmar reached 7,237, or 2.01 percent of the total.

Street food safety is an important public health issue in developing countries, including Myanmar. Many people who live in urban areas like restaurants and they eat outside fast-food joints and street food vendors. In Yangon Region, street food vendors are mostly located in residential areas, near workplace and they tend to congregate in crowded areas, including bus stops and train stations.

1.2 Objective of the Study

The main objective of this study is to investigate the knowledge, attitude and practice of food safety and hygiene among local street food vendors in the Sanchaung Township, Yangon Region area.

The specific objectives are:

(a) to identify current business situation of street food vendor at Sanchaung Township, Yangon Region;

(b) to examine the level of knowledge, attitude and practice on food safety of street food vendors at Sanchaung Township, Yangon Region; and

(c) to find out the relationship between sociodemographic and knowledge, attitude and practice on food safety in Sanchaung Township.

1.3 Method of Study

This study mainly focuses on 150 street food vendors using random sampling method and conducted in Sanchaung Township, Yangon Region. The study used the descriptive analysis method based on both primary data and secondary data. Primary data is collected 150 respondents with self-administered, structured questionnaires from street food vendors who are serving food for consumers in Sanchaung Township, Yangon Region. The secondary data is obtained from reports and fact from Ministry of Health and Sports, Yangon City Development Committee, Food and Drug Board of Authority, World Health Organization, Sanchaung Township General Administration Department, libraries and websites.

1.4 Scope and Limitation of the Study

The study is only one Sanchaung township selected as sample area of Yangon Region because this region consists forty-five townships. Among them, collected of 150 street food vendors. Therefore, the findings were not generalizable to Yangon Region Street food vendors.

1.5 Organization of the Study

The study is organized into five chapters. Chapter one is the introductory chapter with rationale of the study, objectives of the study, method of study, scope and limitation of the study and organization of the study. Chapter two presents literature review on trade in street foods, street food vendors, personal hygiene of street food vendors, foodborne diseases, safety of street foods, knowledge, attitudes and practices on food safety and foodborne diseases. Chapter three shows an overview of street food vendors in Sanchaung Township, Yangon Region. Chapter four describes the survey analysis on the study area. Chapter five mentions the conclusion which includes findings, suggestions and recommendation.

CHAPTER II

LITERATURE REVIEW

This chapter presents a review of the literature to explore the studies that have looked at trade in street foods, street food vendors, safety of street foods, personal hygiene of street food vendors, knowledge, attitudes and practices on food safety and foodborne diseases.

2.1 Safety of Street Foods

The main health risks associated with street food are pesticide residues; parasitic infections; and use of unauthorized chemicals. Although environmental pollution and unrestricted access to safe water are identified as potential risks (Abdussalam & Kaferstein, 1993).

The potential for contamination of street food with pathogenic microorganisms is well documented, and many illnesses are caused by consumption of unsanitary street food (Abdussalam & Kaferstein, 1993). The risk of microbial contamination depends on the type of street food and how the food is prepared. Food risk is determined by the type of food, pH and method of preparation; availability of water; handling Influenced by exposure temperature and holding time (Mathee, Von Schirnding, Byrne, De Beer, Letlape, Hobbs, & Swanepoel, 1996).

In general, low-moisture cereals and baked goods, sufficient sugar salt or acidic products and certain fermented products such as dairy products. It is less likely to support bacterial growth than eggs and meat products. Dishes made with raw ingredients or ice are also dangerous items. (Arambulo, Almedia, Cuellar & Belotto, 1994).

Foods that are cooked immediately before consumption are safer than foods that are cooked and stored at ambient temperature. Other causes of microbial contamination include poor food preparation and handling; Adequate storage facilities; hygiene of

vendors; Including adequate sanitation and waste disposal facilities. The health risk from street food is no greater than that from foods or dishes from other sources such as restaurants (Abdussalam & Kaferstein, 1993).

Food safety is one of the most important public health issues, and it contributes significantly to health care costs (Scallan and Hoekstra, 2011). Globally, 600 million people become ill, 549 million die from diarrheal disease and an estimated 420,000 die each year after eating contaminated food (Krick, 2015). Food production processes such as cooking; Improper handling by food handlers during food production processes such as storage and serving plays a major role in food contamination (Zanin and Cunha, 2017). Therefore, the involvement of food handlers is important to prevent foodborne illness (Bou-Mitri, Mahmoud and El Gerges, 2018)

Good knowledge and a positive attitude among food handlers and proper food handling practices can help control foodborne illness outbreaks in certain situations (Sharif and Al-Malki, 2010). In addition to good knowledge and positive attitudes about food safety, socio-demographic conditions, such as the education and food safety training attended by food handlers, play an important role in motivating food handlers to implement appropriate food handling practices (Al-Shabib and Mosi, 2016).

Essentially, food safety issues are everyone's responsibility to ensure safe food. This means that all necessary measures must be taken throughout the entire food chain, from farm to fork. An important step to reduce the risk of food-borne pathogens, especially from street food, is contamination in the cooking and sale of food; Controlling food preparation steps that can aid growth and survival. It educates food handlers particular attention should be paid to improving the environmental conditions in which trade is conducted and providing essential services to sellers to ensure the safety of their goods. (WHO, 2002).

2.2 Personal Hygiene of Street Food Vendors

Good personal hygiene is necessary to avoid food contamination to prevent pollution; Everyone in a food handling area must maintain a high standard of personal hygiene and cleanliness, even if they are not actively handling food.

A street food vendor must:

- Wash hands before starting work, handling food or wearing on gloves.
- Wash hands after using the toilet, smoking, coughing, sneezing, blowing the nose, wash hands with soap and warm water after handling body parts (face, nose, ears, mouth) and performing hygiene tasks such as handling garbage or mopping. Dry hands thoroughly with a disposable paper towel or hand dryer.
- Take all practical measures to prevent unnecessary contact with ready-to-eat foods.
- Pin the hair back and tie the length of the hair back.
- Secure hair clips, hair pins, buttons on clothes, jewellery, bandages.
- Make sure bandages or dressings on exposed parts of the body are covered with waterproofing.
- Not sneezing on unprotected food or food-contact surfaces, avoid blowing and coughing.
- Not eat unprotected food or surfaces that may come into contact with food.
- Not spitting in food handling areas and not smoke or use tobacco or similar preparations.
- Not touch food after touching earrings, hair, nose, ear, eye, skin lesions, saliva, mucus, sweat, blood, money and before washing hand;
- Not wear jewellery on hands and wrists; and
- Not urinate or defecate, except in a toilet (Population Health Division, 2009).

2.3 Trade in Street Foods

The street food industry plays an important role both economically and in cities and towns of many developing countries, meeting the food needs of urban dwellers. It contributes significantly to household food expenditure and also provides an income for many female-headed households.

Street foods are defined by the Food and Agriculture Organization (FAO) as food and beverages prepared and sold by vendors and vendors on streets and other similar public spaces (FAO, 1997). In this definition, the main characteristic of street foods is their retail location, that is, they are sold on the street, and they are classified as part of the informal sector.

To differentiate street food vendors from formal food establishments such as restaurants and to separate street food from carts or baskets or balance poles or from shops or stalls with less than four permanent walls (Tinker, 1987). Therefore, the vendors of street food are micro-entrepreneurs who form part of the so-called informal sector.

The street food sector has experienced phenomenal growth over the past few decades due to socio-economic changes in many countries. Urbanization and population growth are expected to continue, and street food, which is largely a non-urban phenomenon, will grow accordingly (Atkinson, 1992).

Street food trading has emerged as a business for the poor in many developing countries. Street foods are considered essential for maintaining the nutritional status of the population (Maxwell, 2000). Street food sales ensure food security for low-income urban residents and provide livelihoods for many workers who would otherwise be unable to establish businesses. As vendors often buy their ingredients locally, the benefits of this trade extend throughout the local economy (Winarno & Allain, 1991).

Street food is a different type of food and includes foods, Includes beverages and snacks. They are mass-consumed foods that are regularly consumed without further modification or cooking. Street foods show variation in terms of ingredients, methods of processing, and consumption (Ekanem, 1998). Street food trading is usually involved in retail and manufacturing activities, but selling street food is the most prominent part of the trade. Most street food is processed to some degree, and most of it can be invisible

on the street. Because of this, the trade should be seen as part of the whole food system, rather than just as a service or retail activity (Weber, 1987).

The benefit and contribution of street food trade to the economies of developing countries calls for ways to mitigate the risks in its consumption and protect the health of the consumer population. To ensure the safety and quality of street food and protect consumers from unsafe food, management of key risk factors associated with street food needs to be strengthened and effective preventive measures taken at appropriate levels (Sezgin, 2016).

All street vendors involved in the street food trade, including consumers and governments, must be involved in ensuring the safety of the food sold and consumed. (Alimi, 2016). The street food business is a major indirect driver of the economy of developing countries and should not be ignored as it has turned to the main means of livelihood for the majority of the unemployed population to improve their lives. This food service sector has played, and continues to play, an important role in ensuring food security and hunger reduction, assuring access to affordable and convenient food.

2.4 Street Food Vendors

The street food vendors are not a homogenous group but vary along various socio-economic and demographic criteria. With regard to mode of selling, vendors can be broadly classified into stationery and ambulatory. It has been found that stationary vendors, who sold their wares from small stalls, kiosks, and so forth, were the predominant type in most of the countries studied (Powell, Brodber, Wint & Campbell, 1990).

Street food vendors refer to people pushing carts selling their products. Most of the vendors are bus and train stations; markets and shopping areas; business districts; outside schools and hospitals; residential suburbs; Most vendors operate from strategic locations, including factories and construction sites. In some places, vendors appear to have regular customers (Nasinyama, 1992).

Street food vendors are defined as consumer goods such as beverages and food sold in public places (Bhattacharjya and Reang, 2014). Street food sales are usually of an informal nature and are often not banned by the relevant authorities (Samapundo, Thanh, Xhaferi, Devliegher, 2016). Street food vendors provide dietary diversity for

most people in the informal sector; Because they are inexpensive; Affordable food is readily available (Alimi, 2016).

Street food businesses increase income for individuals from low-income households involved in street food vending (Choudhury, Mahanta, Goswami, Mazumder, Pegoo, 2011). Most street food vendors are poorly educated and often lack adequate food safety knowledge and skills (Samapundo, Thanh, Khaferi, Devlieghere, 2016). They do not follow food safety procedures during food handling and preparation, which can lead to food contamination. Food contamination occurs due to lack of hygiene. A variety of factors are intertwined, such as incorrect food temperatures and failure to follow proper food preparation techniques. (Monney, Agyei, Owusu, 2013).

In addition, most street food vendors have refrigerators. It was found that facilities such as potable water and electricity were inadequate (Farahat, El-Shafie, Waly, 2015). Inadequate resources – such as lack of electricity and contaminated water – can hinder the implementation of safe food practices. Thus, the food is contaminated and polluted (Monney, Agyei, Owusu, 2013).

Street food vendors are considered a food safety risk to consumers; Vendors are warehouses, food reheaters; This is due to the frequent lack of basic food service infrastructure and equipment such as refrigerators and waste disposal facilities (Rane, 2011). Lack of adequate food service equipment is a barrier to effective implementation of safe food storage practices at street food outlets (Muyanja, Nayiga, Brenda, Nasinyama, 2011). Adequate food safety knowledge and skills to effectively implement food safety measures at street food outlets; Having adequate infrastructure and equipment is essential (Aluko, Ojeremi, Olakele, Ajidagba, 2014).

2.5 Knowledge, Attitudes and Practices on Food Safety and Foodborne Diseases

The relationship between knowledge, attitudes and practices are explained through the KAP model (Simelane, 2005). Knowledge is accumulated through learning processes, which may be formal or informal instruction, personal experience and experience sharing are possible (Glanz & Lewis, 2002). It has traditionally assumed that knowledge is automatically translated into behavior (Glanz & Lewis, 2002).

Knowledge was found to be unimportant and cognitive processing of information important in the attitude-practice relationship (Simelane, 2005). Attitude is the way people think, It includes evaluative concepts related to how we feel and behave (Keller, 1998) It includes cognition, emotions and what to know a habit component that refers to how to feel and what to do (Keller, 1998). Attitudes can influence the intention to perform a given practice (Rutter & Quine, 2003).

Another concern is that there is an assumption that there is a direct relationship between knowledge and practice. Health-related studies have found that knowledge is not the only factor influencing treatment-seeking practices, and health programs use socio-cultural, the environment Many economic and structural issues need to be addressed (Launiala, 2009). Practices include self-esteem, practices further influence one or more KAP variables such as self-efficacy and misconceptions. (Ajzen, 2002).

Food is the health of the population. It is a key factor for nutritional status and productivity. Therefore, it is important that the food we eat is healthy and safe. Unsafe food can cause many foodborne illnesses. The understanding of food safety is improved by defining two other concepts: toxicity and risk.

Toxicity is the ability of a substance to cause harm or injury under any circumstances. Hazard is the relative probability that harm or injury may occur when the material is not used in the prescribed manner and quantity. Hazards are physical, which can affect the health of consumers. Possible chemical and biological effects. A physical hazard is any unusual physical material in food that can cause illness or injury, such as wood, stones, pests including hair etc.

Chemical hazards are chemical or deleterious substances that may be intentionally or unintentionally added to food. These types of hazards include pesticides; chemical residues; toxic metals; polychlorinated biphenyls; preservatives; Contains food colors and other additives. Biological hazards are organisms and include microorganisms. Food and disease-causing microorganisms are called foodborne pathogens.

Foodborne diseases are usually defined as infectious air-borne diseases caused by agents that enter the body through food consumption (World Health Organization, 2000). Foodborne diseases are a significant and growing public health problem in both developing and developed countries (Bhattacharjya & Reang, 2014).

Many food-borne microbiological events have been reported from raw materials, unclean cooking equipment; environmental pollution. It can be introduced into food by careless handling during food preparation. Contamination of food can occur during the transition from food producers to consumers. Therefore, food hygiene is essential to prevent food-borne diseases in the community, and food safety is an essential issue for public health.

Food and water contamination have traditionally been known sources of illness in human societies. Foodborne diseases remain among the most widespread health problems in the contemporary world. In rich and poor countries alike, they cause a health burden ranging from mild depression to serious illnesses. However, the global burden of foodborne disease Not well defined at the regional or national level.

Acute gastroenteritis is not all gastroenteritis, but gastroenteritis is not always acute gastroenteritis, but foodborne pathogens that cause acute gastroenteritis (Flint, Van Duynhoven, Angulo, DeLong, Braun, Kirk, Scallan, Fitzgerald, Adak, Sockett, Ellis, Hall, Gargouri, Walker, Braam, 2005).

Obtaining global estimates is more complex when data from different countries are combined to obtain regional or global estimates, and the influence of study design and existing monitoring systems on these estimates must be considered (Flint, Van Duynhoven, Angulo, DeLong, Braun, Kirk, Scallan, Fitzgerald, Adak, Sockett, Ellis, Hall, Gargouri, Walker , Braam, 2005).

The globalization of the food supply system has presented new challenges to food safety and contributed to the international public health problem of foodborne disease. It is a growing food production and trade. Rapid urbanization associated with increased food preparation/consumption outside the home and the emergence of new antibiotic-resistant pathogens and food vehicles. To initiate and sustain efforts aimed at preventing foodborne diseases at national and international levels; It is necessary to determine the extent of the problem.

2.6 Review on Previous Studies

Review the previous studies on street food vendors' knowledge, attitudes, and practices regarding food safety. Selected studies in this area are reviewed and discussed below.

Khin Ma Gyi (2000), studied the identification of common bacteria associated with Street-vended foods such as Fast Foods and Myanmar Traditional Foods from four townships such as Lanmadaw, Yankin, North Okalapa and Kamaryut in Yangon. In this study, *Escherichia Coli*, *Coliforms*, *Staphylococcus Aureus* and *Clostridium Perfringens* were isolated from Burmese traditional foods. *Salmonella* was found in only one sample of Fast Foods. The food samples in this study found that hygiene and sanitation were not satisfactory. Making street food safe to eat; Hygiene and sanitation in storage and sale need to be improved.

Aung Kyaw Myint (2005), studied the food safety knowledge, practice and health status of food handlers from restaurant in Downtown townships of Yangon City, Myanmar. This study design was cross sectional survey to explore the knowledge, attitude and practice of food handler at restaurant in Downtown Township. This study found that among the 240 respondents surveyed their health personal hygiene, food contamination and good manufacture procedure. The knowledge level of food handler on safety food were fair knowledge group. According to attitude of food handler, respondents have good attitude. The practice of respondents on personal hygiene has fair practice possessed in the respondents. In this study, significant gap between knowledge and practices on these topics existed.

Zayar Htein Win (2007), studied the food hygiene's knowledge, attitude and practices of food handlers conducted in mass catering from the selected military units of Mingaladon Cantonment Area. According to this study, there was relationship between knowledge, attitude and practice of respondents. And also, the study showed that knowledge, attitude and practice of food handlers was different mentioned based on type of food preparation. Therefore, high knowledge possessed also the high attitude and high practice about the food hygiene.

Faridah, Chemah, Rosmaliza and Norhayati (2015), examined the awareness of food handler personal hygiene on food hygiene practices. The study found that food handlers need good hygiene. They do not understand important aspects of personal

hygiene, such as cleaning surfaces and controlling food temperature values during cooking. There is a need to acquire and promote hygienic practices related to hygiene and food safety for consumers. Food safety knowledge has a positive relationship between hygiene and mobile food handlers. Also, the study helps to make consumers aware of food quality and safety. Also, more food education should be done for mobile food handlers. Safety and hygiene practices to protect not only consumers but also ready-to-eat food.

Tin Aung Soe Htwe (2019), studied factors associated with food safety knowledge and practice among street food vendors in Taunggyi Township, Myanmar. The study found that most vendors have good food safety knowledge, but that their hygienic practices require improvement. Therefore, the Food and Drug Administration (FDA); The Department of Public Health and the Department of Municipal Affairs should conduct food safety training with specialized training in line with global health guidelines for street food vendors. Street food vendors must have current food safety training certificates; Local authorities should be empowered to process documents such as medical certificates and infrastructure of street food stalls.

Ferdaus, Lina, Das and Baman (2020) studied food safety knowledge, attitudes and practices of street food vendors in Jashore Region, Bangladesh. According to the study, the level of food hygiene knowledge of the food vendors proved to be satisfactory in the study. However, although street food vendors have adequate food safety knowledge and attitudes, poor understanding of safe food handling is reflected by their inadequate and unsanitary practices during food sales. Most of the street food vendors in this study had low levels of education, which contributed to their poor food safety practices. The study suggests that overall food safety knowledge of suppliers in the Jashore region is good, but their attitudes and practices need to be improved.

Alemayehu, Anderw, Giza and Diress (2020), studied to assess food safety knowledge, handling practice, and its associated factors among food handlers in Debre Markos Town, North West Ethiopia. The study found that the level of food safety knowledge and handling practices was relatively low. Therefore, the level of education of food handlers; Food safety training and attitude were identified as factors related to food safety knowledge and still need further intervention and investigation. Similarly, food safety knowledge and work experience were identified as factors associated with food handling practices. In order to improve food handling practices, relevant

organizations need to improve the food safety awareness of food handlers. The government of Ethiopia should pay special attention to food workers in food factories to achieve better results in the future.

Hassan and Fweja (2020) highlighted food safety and hygiene issues as a major reason for the increase in food-borne illness arising from many of these hawker centres. It has been established that stalls are poorly maintained and vendors practice moderate compliance with both food safety measures and hygiene practices. The study suggests that basic training on basic food safety and hygiene knowledge received by a street food vendor should be followed by consistent inspection and monitoring to ensure basic food safety and hygiene practices. The knowledge gained corresponds to appropriate and safe food codes. In addition, the results suggest that since the self-employed dominate the majority of the population, policy makers and regulators should consider developing targeted framework policies or regulations at the national or regional level. This can preserve the benefits of street food and ensure the safety of the food being sold.

CHAPTER III

AN OVERVIEW OF MYANMAR FOOD SAFETY CONTROL SYSTEM AND STREET VENDORS IN YANGON

3.1 Food Safety Control System in Myanmar

The food control management in Myanmar involves multi-sector departments and services including the Ministry of Health (MoH), Ministry of Commerce (MoC), Myanmar Scientific and Technological Research Department (MSTRD), Department of Fisheries, the Livestock Breeding and Veterinary Department, Post-Harvest Technology Application Centre, Myanmar Agricultural Service (MAS), Myanmar Customs Department, Ministry of Industry, Ministry of Hotels and Tourism, city development committees and Development Affairs Department.

Ministry of Health (MoH) takes necessary measures in matters related to food safety in accordance with the notifications and provisions of the National Food Law (NFL). This 1997 law aims to ensure that the public can consume food of genuine quality and avoid the consumption of food that is dangerous and harmful to health. Food and Drug Administration (FDA) under the Ministry of Health is food production and importing or exporting storage. It is the agency responsible for proper supervision of distribution and sales.

The National Food Law (NFL) requires all food products to be approved by the Ministry of Health's Food and Drug Administration (FDA) for import and export. Consignments arriving at Myanmar ports will be allowed to be distributed only after the Health Department has inspected and evaluated them and issued a health certificate. Food and Drug Administration, the Myanmar Food and Drug Administration Authority (MFDBA); central State/Region/District and township level food and drug control committees and the Advisory Committees also work to control food quality in Myanmar.

The Myanmar Food and Drug Administration Authority (MFDBA) regulates food manufacturing, distribution importing exporting quality assurance; standardization; To establish policies and guidelines on controlled foods; classification; adding food; substandard foods; branding and advertising.

Based on the size of the business for locally produced food, the supervision is divided into three main groups;

1. food produced by in the factories
2. food produced by in the small and medium-sized enterprises (SMEs)
3. food produced by in the family-business level.

To implement Good Manufacturing Practices (GMPs) in Myanmar, the government has to enforce (GMPs) that must be applied in food processing industries in Myanmar. Therefore, the FDA encourages all food manufacturing sectors to implement Hazard Analysis Critical Control Points (HACCP) and hazard analysis methods for their food control officers.

The FDA has issued GMP recommendations for the food processing industry that are two years old. It conducts three routine inspections annually and reviews the results of microbiological and chemical laboratory tests on the safety and quality of food produced by these facilities in accordance with Codex standards.

For controlling street foods, restaurants and meat products; issuing health certificates to food shops; licensing approval of food shops, medical screening for food handlers, food safety training, safety of food manufacturers and food outlets, permits for slaughterhouses and meat sales are overseen by the City Development Committee (CDC) in accordance with the Municipal Development Committee Law of 1993. City Development Committees (CDCs) are also part of the Food and Drug Regulatory Committee, which is particularly relevant to street food and food service industries. CDCs have the right to issue licenses in their respective cities.

3.1.1 Food Inspection Services

Food inspection services may be provided by independent organizations accredited by government agencies and national authorities. Competent in the administration and implementation of food laws; trained, need an efficient and honest food inspection service.

The Food and Drug Administration (FDA) generally conducts inspections as part of its food control measures (1) food facility inspection (conformity assessment) and (2) pre-market surveillance of food sold in the market. imported or locally produced food) in the domestic market.

Edible oil imported from the border route. Chemical dyes such as locally produced fish paste, Sour tea leaves, such as Auramine O and chili powder, are contaminated with the chemical dye Rhodamine B red, a type of chemical dye, and the latter is a banned food. Food authorities are searching the market after it has been seized from the market.

In short, FDA's inspection is seen more specifically in food facility inspections and pre-market surveillance for certain varieties of food in the domestic market than in the inspection of entire food facilities.

3.1.2 Food Laboratory Services

The Food Quality Control Laboratory (FQCL) was established in the 1970s as a branch under the National Health Laboratory of the Department of Health under the Ministry of Health. Adequate laboratory infrastructure such as food control laboratories; Monitoring of the food control system by trained analysts and implementing a quality assurance system that meets international standards; Monitoring and enforcement activities are required to be provided.

Food and Drug Administration (FDA) laboratories are in urgent need of infrastructure expansion to meet the current situation. There is one in Yangon and one in Mandalay. Therefore, in balance with the scope of its function as a national food control authority, it can be considered as a small-sized agency. The regulator responded that capacity and infrastructure expansion are top priorities for enhancing food control measures.

3.1.3 Information, Education and Communication

Information, Education and Communication (IEC) is used by governments to educate consumers about food safety and quality, good agriculture, and manufacturing. The food industry can be encouraged to adopt good hygiene and handling practices. Information among stakeholders in the farm-to-table round table; education and sharing ideas are essential to making food safety programs work.

Improving food safety awareness for food manufacturers using IEC materials is a priority for FDA to effectively reduce food safety risks. In order to carry out food safety IEC activities, the FDA is responsible for agricultural, water products veterinary medicine Working with other departments for safety control measures.

The Food and Drug Administration (FDA) is an international, Actively participating in local and regional affairs, we are working with international organizations to achieve better cooperation.

The Food and Drug Administration (FDA) requires GMP training for facility managers. Food safety courses; training to increase the awareness of restaurant managers and processors; training on food hygiene and safety; food analysis (with test equipment) especially for food analysts for border post inspection.

The training conducted by the FDA shows clear IEC pathways for the food industry. awareness among consumers and proper hand washing; Programs on adequate cooking and avoiding contamination in food preparation are periodically broadcast on government television in collaboration with the Ministry of Information and the Ministry of Health.

Therefore, the IEC channel for consumers is not more than has been generalized so far, but the consumer is a beneficiary group for food safety, but is weak in participation.

3.2 Street Vendors in Yangon

Yangon, the former historical capital and current commercial capital of Myanmar, is the most populous city in Myanmar. Yangon is a source of employment and income for a large population. Due to the lack of jobs across the country, many people migrated to Yangon to sell goods. Street vendors in Yangon are usually found

in crowded areas. These vendors sell seasonal fruits and vegetables. snacks, they often sell cheap clothes and other products.

Street food vendors provide goods, including food, to the urban poor at low prices. In addition, Street food vendors contribute to the presence of other sectors of the urban poor by providing cheap goods and services. At the same time, street food vendors will not only have good sales, but also earn income because they serve the people of Yangon. However, they are worried every day due to the instability of municipal laws and regulations.

Currently, there are more than 70,000 street vendors living on the streets in Yangon. The rise of street vendors is partly due to the lack of employment opportunities, leaving the poor with few options, but the convenient option of selling food and food on the street as an occupation.

The difficulty for street vendors is that they need to be careful when selling to municipal employees. While the municipal government is clearing the streets for the convenience of pedestrians, street vendors are fleeing. If the municipal employee keeps the items, there is no reason to take them back. Since these vendors are operating without the permission of the concerned departments, they cannot claim compensation for losses.

3.3 Laws and Regulations for Street Vendors

In 1989, the YCDC allowed street vending and charged a fee for the stalls. However, new vendors are increasing and not applying for registration. As a result, the number of illegal sellers increases.

In 2013, a new Yangon City Development Law was amended (September 4, 2014). Section 5 of this law applies directly to street vendors. The relevant section is summarized below.

Section 11 (H) of Chapter (3); The Yangon City Development Committee shall set and enforce rules for street shops and street vendors.

Chapter 20 (E); The Yangon City Development Committee manages vendors who are not allowed to sell; monitoring and cancellation must be carried out.

Chapter 63 (A); Do not block, destroy or pollute public roads without the permission of the Yangon City Development Committee.

Sub-section (3) of section 63 (b); Sunbathing or having goods for sale on public roads will not be tolerated.

Section 66 (E) of Chapter 19; No one shall be allowed to operate street stalls without the permission of the Yangon Municipal Development Committee.

Chapter 68 of Chapter 20; Those who is convicted of failing to comply with any of the above-mentioned laws, that person shall be sentenced to imprisonment for up to one year and a fine of at least ten thousand to five hundred thousand kyats. Both punishments shall be imposed.

Section 70; Those who is found guilty of violating any of the above rules, he shall be imprisoned for up to six months or fined at least from ten thousand kyats to four hundred thousand kyats, or both of these penalties.

According to the law, the Market Department and the Administration Department are responsible for managing sales hours and locations, and have the authority to set regulations for street vendors. Yangon City Municipal Development Committee (YCDC) may issue notices to manage street vendors.

Street food vendors are considered legal businesses without a license, but are under the control of the Yangon City Municipal Development Committee (YCDC). Temporary sales are allowed from 3pm to 8pm without registration fee and zone restrictions. Street food vendors can trade unhindered after 3pm, but are not allowed to sell items along the road before then.

The National Food Law of 1997 regarding food law in controlling food shops. Yangon City Municipal Development Committee Law of 1922 and Yangon City Development Committee Law of 1999. The 1999 Yangon City Municipal Committee Health Law consists of eight chapters and forty-six sections aimed at producing safe food (YCDC, 1999).

This document outlines the roles and responsibilities of the committee; Responsibilities of food manufacturers; Approvals and refusals of food manufacturing licenses and sales authorizations are detailed in Chapters 2 and 3.

The definition of street stalls, including street restaurants, is set out in Chapter 2 of Chapter 3 of the Yangon City Municipal Development Committee Management Law of 1999. Chapter (6) Section 18: Taxes paid by street vendors are mentioned. However, the taxation of transactions has become ineffective.

3.4 Food Control Management for Street Vendors

Yangon City Development Committee (YCDC) is primarily responsible for food safety and food control. control by administrative authorities for the effectiveness of the food control system; monitoring and surveillance activities are important.

Licensing for food stalls, issuing health certificates for handlers and monitoring are traditional steps in street food safety operations. According to the YCDC, food sectors are generally divided into four categories: markets and stores; food manufacturing plants, slaughterhouses and food processing shops.

Street food stalls are shops that sell food under the category of prepared shops along with restaurants and school food stalls. Restaurants and school cafeterias YCDC; under the supervision of the Department of Food and Drug Administration and the Regional Health Department, issuing licenses; providing health care certification and training for food handlers. The Department of Health issued a 10-point statement regarding the hygiene requirements of street food stalls (YCDC).

The Health Department of the Yangon City Development Committee (YCDC) is responsible for food hygiene and food safety, and issues health certificates for food stalls in relevant development areas issuing license for food stalls, conducting medical examinations and water and food analysis to food handlers, as well as providing food safety training.

YCDC also provides a training manual on safe food handling. It was found that YCDC has already established five main components of food control system. However, street food is not regulated compared to other food stalls, and the education of the vendors is blocked. In the past, street vendors with permits were often evicted by authorities.

3.4.1 Inspection Service

The food and drug supervisory committee at central, state/region, district and township levels in cooperation with the Department of Health of the Ministry of Health, the Departments of City Development Committees (CDCs) carried out the inspection of shops selling prepared food. In 32 townships of Yangon Region, the authority reported that each of them has its own inspectors who are physicians, midwives, and health care professionals assigned by the township medical administrative offices.

Food handlers and its accessories are common elements to check. However, the inspection task is a corollary to their primary job as a health care professional. The frequency after inspection is effectiveness and follow-up are still questionable for managing successful inspection procedures. Restaurants or food outlets that are required to apply for a license at the YCDC are subject to these inspection levels. Street food is still excluded.

3.4.2 Laboratory Service

YCDC has its own laboratory starting from March, 2013. However, technically under FDA's laboratory supervision. Food control laboratories are an essential component of food safety as they provide scientific information that supports the decision-making process in dealing with food safety issues (FAO, 2006).

3.5 A New Market Program for Street Vendors in Yangon

The Yangon City Development Committee (YCDC) said street vendors and shops disturb pedestrians, cause traffic congestion and irresponsible waste disposal. It is reported that the sanitation system is getting worse and the sewage system is getting blocked. Therefore, YCDC has arranged to sell to vendors in the center of Yangon.

Yangon City Development Committee (YCDC) stated that in April 2016, street vendors were cleared by force in six townships in the city such as Pabedan, Kyauktada, Lanmadaw, Lathar, Botataung and Dagon. These townships are filled with vendors competing with each other to take up space and sell their wares.

The Yangon City Development Committee (YCDC) announced that starting from September 2016, street vendors will be banned in 33 townships under YCDC.

Since July 2016, YCDC has been collecting information for vendor registration. In late September 2016, YCDC began recording the names and locations of vendors.

The street vendors in Kyauktada, Pabedan, Latha and Lanmadaw Township move to a night market on Strand Road, November, 2016. The night market on the Strand Road is reserved for vendors within 300 square feet of each new market. YCDC does not plan to charge fees.

According to Yangon City Development Committee (YCDC), there are 6,041 vendors in downtown Yangon and around 1,600 vendors are moving to the night market. Priority will be given to food and fruit vendors. YCDC has been collecting data for vendor registration since July 2016. The Yangon City Municipal Development Committee (YCDC) began recording the names and locations of vendors in late September 2016.

Before moving to the night market, the vendors are selling the name of the vendor; Identification cards with photo and product name have been received. There is a security system and regular checks to avoid fake IDs and resale locations.

The night market area is designated from Pansoedan Road along the Strand Road between Maharbandula and Strand Road. Yangon City Development Committee (YCDC) has spent nearly 2 billion kyats on the night market, which will include public toilets and a water recycling system. The night market is open daily from 3pm to 11pm. Now these vendors can sell safely and freely in this new night market. It is better for street vendors and people.

The Yangon City Development Committee (YCDC) is working to reduce traffic congestion by clearing roadside and roadside stalls due to the inconvenience of passenger vehicles and cars. To address the problem, local authorities commissioned several new markets in the hope of moving vendors off the streets.

The local authority is building six new markets and renovating 10 old markets in Ahlone, Kyeemyindaing, Hlaing, Thaketa, Insein, Mingalardon, Hlaing Tharyar, Mayangone, Shwe Pyi Thar, Seikgyi Kanaungto and East Dagon Townships. Yangon City Development Committee (YCDC) plans to spend ten billion kyats on the entire project.

CHAPTER IV

ANALYSIS ON SURVEY DATA

4.1 Profile of Sanchaung Township

Sanchaung Township is situated between North Latitude 16 degree 45 minutes - 16 degree 46 minutes and East Longitude 96 degree 96 minutes - 96 degree 97 minutes at Yangon Region, Myanmar. The township area is 0.955 square miles and border with Kamayut Township in the north, Bahan Township in the east, Kyimyindaing Township in the west, Dagon Township and Ahlone Township in the south. This township is crowded with 18 wards. According to the Sanchaung Township General Administration Department report (2021), the township population is 79898, 18830 households and 5358 houses.

The following Table (4.1) is number of wards, houses, households, village tracts, villages and population by gender of Sanchaung Township.

Table (4.1) Wards, Households, Houses and Population

Description	Urban (No.)
No. of House	5358
No. of Household	18830
No. of Wards	18
Total Male Population	35022
Total Female Population	44876
Total Population	79898

Source: Sanchaung Township General Administration Department (2021)

Population density in Sanchaung Township is also crowded and most of their lifestyles is to eat fast food in food stall and food vendor. Therefore, it's possible to get food safety's problem concern with street food vendors. Consequences of food safety

problems are widespread and growing public health problems in developing countries. Food safety is depending on food handlers and their habits in food preparation. Food-borne diseases are preventable diseases. If food handlers are not attention in food preparation, it can be contaminated and leads to cause food borne diseases. It may also increase morbidity and mortality rate of food borne diseases in the community.

4.2 Survey Design

In order to fulfill the objectives of this study, the study used the quantitative method based on primary data and secondary data. The primary data was collected by conducting a survey using simple random sample method. Primary data were collected from 150 street food vendors providing food services to consumers in Sanchaung Township, Yangon Region. The questionnaire was organized by section A: Characteristics of respondents; section B: Business situation of street food vendor; section C: assessment on knowledge of street food vendor; section D: assessment on attitude of street food vendor; section E: assessment on practice of street food vendor.

The secondary data is obtained from reports and fact from Ministry of Health and Sports, Yangon City Development Committee, Food and Drug Board of Authority, World Health Organization, Sanchaung Township General Administration Department, libraries and websites.

The main three streets of Sanchaung Township, information from face-to-face interviews with 150 street food vendors at Baho Street, Kyauntaw Street and Sanchaung Street were conducted in the field and helped to understand the practical conditions of the study within July and August 2022, through questionnaires administered with a well-structured questionnaire. The main three streets concern with crowded street food vendors were selected by randomly. All respondents who were capable of giving consent, those who were willing to participate, and those whose age was 18 years and above in the study area. The sample size was calculated using single population proportion formula based on the assumption that the probability of having poor knowledge, attitude and practice towards food safety was 50.0%, the standard normal score set at 1.96 (95% confidence interval) and 8% margin of error (Daniel, 1999).

Sample Size Formula

$$n = \frac{(Z_{\alpha/2})^2 (p)(1-p)}{d^2}$$

Where;

n = sample size

p = the probability of having poor knowledge, attitude and practice towards food safety
= 50%

Z = the standard normal score set at 1.96 (95% confidence interval)

d = 8% margin of error

Therefore,

$$n = \frac{(1.96)^2 (0.5)(1-0.5)}{(0.08)^2} = 150$$

The survey questionnaires were divided into five sections: (a) characteristics of respondents, (b) business situation of street food vendors, (c) assessment of knowledge of street food vendors, (d) assessment of attitude of street food vendors and (e) assessment of practice of street food vendors. The questions of the street food vendors knowledge, attitude and practices on food safety were adapted from the WHO's Five Keys to Safer Food guidebook for food handlers (WHO, 2006).

The survey questionnaire was first written in Myanmar and then translated into English. This questionnaire had attached in Appendix. The results of the survey were collected in excel sheets and analyzed using statistical package for the social sciences software to identify the key factors and major impediments of ensuring food safety by the street food vendors.

4.3 Survey Data Analysis

The survey data analysis is presented in this section. The first section shows the characteristics of respondents. The second section was business situation of street food vendors. Third section has assessment knowledge on food safety of street food vendors. Fourth section has assessment attitude on food safety of street food vendors. Fifth section has assessment practice on food safety of street food vendors. The last section was the relationship between sociodemographic and knowledge, attitude and practice on food safety.

4.3.1 Characteristics of Respondents

The characteristics of respondents designed to collect data on street food vendors gender, age level, marital status, education level, religion, nationality, native place, current residential place and number of family members as shown in Table (4.2).

Table (4.2) Characteristics of Respondents

Description	No. of Respondents	Percentage
Gender		
Male	38	25.3
Female	112	74.7
Total	150	100
Age level (Years)		
Between 21 to 30	56	37.3
Between 31 to 40	48	32.0
Between 41 to 50	32	26.7
51 to 60	14	4.0
Total	150	100
Educational Level		
Primary School	18	12.0
Middle School	52	34.6
High School	68	45.3
Graduated	12	8.1
Total	150	100
Marital Status		
Single	62	41.3
Married	88	58.7
Total	150	100
Religion		
Buddhist	86	57.3
Christian	25	16.7
Hindu	17	11.3
Islam	22	14.7
Total	150	100

Nationality		
Kachin	4	2.8
Kayin	2	1.4
Chin	5	3.3
Mon	5	3.3
Myanmar	109	72.7
Rakhine	8	5.2
Shan	6	4.1
Other	11	7.3
Total	150	100
Native Place		
Ayeyarwady Region	17	11.3
Bago Region	22	14.7
Mandalay Region	18	12.0
Magway Region	12	8.0
Yangon Region	58	38.7
Mon State	9	6.0
Rakhine Stae	8	5.3
Shan State	6	4.0
Total	150	100
Number of Family Members		
Under 5 Members	108	72
Over 5 Members	42	28
Total	150	100

Source: Survey data, 2022

According to Table (4.3), the distribution of gender for 150 respondents, female is higher than male. The age group show that (56 respondent or 37.3%) have between 21 years to 30 years, (48 respondents or 32.0%) have between 31 years to 40 years, (32 respondents or 26.7%) have between 41 years to 50 years and (14 respondents or 4%) have between 51 years to 60 years respectively. The majority of respondents are married. The most of respondents were high school level. The Buddhist religion is 86 respondents (57.3%), the Christian religion was 25 respondents (16.7%), the Hindu religion was 17 respondents (11.3%) and the Islam religion was 22 respondents

(14.7%). The majority of respondents are Myanmar nationality followed by Rakhine, Shan, Mon, Chin, Kachin and Kayin.

The study of 150 respondents' native place, 58 respondents (38.7%) were Yangon Region, 22 respondents (14.7%) were Bago Region, 18 respondents (12.0%) were Mandalay Region, 17 respondents (11.3%) were Ayeyarwady Region, 6 respondents (4%) were Shan State, 8 respondents (5.3%) were Rakhine State, 0 respondents (6%) were Mon State respectively.

The majority of respondents have lived in Sanchaung Township followed by Kyeemyindaing Township, Hlaingtharyar Township, Kamayut Township and Insein Township. The mostly respondents were under five family member and the rest was over five family members.

4.3.2 Business Situation of Street Food Vendor

This section presents the business situation of street food vendors such as main selling product, initial investment of business, average monthly income of business, working experience, number of labors, cost of business space and business space area.

The following Table (4.3) is main selling product of street food vendors

Table (4.3) Main Selling Product of Street Food Vendors

Description	No. of Respondents	Percentage
Myanmar Traditional Foods	64	42.7
Chinese Foods	20	13.3
Shan Traditional Foods	8	5.3
Fast Foods	58	38.7
Total	150	100

Source: Survey data, 2022

Regarding from 150 respondents (Table 4.3), the majority of respondents said that their main selling product was Myanmar Traditional Foods (64 respondents or 42.7%), Chinese Foods (20 respondents, 13.3%), Fast Foods (58 respondents or 38.7%) and Shan Traditional Foods (8 respondents or 5.3%) respectively.

The following Table (4.4) shows the initial investment of business for 150 street food vendors.

Table (4.4) Initial Investment of Business

Description	No. of Respondents	Percentage
Less than Kyat 100,000	22	14.7
Kyat 100,000 to Kyat 500,000	76	50.7
Kyat 500,000 to Kyat 1,000,000	35	23.3
More than Kyat 1,000,000	17	11.3
Total	150	100

Source: Survey data, 2022

Within 150 street food vendors (Table 4.4), 22 respondents (14.7%) have invested less than Kyat 100,000 for their business, 76 respondents (50.7%) invested between Kyat 100,000 to Kyat 500,000, 35 respondents (23.3%) invested between Kyat 500,000 to Kyat 1,000,000 and 17 respondents (11.3%) invested more than Kyat 1,000,000.

Table (4.5) Average Monthly Income of Business

Description	No. of Respondents	Percentage
Less than Kyat 1,000,000	82	54.7
More than Kyat 1,000,000	68	45.3
Total	150	100

Source: Survey data, 2022

In the study of 150 street food vendors (Table 4.5), their daily income of between Kyat 30,000 to Kyat 50,000. So that, 82 respondents (54.7%) answered that their average monthly income have less than Kyat 1,000,000 and 68 (45.3%) have received more than Kyat 1,000,000 from their business.

Table (4.6) Working Experience

Description	No. of Respondents	Percentage
Less than 5 Years	13	8.7
5 Years to 10 Years	105	70.0
More than 10 Years	32	21.3
Total	150	100

Source: Survey data, 2022

Above from Table (4.6), the mostly respondents are between 5 years to 10 years street food working business. So many respondents said that they are selling their products on main streets of Sanchaung Township such as Baho Street, Kyauntaw Street and Sanchaung Street.

Table (4.7) Number of Labors

Description	No. of Respondents	Percentage
One	72	48.0
Two	44	29.3
Three	20	13.3
Four	10	6.7
Five	4	2.7
Total	150	100

Source: Survey data, 2022

From Table (4.7), 72 respondents (48%) answered that they have one helper or assistance person for the street food business activities. If the street food business is large, it is found that a large number of labors are employed in the study area.

Table (4.8) Cost for Business Space

Description	No. of Respondents	Percentage
Yes	38	25.3
No	112	74.7
Total	150	100

Source: Survey data, 2022

According to result of 150 respondents (Table 4.8), the mostly respondents said that they have not charges for the business space area. Although, most of the street food vendors said that they have to pay the daily market tax to the municipal staff.

Table (4.9) Business Space Area

Description	No. of Respondents	Percentage
Within 10 Feet	128	85.3
Within 15 Feet	22	14.7
Total	150	100

Source: Survey data, 2022

Above from Table (4.9), the majority of respondents answered that their street food business area was within 10 feet on the main streets of Sanchaung Township.

4.3.3 Assessment of Knowledge of Street Food Vendor

The assessment of knowledge about the food safety in street food vendors presented in Table (4.10). There were total (18) questions and (18) responses included. Most of the knowledge questions were correct responses. Among them, questions no (7) and question no (17) are negative responses. Detailed responses are shown in table.

Table (4.10) Assessment on Knowledge of Street Food Vendors

No.	Description	Yes	No	Mean
1.	Regular hand washing before starting work is a part of personal hygiene.	150 (100%)	0 (0%)	2.00
2.	Regular hand washing after work is a part of personal hygiene.	145 (96.6%)	5 (3.4%)	1.97
3.	Proper hand washing reduces the risk of food contamination.	137 (91.5%)	13 (8.5%)	1.91
4.	Washing hands with only water can't clean enough.	130 (86.7%)	20 (13.3)	1.87
5.	Wearing mask, gloves, and caps are part of personal hygiene.	110 (73.3%)	40 (26.7%)	1.73

6.	Vendors should avoid touching their hair after washing their hands.	102 (68.0%)	48 (32.0%)	1.68
7.	Food contaminating can be prevented by hand washing in common bowl.	86 (57.3%)	64 (42.7%)	1.57
8.	Proper cleaning and handling of cooking utensils reduce the risk of food contamination.	135 (90.0%)	15 (10.0%)	1.90
9.	The street food vendors should not paint with long nails.	120 (80.0%)	30 (20.0%)	1.81
10.	The use of gloves reduces the risk of contamination to consumers.	110 (73.3%)	40 (26.7%)	1.74
11.	Damaged gloves need to be replaced with new ones.	98 (65.3%)	52 (34.7%)	1.65
12.	Cooking utensils can reduce contamination after cleaning.	136 (90.7%)	14 (9.3%)	1.91
13.	Using hot water to clean equipment reduces the risk of contamination.	112 (74.7%)	38 (25.3%)	1.75
14.	Contamination can be reduced by separating the contaminated zone from the clean zone.	65 (43.3%)	85 (56.7%)	1.43
15.	Contaminated foods always have some change in color, odor or taste.	128 (85.3%)	22 (14.7%)	1.85
16.	Reusing oil is dangerous to health.	86 (57.3%)	64 (42.7%)	1.57
17.	Reheating cooked foods can cause food borne diseases.	53 (35.3%)	97 (64.7%)	1.35
18.	Polythene packs are not safe for food packaging.	36 (24.0%)	114 (76.0%)	1.24

Source: Survey data, 2022

In order to preserve personal hygiene, 100% of the 150 street food vendors believed in hand washing before work, while 96.6% of the 150 street food vendors believed in hand washing after work.

Within 150 street food vendors 91.5% had the awareness that washing hands reduce the risk of contamination, while 8.5% felt that washing hands could not

effectively reduce the risk of contamination with food handling. 86.7% of total street food vendors have agreed that water could not clean hand properly.

Surprisingly, about 73.3% of the 150 street food vendors knew that personal protective equipment such as mask, gloves, and caps are the parts of personal hygiene. Within 150 street food vendors, 68% of vendors were not touching their hair after washing hands but 32% of vendors were touching their hair.

According to 150 street food vendors findings, 90% of street food vendors knew that proper cleaning and handling of cooking utensils reduce the risk of food contamination and 80% of street food vendors were aware that their long nails could contaminate food.

In the study of 150 street food vendors, 73.3% used gloves for reduce the risk of contamination to consumers and 65.3% replaced with new ones for damaged gloves. And also, 90.7% street food vendors have known the cooking utensils can reduce contamination after cleaning and 74.7% of street food vendors were using hot water to clean equipment reduces the risk of contamination. But 56.7% of street food vendors have not agreed the contamination can be reduced by separating the contaminated zone from the clean zone.

Within 150 street food vendors, 85.3% have contaminated foods always have some change in color, odor or taste and 57.3% of street food vendors have agreed that reusing of oil is dangerous to health. Although, 64.7% of street food vendors have not agreed that reheating cooked foods can cause food borne diseases and 76% of street food vendors used polythene packs for food packaging.

4.3.4 Assessment on Attitude of Street Food Vendors

The assessment on attitudes of street food vendors shown in Table (4.11). There were total (18) questions and (18) responses included. All attitude questions were correct responses. Detailed responses are shown in table.

Table (4.11) Assessment on Attitude of Street Food Vendors

No.	Description	Agree	Disagree	Mean
1.	Knowledge of food safety will be beneficial in personal life.	90 (60.0%)	60 (40.0%)	1.60
2.	Knowledge of food safety will benefit consumers.	80 (53.3%)	70 (46.6%)	1.53
3.	Safe food handling is an important part of your job.	97 (64.7%)	53 (35.3%)	1.65
4.	Good hygiene can prevent foodborne illness.	88 (58.7%)	62 (41.3%)	1.59
5.	Washing hands before handling food reduces the risk of food poisoning.	65 (43.3%)	85 (56.7%)	1.43
6.	It is more important to produce safe food than tasty food.	77 (51.3%)	73 (48.7%)	1.51
7.	Keep nails short to reduce the risk of food contamination.	48 (32.0%)	102 (68.0%)	1.32
8.	Do not touch food with injured hands.	125 (83.3%)	25 (16.7%)	1.83
9.	Reusing oil is harmful to health.	86 (57.3%)	64 (42.7%)	1.57
10.	Should not rub your hand on face, hair, etc. while working.	95 (63.3%)	55 (36.7%)	1.63
11.	Must need tissue or cloth when coughing or sneezing.	136 (90.7%)	14 (9.3%)	1.91
12.	Using mask, gloves and cap is important in reducing risk of food contamination.	140 (93.3%)	10 (6.7%)	1.93
13.	All prepared food should be covered.	138 (92.0%)	12 (8.0%)	1.92
14.	Foodborne diseases can have devastating health and economic impacts on society.	105 (70.0%)	45 (30.0%)	1.70
15.	Food hygiene training for workers is an important issue in reducing the risk of food contamination.	37 (24.7%)	113 (75.3%)	1.25

16.	Properly cooked food is free from contamination.	150 (100.0%)	0 (0.0%)	2.00
17.	Raw and cooked foods should be stored separately to reduce the risk of food contamination.	150 (100.0%)	0 (0.0%)	2.00
18.	The polythene bags used are not safe for food packaging.	42 (28.0%)	108 (72.0%)	1.28

Source: Survey data, 2022

Regarding from 150 street food vendors (Table 4.11), 60% of street food vendors agreed to food safety knowledge would benefit their personal lives but 40% of street food vendors have not agreed. And also, 53.3% of street food vendors agreed to knowledge of food safety will benefit consumers but 46.6% of street food vendors disagreed to this statement.

In the study of 150 street food vendors, 64.7% of street food vendors agreed with safe food handling is an important part of their job responsibility and 58.7% of street food vendors agreed with good personal hygiene. Although, 43.3% of total street food vendors were washing hand prior to food handling can reduce food poisoning.

Moreover, 51.3% of street food vendors agreed that producing safe food than made it tasty. Only 32% of street food vendors kept nails short to reduce the risk of food contamination. In addition, 83.3% of street food vendors have not touch food with injured hands.

About 57% of street food vendors agreed that reusing oil is harmful to health but the rest of street food vendors recycle the cooking oil. Within 150 street food vendors, 63.3% of street food vendors answered that they did not touch their hand on face, hair, etc. while working and 90.7% of street food vendors used tissue or cloth when coughing or sneezing. In addition, 93.3% of street food vendors agreed that Using mask, gloves and cap is important in reducing risk of food contamination. 92% of street food vendors have known the usage of cover on prepared food reduces the risk of food contamination and 30% of street of vendors did not know that foodborne diseases can have devastating health and economic impacts on society.

Moreover, 75.3% of street food vendors disagreed that food hygiene training for workers is an important issue in reducing the risk of food contamination. All of street food vendors agreed that properly cooked food is free from contamination. They have made raw and cooked foods should be stored separately to reduce the risk of food contamination. But 72% of street food vendors used the polythene bags for food packaging.

4.3.5 Assessment on Practice of Street Food Vendors

Table (4.12) shows the assessment on practice of street food vendors in the study area. There were total (18) questions and (18) responses included. Most of the knowledge questions were correct responses. Among them, questions no (7) and question no (16) are negative responses. Detailed responses are shown in table.

Table (4.12) Assessment on Practice of Street Food Vendors

No.	Description	Always	Sometimes	Never	Mean
1.	Washing hands before processing food.	37 (24.7%)	88 (58.6%)	25 (16.7%)	2.08
2.	Washing hands before touching unwrapped raw foods.	12 (8.0%)	45 (30.0%)	93 (62.0%)	1.46
3.	Washing hands after touching unwrapped raw foods.	150 (100.0%)	0 (0.0%)	0 (0.0%)	3.00
4.	Soap/detergents are used to wash hands.	135 (90.0%)	15 (10.0%)	0 (0.0%)	2.90
5.	Keep nails short before beginning food preparation activities.	46 (30.7%)	60 (40.0%)	44 (29.3%)	2.01
6.	Wash hands before handling to prepare food.	20 (13.3%)	58 (38.7%)	72 (48.0%)	1.65
7.	Handling foods at work while having diarrhoea.	60 (40.0%)	73 (48.7%)	17 (11.3%)	2.29
8.	Clean the work area before starting work.	130 (86.7)	12 (8.0%)	8 (5.3%)	2.81
9.	Washing hands after going to toilet.	150 (100.0%)	0 (0.0%)	0 (0.0%)	3.00

10.	Using mask, gloves and caps at work daily.	7 (4.6%)	25 (16.7%)	118 (78.7%)	1.26
11.	Washing hands before using gloves.	0 (0.0%)	5 (3.0%)	145 (97.0%)	1.03
12.	Daily wash and clean work clothes.	150 (100.0%)	0 (0.0%)	0 (0.0%)	3.00
13.	Use a tissue/cloth when coughing or sneezing.	106 (70.7%)	12 (8.0%)	32 (21.3%)	2.49
14.	Clean the knife after cutting raw chicken or meat or other raw foods.	135 (90.0%)	15 (10.0%)	0 (0.0%)	2.90
15.	Using detergent to clean cooking utensils.	150 (100.0%)	0 (0.0%)	0 (0.0%)	3.00
16.	Using one common bowl for washing dishes.	102 (68.0%)	38 (25.3%)	10 (6.7%)	2.61
17.	Rubbing hands on face, hair, etc. while working.	115 (76.7)	26 (17.3%)	9 (6.0%)	2.71
18.	Reusing of oil.	150 (100.0%)	0 (0.0%)	0 (0.0%)	3.00

Source: Survey data, 2022

According to result of 150 street food vendors, 24.7% of street food vendors have always washing hands before processing food, 58.6% have sometimes washing their hands before processing food and 16.7% have not washing their hands. About 62% of street food vendors have not Washing hands before touching unwrapped raw foods but 8% have washing hands before touching unwrapped raw foods and 30% have sometimes washed their hands.

Regarding from 150 street food vendors, 90% of street food vendors used soap/detergents for washing their hands. Only 30.7% respondents kept their nails short before beginning food preparation activities. Moreover, 13.3% respondents answered that they have always wash hands before handling to prepare food and 38.7% have sometimes made it. Although, 48% of street food vendors were not washing their hands before handling to prepare food.

During the observation the question of handling foods at work while having diarrhea, 40% of street food vendors have always worked when they had diarrhea and 48.7% respondents sometimes were working. About 85% of street food vendors have always cleaned the work area before starting work.

This study also found that all of respondents washed their washing hands after going to the toilet. Besides, over 75% of street food vendors did not use mask, gloves and cap during daily working activities.

Disappointingly, when they were washing hands before using gloves. But all of respondents were washing and cleaning work clothes and about 70% used a tissue/cloth when coughing or sneezing. Mostly respondents said that they have always used detergent to clean the knife after cutting raw chicken or meat or other raw foods.

Moreover, most of the respondents answered in using one common bowl for washing dishes and all respondents reused the cooking oil. And also 76% of street food vendors have always touched their hands-on face, hair, etc. while food cooking or preparation.

4.3.6 Relationship between Sociodemographic and Knowledge, Attitude and Practice on Food Safety

(A) Mean Value of Sociodemographic and Knowledge, Attitude and Practice

The questions on knowledge, attitude and practices were adapted from the WHO's Five Keys to Safer Food guidebook for food handlers (WHO, 2006).

Regarding from the study of sociodemographic mean value, the gender mean value indicates mostly street food vendors were female. The mean value of age mentioned that the most of street food vendors were between 31 years to 40 years. The mean value of street food vendors education level reported that they were high school level. The mean value of street food vendors working experience mentioned that they have 5 years to 10 years working experience as shown in Appendix.

The food safety knowledge section includes 18 questions with two possible answers: agree and disagree. If the answer to a question was agreed, it was given a score of 2, and if the answer was disagreed, it was given a score of 1. According to result of the street food vendors' knowledge mean value 1.74 with standard deviation 0.451

showed that mostly respondents have agreed to the knowledge questions as shown in Appendix.

The food safety attitude section includes 18 questions with two possible answers. For each response of agree, 2 scores given, whereas for responses of disagree the score was 1. According to result of the street food vendors; attitude mean value 1.65 with standard deviation 0.478 showed that mostly respondents have agreed to the attitude questions as shown in Appendix.

The food safety practice questions have 18 questions with three possible answers: always, sometimes and never. For always 3 scores given, sometimes 2 scores given and never 1 score given respectively. According to result of the street food vendors' practice mean value 2.36 with standard deviation 0.4838 indicate most of the respondents showed that they sometimes practice as shown in Appendix.

(B) Correlation Analysis between Sociodemographic and Knowledge, Attitude and Practice

The analysis presents correlation statistical technique that can show whether and how strongly pairs of variables are related. The correlation coefficient ranges from -1.0 to +1.0. If the value is positive, it means that as one variable gets larger, the other gets larger. If the value is negative, it means that as one variable gets larger, the other gets smaller. The correlation value is (0.00 to 0.199) indicates very weakly relationship between two variables, (0.20 to 0.399) indicates weakly relationship between two variables, (0.40 to 0.599) indicates strong enough relationship between two variables, (0.60 to 0.799) indicates strong relationship between two variables, and (0.80 to 1.000) indicates very strong relationship between two variables (Riduwan, 2008). The following Table (4.13) shows the correlation between sociodemographic (independent variable) and knowledge (dependent variable) on food safety.

Table (4.13) Correlation between Sociodemographic characteristics and Knowledge

Sociodemographic characteristics		Knowledge
Gender	Pearson Correlation	0.384
	Sig. (2-tailed)	.000
Age	Pearson Correlation	0.207
	Sig. (2-tailed)	.000
Education Level	Pearson Correlation	0.735
	Sig. (2-tailed)	.000
Working Experience	Pearson Correlation	0.849
	Sig. (2-tailed)	.000

Source: SPSS Output, 2022

** Correlation is significant at the 0.01 level (2-tailed).

Regarding the result of correlation value (Table 4.13), The value 0.384 indicates the positive weak relationship between two variables. The value 0.207 indicates the positive weak relationship between two variables. The value 0.735 indicates the positive strong relationship between variables. The value 0.849 indicates the positive very strong relationship between variables. So that, there is strongly relationship between sociodemographic and knowledge. The following Table (4.14) shows the correlation between sociodemographic (independent variable) and attitude (dependent variable) on food safety.

Table (4.14) Correlation between Sociodemographic characteristics and Attitude

Sociodemographic characteristics		Attitude
Gender	Pearson Correlation	0.426
	Sig. (2-tailed)	.000
Age	Pearson Correlation	0.374
	Sig. (2-tailed)	.000
Education Level	Pearson Correlation	0.809
	Sig. (2-tailed)	.000
Working Experience	Pearson Correlation	0.825
	Sig. (2-tailed)	.000

Source: SPSS Output, 2022

** Correlation is significant at the 0.01 level (2-tailed).

Regarding the result of correlation value (Table 4.14), The value 0.426 indicates the positive strong enough relationship between variables. The value 0.374 indicates the positive weak relationship between variables. The value 0.809 indicates the positive very strong relationship between variables. The value 0.825 indicates the positive very strong relationship between variables. So that, there is strongly relationship between sociodemographic and attitude.

The following Table (4.15) shows the correlation between sociodemographic (independent variable) and practice (dependent variable) on food safety.

Table (4.15) Correlation between Sociodemographic characteristics and Practice

Sociodemographic characteristics		Practice
Gender	Pearson Correlation	0.648
	Sig. (2-tailed)	.000
Age	Pearson Correlation	0.520
	Sig. (2-tailed)	.000
Education Level	Pearson Correlation	0.726
	Sig. (2-tailed)	.000
Working Experience	Pearson Correlation	0.850
	Sig. (2-tailed)	.000

Source: SPSS Output, 2022

** Correlation is significant at the 0.01 level (2-tailed).

Regarding the result of correlation value (Table 4.15), The value 0.648 indicates the positive strong relationship between variables. The value 0.520 indicates the positive strong enough relationship between variables. The value 0.726 indicates the positive strong relationship between variables. The value 0.850 indicates the positive very strong relationship between variables. So that, there is strongly relationship between sociodemographic and practice.

Street food is the most dangerous food in the current state of food hygiene in Myanmar (Go Myanmar Tours, 2021) due to socio-economic change and rapid urbanization and population. From a socioeconomic perspective, the availability and

affordability of street food for low-income groups, along with the vendor's favorable social familiarity with the food, are the most important influences on street food consumption in Myanmar.

In addition, most street food vendors associate some careless behavior with food preparation and lack concern about foodborne illness. The consequences of socioeconomic conditions lead to food contamination factors affecting the knowledge applied in food preparation practices.

According to the research findings, there is a gap between street food vendors' knowledge questions and their practice responses. Even the basic knowledge they have cannot be applied during working hours. Almost all vendors rarely cover food prepared for consumption without wearing personal protective equipment. In addition, they use used oil from recycled cooking oil and a common bowl for washing dishes. These improper practices are a major risk factor for contamination of food-borne diseases. Answers to the self-practice questions and the correct situation were observed. Therefore, it is necessary not only to improve knowledge and attitude, but also to improve in practice.

CHAPTER V

CONCLUSION

5.1 Findings

The street food vendors are typically cluster in overcrowded areas including residential areas, near the workplaces, bus and railway stations due the hope of sales in Yangon Region. Street food vendors are considered legal businesses without a license but under the control of the Yangon City Development Committee (YCDC). Temporary sales are permitted from 3:00 PM to 8:00 PM without registration fee and zone restrictions. Street food vendors can trade undisturbed after 3:00 PM, but are not allowed to sell items along the road before that time.

The difficulty for street vendors is that they need to be careful when selling to municipal employees. The street vendors are fleeing when the municipal government clears the roads for the convenience of pedestrians. Because if the municipal employee keeps the items, there is no reason to get them back. These vendors cannot claim compensation for losses because they are operating without the permission of the appropriate departments.

The main objectives of the study are to explore the business situation of street food vendor and to examine the level of knowledge, attitude and practice on food safety of street food vendors in Sanchaung Township, Yangon Region. The study was using quantitative method based on primary data and secondary data. The survey design for the study involves data collection by conducting a survey using simple random sample method.

The main streets of Sanchaung Township, information from face-to-face interviews with 150 street food vendors at Baho Street, Kyauntaw Street and Sanchaung Street were conducted in the field and helped to understand the practical conditions of the study within July and August 2022, through questionnaires administered with a well-structured questionnaire.

The distribution of gender for 150 respondents, female is higher than male. The age group show that mostly respondents are between 21 years to 30 years. The majority of respondents were married and high school level. The Buddhist religion is higher than other religions. The majority of respondents are Myanmar nationality.

The majority of respondents have lived in Sanchaung Township followed by Kyeemyindaing Township, Hlaingtharyar Township, Kamayut Township and Insein Township.

The majority of respondents said that their main selling product was Myanmar Traditional Foods and invested between Kyat 100,000 to Kyat 500,000. In the study of 150 street food vendors, their daily income of between Kyat 30,000 to Kyat 50,000.

The mostly respondents are between 5 years to 10 years street food working business. So many respondents said that they were selling their products on main streets of Sanchaung Township such as Baho Street, Kyauntaw Street and Sanchaung Street.

Within 150 street food vendors, 72 respondents (48%) answered that they have one helper or assistance person for the street food business activities. If the street food business is large, it is found that a large number of labors are employed in the study area.

In order to preserve personal hygiene, 100% of the 150 street food vendors believed in hand washing before work, while 96.6% of the 150 street food vendors believed in hand washing after work.

Within 150 street food vendors 91.5% had the awareness that washing hands reduce the risk of contamination, while 8.5% felt that washing hands could not effectively reduce the risk of contamination with food handling. 86.7% of total street food vendors have agreed that water could not clean hand properly.

Surprisingly, about 73.3% of the 150 street food vendors knew that personal protective equipment such as mask, gloves, and caps are the parts of personal hygiene. Within 150 street food vendors, 68% of vendors were not touching their hair after washing hands but 32% of vendors were touching their hair.

According to 150 street food vendors findings, 94.5% of street food vendors knew that proper cleaning and handling of equipment reduce the risk of food contamination and 80% of street food vendors were aware that their long nails could contaminate food.

Within 150 street food vendors, 85.3% have contaminated foods always have some change in color, odor or taste and 57.3% of street food vendors have yes that reusing of oil is dangerous to health. Although, 64.7% of street food vendors have not that reheating cooked foods can cause food contamination and 76% of street food vendors used polythene packs for food packaging.

Within 150 street food vendors, 60% of street food vendors agreed to food safety knowledge would benefit their personal lives but 40% of street food vendors have not agreed. And also, 53.3% of street food vendors agreed to knowledge of food safety will benefit consumers but 46.6% of street food vendors disagreed to this statement.

In the study of 150 street food vendors, 64.7% of street food vendors agreed with safe food handling is an important part of their job responsibility and 58.7% of street food vendors agreed with good personal hygiene. Although, 43.3% of total street food vendors were washing hand prior to food handling can reduce food poisoning.

Moreover, 51.3% of street food vendors agreed that producing safe food than made it tasty. Only 32% of street food vendors kept nails short to reduce the risk of food contamination. In addition, 83.3% of street food vendors have not touch food with injured hands.

About 57% of street food vendors agreed that reusing oil is harmful to health but the rest of street food vendors recycle the cooking oil. Within 150 street food vendors, 63.3% of street food vendors answered that they did not touch their hand on face, hair, etc. while working and 90.7% of street food vendors used tissue or cloth when coughing or sneezing. In addition, 93.3% of street food vendors agreed that using mask, gloves and cap is important in reducing risk of food contamination.

Within 150 street food vendors, 92% of street food vendors have known the usage of cover on prepared food reduces the risk of food contamination and 30% of street of vendors did not know that foodborne diseases can have devastating health and economic impacts on society. Moreover, 75.3% of street food vendors disagreed that food hygiene training for workers is an important issue in reducing the risk of food contamination.

During the observation the question of handling foods at work while having diarrhea, 40% of street food vendors have always worked when they had diarrhea and

48.7% respondents sometimes were working. About 85% of street food vendors have always cleaned the work area before starting work.

This study also found that all of respondents washed their washing hands after going to the toilet. Besides, over 75% of street food vendors did not use mask, gloves and cap during daily working activities.

Moreover, almost respondents were using one common bowl for washing dish and reusing the cooking oil. And also 76% of street food vendors have always touched their hands on face, hair, etc. while food cooking or preparation.

The mean value of gender indicates mostly street food vendors were female. The mean value of age mentioned that the most of street food vendors were between 31 years to 40 years. The mean value of street food vendors education level reported that they were high school level. The mean value of street food vendors working experience mentioned that they have 5 years to 10 years working experience.

The mean value of street food vendors knowledge questions showed that mostly respondents have yes to the knowledge questions. The mean value of street food vendors attitude questions showed that mostly respondents have agreed to the attitude questions.

The mean value of street food vendor practice questions indicates most of the respondents showed that they sometimes practice. According to result of correlation value, there is strongly relationship between sociodemographic and knowledge, attitude and practice.

5.2 Suggestions

The study found that most street food vendors have good food safety knowledge, but that their hygienic practices require improvement. Therefore, the Department of Public Health and the Yangon City Development Committee should conduct special food safety training for street food vendors in accordance with global health guidelines.

Street food vendors must have current food safety training certificates, local authorities should be empowered to process documents such as medical certificates and infrastructure of street food stalls. In addition, local authorities should implement

motivational campaigns and food safety awareness programs aimed at encouraging street food vendors to use hygienic practices.

All street food vendors should attend food handling practice courses. Personal and food hygiene training, food handling practices and waste management tools should be provided by restaurant owners or by a food management committee or by a hospital catering management committee or other organization. Failure to complete pre-replacement and part-time training and medical tests can result in license and contract renewal suspensions for owners.

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SURVEY QUESTIONNAIRE

I am studying Master of Development Studies at Yangon University of Economics. I have designed the following questionnaire for “**An Assessment on Food Safety Knowledge, Attitude and Practices of Street Food Vendors in Sanchaung Township, Yangon Region**” which requires for my thesis work as an integral part of the study to complete the Master.

All information will be treated as confidential and the researcher undertakes not to reveal any individual information that appears in this questionnaire. You will require approximately 20 minutes completing these questionnaires. Read the questions and mark your response off with a tick in the box provided. Thank you for your participation.

Section (A) Characteristics of Respondent

1. Gender (a) Male (b) Female
2. Completed Age (Years)
 - (a) Between 20 Years to 30 Years (b) Between 31 Years to 40 Years
 - (c) Between 41 Years to 50 Years (d) 51 Years to 60 Years
3. Marital Status (a) Single (b) Married
4. Education Level
 - (a) Primary School (b) Middle School (c) High School (b) Graduated
5. Religion
 - (a) Buddhist (b) Christian (c) Hindu (d) Islam
6. Nationality
 - (a) Kachin (b) Kayah (c) Kayin (d) Chin (e) Mon (f) Myanmar
 - (g) Rakhine (h) Shan (i) Other
7. Native Place _____
8. Current Residential Place _____
9. Number of Family Member
 - (a) Less than 5 Members (b) More than 5 Members

Section (B) Business Situation of Street Food Vendor

1. Main Selling Product

- (a) Myanmar Traditional Foods (b) Chinese Foods (c) Shan Traditional Foods
(d) Fast Foods (e) Other (Specify) _____

2. Initial Investment of Business

- (a) Less than Kyat 100,000 (b) Kyat 100,000 to Kyat 500,000
(c) Kyat 500,000 to Kyat 1,000,000 (d) More than Kyat 1,000,000

3. Average Monthly Income of Business

- (a) Less than Kyat 1,000,000 (b) More than Kyat 1,000,000

4. Working Experience

- (a) Less than 5 Years (b) 5 Years to 10 Years (c) More than 10 Years

5. Number of Labor

- (a) None (b) One (c) Two (d) Three (e) Four (f) Five

6. Cost for Business Space

- (a) Yes _____ Kyat (b) No

7. Business Space Area

- (a) Within 10 Feet (b) Within 15 Feet

8. Daily YCDC Tax _____ Kyat

Section (C) Assessment on Knowledge of Street Food Vendor

No.	Description	Agree	Disagree
1.	Regular hand washing before starting work is a part of personal hygiene.		
2.	Regular hand washing after work is a part of personal hygiene.		
3.	Proper hand washing reduces the risk of food contamination.		
4.	Washing hands with only water can't clean enough.		
5.	Wearing mask, gloves, and caps are part of personal hygiene.		
6.	Vendors should avoid touching their hair after washing their hands.		
7.	Eating at work increases the risk of food contamination.		
8.	Proper cleaning and handling of equipment reduces the risk of food contamination.		
9.	The street food vendors cannot paint with long nails.		
10.	The use of gloves reduces the risk of contamination to consumers.		
11.	Damaged gloves need to be replaced with new ones.		
12.	Equipment can reduce contamination after cleaning.		
13.	Using hot water to clean equipment reduces the risk of contamination.		
14.	Contamination can be reduced by separating the contaminated zone from the clean zone.		
15.	Contaminated foods always have some change in color, odor or taste.		
16.	Reusing oil is dangerous to health.		
17.	Reheating cooked foods can cause food contamination.		
18.	Polythene packs are not safe for food packaging.		

Section (D) Assessment on Attitude of Street Food Vendor

No.	Description	Agree	Disagree
1.	Knowledge of food safety will be beneficial in personal life.		
2.	Knowledge of food safety will benefit consumers.		
3.	Safe food handling is an important part of your job.		
4.	Good hygiene can prevent foodborne illness.		
5.	Washing hands before handling food reduces the risk of food poisoning.		
6.	It is more important to produce safe food than tasty food.		
7.	Keep nails short to reduce the risk of food contamination.		
8.	Do not touch food with injured hands.		
9.	Reusing oil is harmful to health.		
10.	Should not rub your hand on face, hair, etc. while working.		
11.	Must need tissue or cloth when coughing or sneezing.		
12.	Using mask, gloves and cap is important in reducing risk of food contamination.		
13.	Protective clothing reduces the risk of food contamination.		
14.	Foodborne diseases can have devastating health and economic impacts on society.		
15.	Food hygiene training for workers is an important issue in reducing the risk of food contamination.		
16.	Properly cooked food is free from contamination.		
17.	Raw and cooked foods should be stored separately to reduce the risk of food contamination.		
18.	The polythene bags used are not safe for food packaging.		

Section (E) Assessment on Practice of Street Food Vendor

No.	Description	Always	Sometimes	Never
1.	Washing hands before processing food.			
2.	Washing hands before touching unwrapped raw foods.			
3.	Washing hands after touching unwrapped raw foods.			
4.	Soap/detergents are used to wash hands.			
5.	Keep nails short before beginning food preparation activities.			
6.	Wash hands before handling to prepare food.			
7.	Handling foods at work while having diarrhoea.			
8.	Clean the work area before starting work.			
9.	Washing hands after going to toilet.			
10.	Using mask, gloves and cap at work daily.			
11.	Washing hands before using gloves.			
12.	Wash and clean work clothes.			
13.	Use a tissue/cloth when coughing or sneezing.			
14.	Clean the knife after cutting raw chicken or meat or other raw foods.			
15.	Using detergent to clean equipment.			
16.	Eating or drinking in the workplace.			
17.	Rubbing hands on face, hair, etc. while working.			
18.	Reusing of oil.			

Thanks for your time.

Mean Value of Sociodemographic

Description	Mean	Standard Deviation
Gender	1.75	0.436
Age	2.03	0.983
Education Level	2.50	0.801
Working Experience	2.14	0.531

Source: SPSS Output, 2022

Mean Value of Street Food Vendors' Knowledge

No.	Description	Mean	Std. Dev
1.	Regular hand washing before starting work is a part of personal hygiene.	2.00	0.000
2.	Regular hand washing after work is a part of personal hygiene.	1.97	0.180
3.	Proper hand washing reduces the risk of food contamination.	1.91	0.282
4.	Washing hands with only water can't clean enough.	1.87	0.341
5.	Wearing mask, gloves, and caps are part of personal hygiene.	1.73	0.444
6.	Vendors should avoid touching their hair after washing their hands.	1.68	0.468
7.	Food contaminating can be prevented by hand washing in common bowl.	1.57	0.496
8.	Proper cleaning and handling of cooking utensils reduce the risk of food contamination.	1.90	0.301
9.	The street food vendors should not paint with long nails.	1.81	0.396
10.	The use of gloves reduces the risk of contamination to consumers.	1.74	0.440
11.	Damaged gloves need to be replaced with new ones.	1.65	0.478
12.	Cooking utensils can reduce contamination after cleaning.	1.91	0.292

13.	Using hot water to clean equipment reduces the risk of contamination.	1.75	0.436
14.	Contamination can be reduced by separating the contaminated zone from the clean zone.	1.43	0.497
15.	Contaminated foods always have some change in color, odor or taste.	1.85	0.355
16.	Reusing oil is dangerous to health.	1.57	0.496
17.	Reheating cooked foods can cause food borne diseases.	1.35	0.480
18.	Polythene packs are not safe for food packaging.	1.24	0.429
	Overall	1.72	0.451

Source: SPSS Output, 2022

Mean Value of Street Food Vendors' Attitude

No.	Description	Mean	Std. Dev
1.	Knowledge of food safety will be beneficial in personal life.	1.60	0.492
2.	Knowledge of food safety will benefit consumers.	1.53	0.501
3.	Safe food handling is an important part of your job.	1.65	0.480
4.	Good hygiene can prevent foodborne illness.	1.59	0.493
5.	Washing hands before handling food reduces the risk of food poisoning.	1.43	0.497
6.	It is more important to produce safe food than tasty food.	1.51	0.501
7.	Keep nails short to reduce the risk of food contamination.	1.32	0.468
8.	Do not touch food with injured hands.	1.83	0.374
9.	Reusing oil is harmful to health.	1.57	0.496
10.	Should not rub your hand on face, hair, etc. while working.	1.63	0.484
11.	Must need tissue or cloth when coughing or sneezing.	1.91	0.292
12.	Using mask, gloves and cap is important in reducing risk of food contamination.	1.93	0.250
13.	All prepared food should be covered.	1.92	0.272

14.	Foodborne diseases can have devastating health and economic impacts on society.	1.70	0.460
15.	Food hygiene training for workers is an important issue in reducing the risk of food contamination.	1.25	0.433
16.	Properly cooked food is free from contamination.	2.00	0.000
17.	Raw and cooked foods should be stored separately to reduce the risk of food contamination.	2.00	0.000
18.	The polythene bags used are not safe for food packaging.	1.28	0.451
	Overall	1.65	0.478

Source: SPSS Output, 2022

Mean Value of Street Food Vendors' Practice

No.	Description	Mean	Std. Dev
1.	Washing hands before processing food.	2.08	0.640
2.	Washing hands before touching unwrapped raw foods.	1.46	0.641
3.	Washing hands after touching unwrapped raw foods.	3.00	0.000
4.	Soap/detergents are used to wash hands.	2.90	0.301
5.	Keep nails short before beginning food preparation activities.	2.01	0.777
6.	Wash hands before handling to prepare food.	1.65	0.705
7.	Handling foods at work while having diarrhoea.	2.29	0.659
8.	Clean the work area before starting work.	2.81	0.510
9.	Washing hands after going to toilet.	3.00	0.000
10.	Using mask, gloves and caps at work daily.	1.26	0.536
11.	Washing hands before using gloves.	1.03	0.180
12.	Daily wash and clean work clothes.	3.00	0.000
13.	Use a tissue/cloth when coughing or sneezing.	2.49	0.825
14.	Clean the knife after cutting raw chicken or meat or other raw foods.	2.90	0.301
15.	Using detergent to clean cooking utensils.	3.00	0.000
16.	Using one common bowl for washing dishes.	2.61	0.611
17.	Rubbing hands on face, hair, etc. while working.	2.71	0.574
18.	Reusing of oil.	3.00	0.000
	Overall	2.36	0.838

Source: SPSS Output, 2022