HYGIENE AND SANITATION PRACTICES ON STREET FOOD VENDORS IN MALAYSIA

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LIST OF SYMBOLS AND ABBREVIATION

Symbols

α = Alpha

d = Degree of accuracy expressed as a proportion (0.05)

X^2 = Chi-square

≥ = Equal and more than

≤ = Equal and less than

n = Frequency

< = Less than

> = More than

(-) = Negative

r = Pearson Correlation Coefficient

% = Percent

N = Population

P = Population proportion

s = sample size

Abbreviations

CAC = Codex Alimentarius Commission

FAO = Food and Agriculture

F&B = Food and Beverage

KAP = Knowledge, Attitude and Practice Model

MOH = Ministry of Health

SPSS = Statistical Package for the Social Sciences

SRS = Simple Random Sampling

WHO = World Health Organization

ABSTRACT

This study focuses on street food vendors in the food and beverage industry. The study examines hygiene and sanitation practices on street food vendors in Malaysia. Thus, this study investigates the relationship between food knowledge, attitude, food safety practice towards food safety implementation among street food vendors in Malaysia. KAP Model also be used in this research. Quantitative research was carried out to accomplish this research. Convenience sampling was used and responses from 375 respondents were collected. Descriptive analysis, reliability test, and Pearson Correlation were used to analyse the data. The final result showed a significant relationship between food knowledge, attitude, and food safety practice with the food safety implementation. Preparation practice and environmental hygiene are found as additional variables that can be used in future research.

Keywords: Street Food Vendors**,** Hygiene, Safety Practice, Poisoning, Contamination

ABSTRAK

Kajian ini memfokuskan kepada penjual makanan jalanan di industri makanan dan minuman. Kajian ini mengkaji amalan kebersihan dan sanitasi terhadap penjual makanan jalanan di Malaysia. Kajian ini mengkaji hubungan antara pengetahuan makanan, sikap, amalan keselamatan makanan terhadap pelaksanaan keselamatan makanan di kalangan penjual makanan jalanan di Malaysia. Model KAP juga digunakan dalam penyelidikan ini. Satu kajian kuantitatif dilakukan untuk menyelesaikan penyelidikan ini. Persampelan mudah telah digunakan dan tindak balas daripada 375 responden dikumpulkan. Analisis deskriptif, ujian kebolehpercayaan dan korelasi pearson digunakan untuk menganalisis data. Hasil akhir menunjukkan terdapat hubungan yang signifikan antara pengetahuan makanan, sikap dan amalan keselamatan makanan dengan pelaksanaan keselamatan makanan. Amalan penyediaan dan kebersihan persekitaran didapati sebagai pemboleh ubah tambahan yang boleh digunakan dalam penyelidikan masa depan.

Kata kunci: Penjual Makanan Jalanan, Kebersihan, Amalan Keselamatan, Keracunan, Pencemaran

CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

This chapter sets out the research area and discusses the context and reasoning for this analysis. This research project aims to investigate hygiene and sanitation practices on street food vendors in Malaysia. In this chapter, discussed the background of the study, problem statement, research questions and objectives, significance of study and definition of terms.

1.2 BACKGROUND OF THE STUDY

Hospitality is a distinctive sort of management and managerial activity which are food and beverage management and accommodation management define this distinctiveness (Wood, 2000). In rapid urbanization, Asian is one of countries increases the demand for street foods. Each individual, especially those in the foodservice industry, is responsible for preparing safe and nutritious food. There is also a need to educate people about the reality and the importance of safe food handling as it becomes a global issue for individuals and enforcement (Khongtong, Karim, Othman & Bolong, 2015). Furthermore, Food and Beverage courses in the hotel study curriculum have special importance and must be adequately adapted and based

on scientific principles to produce the knowledgeable, skilled, and competent graduates required by the industry (Ko, 2010). Next, the Food and Beverage Department (F&B) is responsible for maintaining high quality of Food and Services through food costing, and the management of restaurants, bars, etc. in an industrial context. F&B Service is the food services conducted in the kitchen while beverages provided at the bar to customers at F&B premises which can include Restaurants, Bars, Hotels, Airlines, Cruise Ships, Trains, Companies, Schools, Colleges, Hospitals, Prisons, Takeaway and others (Robinson, Kralj, Brenner, & Lee, 2014).

A low or low-income people eat street food however the majority segments of society visit street food vendors. Street vendors carry their equipment and use movable platforms like carts and stalls to conduct their businesses. They are typically located centrally in selected market areas or semi-permanent sites in less developed regions (Henderson, Yun, Poon, & Biwei, 2012). The amount of street and workplace food vendors increases in many countries; it is because of the socio-economic gains derived from it. The street food vendors provide inexpensive cost, convenient, and often nutritious food, and street food vending provides job opportunities and income, particularly for women (McKay, Arbind, Sangeeta, Suvajee, & Richard, 2016). Consistent with (Hassan, 2003) has defined the term "street vendor" in the context of Malaysia's Local Government Act 1976, which refers to somebody who goes around providing people goods for sale and may be classified as a "temporary hawker," “static hawker” and a “nomad.”

Street food refers to food and beverages that are ready to be eaten or sold by vendors and hawkers, especially in the same streets and other public places but not through any process or preparation (Ministry of Health, 2015). Street food is cheaper, only accessible, and something is nourishing food for urban and rural poor and at a constant time contributes to

business enterprise trade. Moreover, street food is prepared informally in a number of circumstances such as in small food factories or ancient workshops, home, markets, and on the street itself. They will be ready either without preparation and continue to be able to eat the food sauté on the positioning. Five primary keys to safer food are being developed, including cleaning, separating raw and cooked food, processing properly, ensuring food fresh, or using clean equipment. These five keys to safer food are particularly important in developing countries, with such information it can significantly affect food safety.

According to (WHO, 1993) mentioned that street vendor foods may pose a major public health problem. Moreover, the safety of street vendors in countries selling such street food plays an important role in life and culture as well as being of special concern (Chavaria & Phakdee-aksorn, 2017)). Furthermore, low environmental conditions in which street food is prepared or sold are usually considered unclean and of poor quality. It also lacks adequate knowledge of food preparation and handling by the food vendors themselves. Various studies show that most street food vendors have poor hygiene practices (Liu, Zhang, & Zhang, 2014).

There are many factors that cause poor food safety and hygiene practices to be identified, including lack of food safety knowledge, low perspectives on food safety, and low level of food education (Afolaranmi, Hassan, Bello, Tagurum, Miner, Zoakah & Ogbonna, 2014). Food is a basic thing needed by all life such as humans and animals, and can be contaminated in different ways. Among the major risk factors responsible for foodborne illness are such as lack of personal hygiene, poor food handling, as well as contaminated food surfaces and equipment (Akabanda, Hlortsi, & Owusu-Kwarteng, 2017). Food handling practice is the main of sources of food contamination. Furthermore, in observational studies, food handling errors also often occur among food handlers who lack knowledge. This suggests that food handlers play a key role in ensuring food hygiene throughout the food processing network

(Patah Mo, 2009). Considering the food knowledge, attitude, and food safety practice, a lot of hygienic food needs to be improved on the food establishment especially in developing country.

1.3 PROBLEM STATEMENT

Nowadays, street foods in developing countries get close attention and become more prevalent in society. World Health Organization, (WHO, 2015) has mention a one of every ten individuals will easy to contract food-borne illnesses. Street foods have been linked with numerous food-borne illnesses and food poisoning outbreaks (Feglo & Sakyi, 2012). The World Health Organization (WHO, 2015) reported that about two million death cases of food poisoning occur every year, especially in developing countries. Based on the previous study, Malaysia recorded about 17,840 cases of food poisoning in 2016 compared with 2017 with 13,686 cases. (Department of Statistic Malaysia, 2018). The Laksa stall located in Baling, Kedah, was reported due to 80 victims of food poisoning cases from Kedah, Perlis, Selangor, and two customers who died from the food poisoning by the Health Ministry. (New Straits Times, 2018). According to the Director of Kelantan State Health Department Datuk Dr. Zaini Husin, nine food premises around Tanah Merah were closed immediately during the inspection of the premises. All the premises were closed for 14 days according to the Section 11 of the Food Act 1983 for failing to meet the set hygiene standards. Of the total notices issued, 57 notices were offenses following Rule 32, which relates to food handler clothing. Five notices were issued for offenses according to Rule 31 relating to food handlers not undergoing health checks and vaccinations (My Metro, 2020).

According to (The World Health Organization, 2015), five methods have been suggested to ensure food protection. It includes separating raw materials and cooked food product, using a clean and safe water, cooking with a right way, keeping food followed right temperatures, and keeping a cleanness. Other than that, there also a strategy been adopted by several training programs for street food vendors. According to Chandra Thangayah, 2009, training must be compulsory for food handlers and needs to do the medical examination and health to prevent food-borne diseases, also must know some food knowledge such as how to handle food, appliances. For example, do not bring food directly with material that can affect contaminated food; raw food appliances are washed until they are used for the food cooked. Must be separate storage of the raw material when the processing of food. Food is always maintained clean, and it can help to protect from contamination.

Food handlers must wear clean and proper clothing to set standards. The need for food handlers to wear aprons in appropriate or prescribed colours and wear hair coverings should be tempered by recognizing that it is more about food aesthetics and inspires consumer confidence than food safety (WHO, 2010). In Malaysia, there is also a lack of enforcement by the Ministry of Health and local public authority where the requirement for food premises is very loose. They only need to attend one day training in food handling, have a typhoid injection, and have a health examination. Since Malaysia is flooded with immigrants, there are increasing problems where each of them has its own culture, which some of them do not concern about hygiene and cleanliness.

Many factors lead to food poisoning, including a poor of food safety practices among vendors like food preparation, which will increase food contamination. According to (Donkor et al., 2009), due to the lack of structure such as water connection and refrigerator, the sanitary quality at these venues may compromise the consumers' public health risk. Next, the vendors'

improper food handling practice will lead to a risk of food contamination, especially in Bazar Ramadan during the fasting month, and there were reported cases of food poisoning. This is because the food prepared early in the morning was not kept at the correct temperature and had already been contaminated by bacteria before served and consumed by customers. (MOH, 2015). So, this food or water contaminated usage will produce food-borne pathogens such as bacteria, viruses, parasites, and toxins, which can cause food-borne illnesses (WHO, 2014). A previous study conducted on 2016, food street vendors in Malaysia were low qualified to manage food safety. Majority, among of them showed a poor of knowledge especially a pathogen that cause a disease. (The Straits Times, 2015).

Hence, the aim of this research to examine the food safety implementation on food knowledge, attitudes, and food safety practices among street food vendors in Malaysia

1.4 RESEARCH QUESTIONS

1. What are the impacts of food knowledge, attitudes, and food safety practices towards implementing food safety among street food vendors in Malaysia?
2. How do food knowledge, attitudes, and food safety practices influence the implementation of food safety among street food vendors in Malaysia?

1.5 OBJECTIVES OF THE STUDY

1. To examine the relationship between food knowledge and food safety implementation among street food vendors in Malaysia

2. To examine the relationship between attitudes and food safety implementation among street food vendors in Malaysia.

3. To examine the relationship between food safety practices and the food safety implementation among street food vendors in Malaysia

1.6 SIGNIFICANCE OF THE STUDY

This section gives a significance and benefits for researchers provides awareness about safe food handling practices in food handling. On the other hand, food handlers also need to practice their knowledge of safe food handling. In many countries, street vendors have a major economic effect and are a major source of employment (Mahon, 1999). After doing the research, it will benefit to:

Government

Governments and public health authorities, on the other hand, are cautious of street food, afraid that an unregulated street food industry would lead in a tourism backlash. Officials are especially concerned about the potential of food poisoning outbreaks, which are frequently linked to the microbiological condition of the water used to produce food and beverages. Asia's street food has been far better to its reputation. For far too often, politics has ignored the importance of the street food industry in Asian nations. In fact, street food has positive social,

economic, and nutritional characteristics that local governments and authorities should acknowledge.

Street Food Vendors

Economic and social changes or individual characteristics, find it difficult to find employment in the formal sector find employment in the street food industry. The whole family has often been involved in raw material procurement, preparation, and cooking, as well as food sales, in street food operations. Women play a major role in the street food sector around the world. Street food vendors are attracted to this occupation because it enables women to earn a good lifestyle. Vendors' average earnings in Southeast Asia can range from three to ten times the minimum wage, and they are frequently compared to skilled employees' earnings in the private employment. Economic and social changes or individual characteristics, find it difficult to find employment in the formal sector find employment in the street food industry. The whole family has often been involved in raw material procurement, preparation, and cooking, as well as food sales, in street food operations. Women play a major role in the street food sector around the world. Street food vendors are attracted to this occupation because it enables women to earn a good lifestyle. Vendors' average earnings in Southeast Asia can range from three to ten times the minimum wage, and they are frequently compared to skilled employees' earnings in the private employment.

Academic

This study focuses on street food vendors. This takes some factors that street vendors have to seriously consider food safety practice, food knowledge, and vendor attitude. When finished looking for a literature review, the researcher should find a method to find respondents and know the study results.

1.7 DEFINITIONS OF TERMS

Food safety implementation

Food Safety Management System implementation in small and medium food enterprises can be hard due to the limitations and limitations that, although common to all food businesses, appear to be exceptionally hard for this population (Mensah & Julien, 2011; Yapp & Fairman, 2006).

Food safety practice

The safety of street food is affected by many influences ranging from raw material quality during the handling and storage practices in any kind of place. The preparation place of street food also is exposed to environmental conditions that are unpleasant compared to the food provided on the premises. This indicates that mobile food handlers are associated with food-borne diseases. This practice has been seen among mobile food handlers and hawkers as well as its many nationwide food processors or cottage industry (Muyanja et al., 2011).

Food knowledge

Bangladesh society lacked food safety knowledge and practise (Faruque, 2010). Food safety education is beneficial for the young since they will require it to develop the proper attitude, knowledge, and skills to handle contemporary food issues. As a basis, understanding young students' food safety knowledge, attitudes, and behaviours is critical to identifying approach to enhance education and reduce the risk of foodborne disease.

Attitude

Knowledge has a positive impact on the recipient's attitude formation and perception of health facts (Kalua, 2001). The formation of a positive attitude leads to positive behaviour. Attitude factors include beliefs about the costs and benefits of a particular behaviour and feelings associated with the behaviour. Both declarative knowledge about issues and action techniques according to (Hines, 1987) are knowledge for behaviour change.

1.8 CONCLUSION

This study discusses the background of the study, problem statement, research objectives, research questions, and the significance of the study. The research objectives were suggested, followed by a research question, and hypotheses based on the problem statement. Besides, the scope and limitation briefly explained the problems the researchers had confronted while accomplishing the research. Finally, the word description of the operation helps to describe the terminology used in this study.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

This research intends to examine the food safety implementation on food knowledge, attitudes and food safety practices on street food vendors in Malaysia. This chapter consists of an introduction, an explanation of the components of food safety implementation on street food vendors, and their relationship. This chapter also will review the relevant literature about food knowledge, attitude, and food safety practice.

2.2 FOOD STREETS IN MALAYSIA

Malaysia is an incredible food paradise in serving various ranges of local and global cuisines. In many developing countries, mostly in towns or cities, food street is familiar (Alimi, 2016). The affordable prices, easy to obtain, variety of choices, and convenience of food streets have been high in demand. (Trafialek et al., 2017). Food streets have always been famous in Malaysia. Because of lifestyle changes and more solemn responsibilities from work and family, this person will often look for other meal alternatives than home-cooked food. Previous study found Malaysia include contribute famous street food and became more popular. (Ismail et al., 2016), As an example, Penang is the best destination to travel and taste the street foods in Asia. (Time Magazine, 2004). Based on the Cable News Network 2015, Penang is chosen as one of

Asia's top ten street foods (Goldberg, 2013). Malaysia also includes countries with the regulations has been set up and compulsory obey by food street food vendors for protecting them and Malaysia also which country where have licensed that are provided facilities for conducting trade.

2.3 FOOD SAFETY IMPLEMENTATION

In reaction to actual and potential food contamination, the food industry is implementing various food safety management systems (Henson & Humphrey, 2010). So, because implementation of a food safety management system in some segments of the food industry was optional in Cyprus before to accession but became necessary afterward, there is a unique opportunity to learn from the food industry's knowledge. Improved food safety regulations in the areas of product resource management and risk management were passed by the government in 2014 and their implementation in the industry is expected to improve food safety.

Food safety is known as food suppliers' perceptions and practical implementation of food safety laws and operations. Food safety concerns are frequently emphasized in the media, generating concern among consumers who have incomplete or incorrect information. Some food providers would change their food safety and hygiene methods in reaction to media claims without scientific verification in order to satisfy these consumers. Small and medium-sized food businesses struggle to implement and maintain a food safety management system due to a lack of employee knowledge about food safety, a lack of financial resources, particularly

investments in structure, an equipment, an employee, a lack of time to set up and run a food safety management system.

2.4 FOOD KNOWLEDGE

Food knowledge is crucial to prevent food-borne illness. In several study to assess the food safety knowledge and attitudes of food handlers, it exactly sure among of them does not have enough about food safety knowledge. (FAO, 2013). Personal information such as age and gender consist not a main food knowledge of street food vendors. (Soares et al., 2012). Usually, street food vendors emphasize food safety and hygiene. However, knowledge on food safety can be improved if street food vendors get training on the basics of food hygiene as well as Halal elements in the training syllabus. Street food vendors must know the hygiene and sanitation features for street food sales. A committee should be formed to educate street vendors and help street vendors join the urban food supply chain safely and efficiently in line with Halal and based on the pillars of Islam (Oludare et al., 2014).

In previous study also found, the education of street food vendors and food safety knowledge are also related. In addition, a positive relationship occurred between the vendor's own level of education and food safety knowledge. Next, does not existed significant effect of education level on food knowledge. (Annor & Baiden, 2011).

2.5 ATTITUDE

The need to improve food safety education has been recognized in developed countries with the launch of national initiatives by finding ways to educate consumers more effectively, especially young people who prepare food. Demographic and lifestyle changes as well as the emergence of resistant and highly dangerous food-borne microorganism strains give rise to scenarios that can lead to major outbreaks of health problems caused by life-threatening foods (Haapala & Probart, 2004). Moreover, people of all ages need to think that they need to know how to manage food safely; however, self-reported food handling behaviours do not support this belief (Gettings & Kiernan, 2003). Positive attitudes were not appropriate for behaviour and when observed during food preparation for hygiene practices. Thus, only 21% used gloves when touching unpackaged raw foods. The use of gloves was the level of education available in a food handling training course. Finally, the authors suggested that emphasis should be continued on improving the knowledge and control of food-borne diseases among food vendors (Angelillo et al., 2000).

Other than that, attitude defined as an evaluative concept that relate with the way people want to think, feel, and behave (Keller, 1998). It exactly comprises a cognitive, emotional, and behavioural an individual or others people to know, feel and do a something (Keller, 1998). Previous study also found it has been argued that attitude may influence individual intention to perform a given behaviour or practice (Rutter & Quine, 2003). Therefore, the researcher conclude behaviour of the individual has a positive attitude toward appropriate hand washing so it confirmed they are among of people to keep and likely to wash their hands (Simelane, 2005).

2.6 FOOD SAFETY PRACTICE

In food safety, cleaning methods ensure that food is fit for consumption—appropriate implementation of correct hand-hygiene practices in clinics (Sharma, 2012). The Food Act of 1983 and the Food Hygiene Regulations of 2009, which are implemented by the Food Safety and Quality Division, require commercial food handlers to attend food safety courses. Many people did not wash their hands before and after preparing food, and they didn't even wear an apron. Despite the fact that long fingernails make it easier to spread infection through food but just a small fraction trim their nails on a regular basis. Furthermore, unhealthy food handling at home, such as cooking methods, improper storage, cross-contamination and temperature abuse has been identified as a contributing factor in food handling.

Food hygiene and food safety refer to anything that happens to customers when eat the food after settle the processing, preparation or handling of food followed with a procedure. (Griffith, 2006). While according to (Yeung & Morris 2001), the danger is an activity or process that can lead to negative consequences and thus provide a source of risk to accept the environment or population. Next, to make sure the food dose not caused the effect to the customers it needed to prepared or served follow a right way. (Codex Alimentarius Commission) (CAC). A safe food that eaten by customers exactly guarantee of food safety for food products that are free of physical, chemical and microbiological contamination. Lack of knowledge and awareness about food safety is one of the problems of healthcare consumers and food handlers, sellers, or hawkers.

To prevent food borne diseases, food safety requires protecting the supply from microbiological, chemical, and physical risks that may arise throughout all stages of food

production, including growing, harvesting, processing, transporting, retailing, distributing, storing, preparing, and consuming (WHO, 2006). With continuous food safety needs as well as sensitization programmes for food handlers and consumers along the food chain for good hygiene practises, British efforts can strengthen the food and manufacturing services sector to became more competitive while ensuring consumer safety. These are commonly referred to as Prerequisite measures and enforced as a basic requirement for the food industry and vendors.

2.7 UNDERPINNING THEORY

2.7.1 Knowledge, Attitude and Practice Model

In this context of food safety implementation of food street vendors, one theory can explain it. This theory is the knowledge, attitudes, and practices model. Based on the KAP Model, it refers to an individual's behaviour; it depends on the individual's knowledge, and the provision of knowledge will directly lead to changes in attitude and practice. (Rennie, 1995). According to (WHO, 2000), the lack of knowledge will cause food-borne disease prevalence. Other than that, training and education play an important role in providing the knowledge, so it does not automatically translate to safe food handling practices. (Clayton & Griffth, 2008).

A crucial thing to examined the level of knowledge among food vendors. Besides that, a useful skill of practice about safe food handling and the priorities practiced in the work environment so that the relevant and useful food training program can be planned. Besides, it is crucial to understand the interaction of prevailing food safety KAP of food vendors to maximize the occurrence of food-borne disease. Some journals only focus on knowledge and practice, while others combined are knowledge, attitudes, and practice as a complete variable.

2.8 THEORETICAL FRAMEWORK

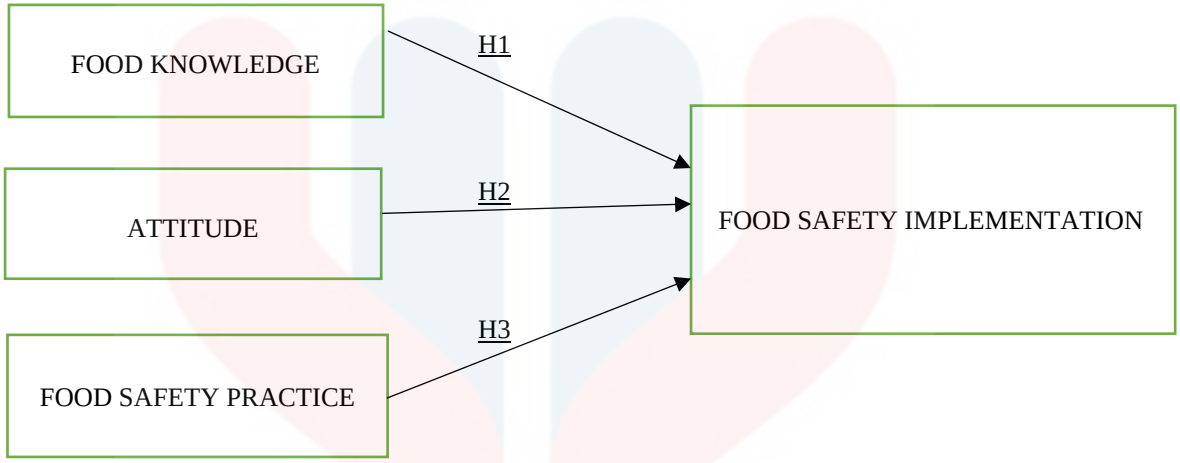


Figure 2.1: Theoretical Framework

Based on figure 2.1 shows the theoretical framework of this chapter. Figure 2.1 shows the relationship of food knowledge, attitude and food safety practice on food safety implementation. Food safety principles are aimed at preventing food from being infected and causing food poisoning. According to a study, food street vendors were enough qualified to trained to handle food safely, and the other hand the majority of them lacked understanding of infections connected with various disease-causing agents. (The Straits Times, 2015).

According (Fariba et al., 2018) reported that there was a lack of knowledge in some areas, such as cooking thoroughly and keeping food at safe temperatures. As they perform the work, they are responsible for and food street vendors compulsory to have a skills and knowledge to make sure a food keeps safe before served to a customer. For food handlers, the important things firstly Keep their hands clean, be conscious of personal hygiene, wear clean work gear, follow food hygiene standards at work, and take a training course to improve their knowledge of how to safely handle and prepare food. (Rebouças et al., 2017). All food street vendors that have their own business compulsory and be alert for make sure especially their

workers who a handle food have skills and knowledge to handle the food. Food safety implementation will affect food knowledge.

The attitude of food handlers positively affects their perception of disease control measures. (Kwol et al., 2020). Also, the attitude of food handlers positively affects their understanding of personal hygiene. (Kwol et al., 2020). Consumer attitude were found to have a positive impact on good hygiene practices such as handing washing and culinary habits such as using a cooking thermometer (Shapiro et al., 2011). For this reason, the hawkers must pay attention to process their food safety attitude when during food processing. Attitude will affect food safety implementation. As a result, it is determined that awareness of food safety implementation directly affects attitude.

Besides that, food safety practices. Inadequate cleaning and personal hygiene practices can cause contamination of food, food poisoning, and infection to spread. In preventing contamination and food-borne diseases, food safety and hygiene are the various conditions and practices that ensure the quality of foods. (Jeinie et al., 2015). Cross-contamination is a major cause of food poisoning. It is usually raw foods to foods ready to eat from one food to another food. For example, a vendor needs to prevent cross-contamination and needs to separate cutting boards for raw meat. According (Fariba et al., 2018), managers should encourage their food handlers to practice food safety rather than focusing on sanitary practices that just contain structural design criteria.

In conclusion, the goal of this study was to determine the relationship between food safety implementation on food knowledge, attitude, and food safety knowledge.

2.9 CONCLUSION

This chapter discussed the relevant previous studies about food knowledge, attitudes, food safety practice and a food safety implementation. This chapter also includes the research framework. The methodology used is discussed in the next chapter.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 INTRODUCTION

Chapter two reviewed the relevant literature and provided insights on the study's core constructs, which led to developing the conceptual model and hypotheses. Act as a bridge, and this chapter three prescribed the most acceptable approach or research method and design to visualize and conceptualize the relationship between two or more independent variables of significance. It commences with the description of the research approach, research design, population of the sample size, instrumentation, pilot study, data collection process, and the statistical analyses used to test the hypotheses.

3.2 RESEARCH DESIGN

The research method, data collection method, sampling plan, fieldwork plan, and analysis plan are the most important components of research methodology. (Mukesh, Salim, & Ramayah, 2013). In this study, the researchers used the quantitative method, which is the primary data. According to Williams (2011), quantitative research involves data collection so that data can be quantified and statistically treated to support or refute alternative claims of knowledge. Quantitative research is a systematic method of collecting and analysis data from various sources. The purpose of this study is to investigate the relationship between food

knowledge, attitude, food safety practice, and food safety implementation among Malaysian street food vendors. Quantitative is considered the most suitable approach to be used.

3.3 RESEARCH SAMPLING AND DESIGN

A whole number of people in a country is defines as a population. A population is a total number of persons occupying an of area or constituting a whole. In other hand, population refers to the researcher wishes to investigate things, people, or events. (Mukesh, 2013). According to the Ministry of Health Malaysian (2020), 149487 food premises have been registered with the Ministry of Health until April 2018. The population of this research is food vendors who were selling street food in Malaysia.

3.4 SAMPLE SIZE

The sample size is a part of the population chosen for research. For this research, the researcher focuses on the respondents which are street food vendors in Malaysia to answer the research objectives. The relationship between sample size and the total population is illustrated in Figure 3.1 and refer by Krejcie & Morgan (1970). The figure showed the sample size based on the given total population.

$$s = X^2 NP (1-P) \div d^2 (N-1) + X^2 P (1-P)$$

s = required sample size

X^2 = the table value of chi-square for 1 degree of freedom at the desired confidence level (3.841)

P = the population proportion (assumed to be 0.50 since this would provide the maximum sample size)

d = the degree of accuracy expressed as a proportion (0.05)

TABLE 1

Table for Determining Sample Size from a Given Population

N	*S*	*N*	*S*	*N*	*S*
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	1000000	384

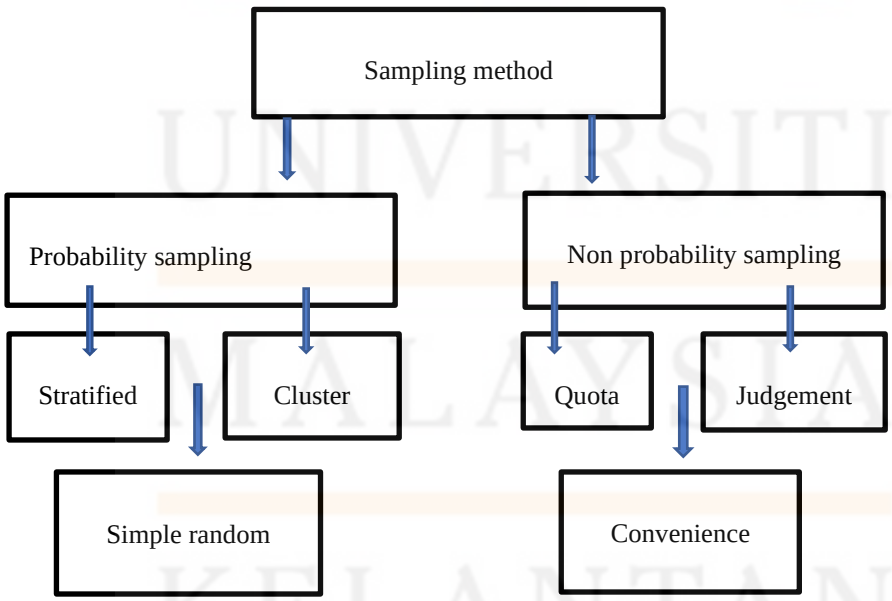
Note.—*N* is population size.
S is sample size.

Figure 3.1: Sample Size of Known Population

A target population in this research is food vendors who were selling street food in Malaysia. According to the Ministry of Health Malaysia (2020), 149487 food premises have been registered with the Ministry of Health until April 2018. Based on these arguments and to strengthen and validate the quantitative findings, 375 samples will be collected as respondents.

3.5 SAMPLING METHOD

There are two main classes of sampling methods; probability sampling method and non-probability sampling. Figure 3.2 below displays the two types of major sampling methods available (Churchill, 1995; Green, Tull & Albaum, 1988; Malhotra, 1996; Parasuraman, et. al 1991).



Source: Churchill 1995; Green, Tull & Albaum, 1988; Malhotra, 1996; Parasuraman, et al, 1991

Figure 3.2: Types of sampling methods

For selecting participants in this research, a convenience sampling method was used. Convenienve sampling is a non-probability sampling selection procedure where the sample taken from a group of people easy to contact or to reach among respondents. A selection criterion of respondents in this study is a food street vendor in Malaysia.

3.6 DATA COLLECTION PROCEDURE

Data collection refers to an efficient approach to assembling and measuring the information from various sources to get comprehensive and accurate data. This data collection consists of primary and secondary data. Primary data research involves collecting information specifically for the study in hand from the actual resources such as consumers, users/non-users, or other entities involved in the research. Meanwhile, secondary data involves any information from published sources that have been specifically collected for the current research problem. The data collection also can be used to collect data by survey form, questionnaire, google form, and personal interview.

The primary data are collected from the questionnaire that has been used for this research. The researchers want each of the street food vendors to distribute the 375 sets of a questionnaire. Therefore, the data collection method by face to face to distribute the questionnaire among food street vendors in Malaysia. In addition, during the questionnaire answering session the researchers also can guide when street food vendors do not understand the questions.

3.7 RESEARCH INSTRUMENT

Research instruments refer to measurement tools such as questionnaires, tests or scales that are designed to help researchers obtain information on the topic of importance from a research subject. In this research the questionnaire used to collect the data in order to gather all the required input to complete this research. Questionnaire is a method of data collection that involves the respondents to answer questions either by written or verbal. Furthermore, this type of research is cheaper than other methods. Other than that, this research involved a large number of respondents so that researchers use this method because it is a more efficient way for collecting data and information.

3.7.1 Questionnaire design

This questionnaire consists of three parts: Section A, Section B and Section C. Section A which is a question about the respondent's demographic information such as gender, age, race, education level and duration of food vending (years). In the section B consists of questions related to independent variables which are provided by researchers such as food knowledge, attitudes and food safety practice. Then, section C discussed the dependent variable which is food safety implementation.

3.7.2 Scale of measurement

The questionnaire structure in section A uses a nominal scale and interval, while in section B and section C using Five-Likert scale. This Five- Likert scale is used in this study

because the reactions are effectively quantifiable and abstract to calculate scientific investigation. Besides, Five- Likert scale consists of Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree and the data obtained through questionnaires. The researchers distributed the questionnaires among street food vendors in Malaysia.

Table 3.1: The Five-Likert scale

Strongly Disagree	Disagree	Neutral	Agree	Strongly agree
1	2	3	4	5

3.7.3 Questionnaire composition

Table 3.2: Questionnaire composition

SECTION	DIMENSION	NUMBER OF ITEMS	SOURCE
Section A	Demographic Information	5	Rahman, 2012
Section B	**Independent Variable** Food Knowledge	9	Samapundo, 2015
Section C	**Dependent Variable** Food Safety Implementation	8	Zaheer Ahmad et al., 2017

3.7.4 Questionnaire in Section A of the questionnaire

Section A focuses on the demographic information of the respondents. The questions involve gender, age, race, educational level, and duration of food vending (years) among food street vendors in Malaysia. Table 3.3 highlights the questions in this section.

Table 3.3: Questions Used in Section A of the Questions- Demographic Information

Items	
1.	Gender ● Male ● Female
2	Age ● <22 ● 23-38 ● 39-54 ● >55
3	Race ● Malay ● Chinese ● Indian ● Others
6.	Education level ● Primary school ● Secondary school ● STPM / Degree
5	Duration of Food vending (years) ● < 1 years ● 2-4 years ● 6-8 years ● > 9 years

3.7.5 Questionnaire in Section B and C of the questionnaire

Section B was designed to understand the hygiene and sanitation practice among street food vendors. 37 items were developed in this section to measure specific statements for each dimension – food knowledge, attitudes, food safety practice and food safety implementation. Items in this section required respondents to indicate their level of agreement based on Five Likert Scale. The items are shown in Table 3.4.

Table 3.4: Proposed questions in Section B and C of the Questionnaire - Hygiene and sanitation practice among street food vendors

Dimensions	Supporting References	Items
Food knowledge	Samapundo, 2015	1. I wash my hands before work. 2. I use gloves to reduce of food contamination. 3. I do proper cleaning and sanitation of decrease the risk of food contamination. 4. I regularly reheat a food so it can contribute to food contamination. 5. Use a detergent when wash utensils will leave the food contamination. 6. Salmonella is an example of food borne pathogens can bring to food poisonous. 7. Proper food preparation can reduce of food poisoning 8. Workers have a skin disease must avoid to come for working. 9. Typhoid fever made transmitted by food if exposed by bacteria such as Salmonella.
Attitudes	Samapundo, 2015	1. A well-cooked can prevent food poisoning. 2. Clean hand hygiene can prevent food borne disease. 3. Raw and cooked foods need be stored separately to reduce the risk of food contamination. 4. The health of status workers should be evaluated before employment. 5. It is compulsory to check the temperature of refrigerators or freezers usually to avoid the food contamination. 6. I wear a mask to avoid of food contamination. 7. I wear a glove to avoid of food contamination.

		8. I wear cap to avoid of food contamination 9. Egg need be washed after purchase. 10. Knives and the cutting board must be regular sanitized before use it.
Food safety practice	Samapundo, 2015	1. I do a preparation in a stall or only at home because keep safe and does not exposed by external pollution. 2. Before the handling, preparation and serving the food, I will wash my hands in clean water. 3. I wash my hands after visiting the toilet. 4. Use an apron when handling, preparation and serving the food. 5. I wear clean cloth and am presentable. 6. I have short, clean nail. 7. I do not wear jewellery during handling, preparation and serving the food. 8. I do not smoke during the handling or preparation of foods. 9. During prepare raw and cooked food product or to cut raw vegetables, fresh meat and poultry, I do not use the same knives and cutting board. 10. I cover my hair when handling, preparation and serving the foods.
Food safety implementation	Zaheer Ahmad et al., 2017	1. Food street vendors to remember about food safety during served food. 2. Food street vendors will intend to implement food safety with better ways during preparation and cooking next time 3. Food street vendors are compulsory to implement food safety during preparing a meal before served to customer 4. Food street vendors need to make sure food safety implementation must be practiced during preparing and cooking

		5. Food street vendors must ensure the personal hygiene each of worker is priority 6. Food street vendors need to apply the safety practice during handling or served a food 7. Food street vendors must have knowledge about food safety before decide to open a business 8. Attitudes is a crucial thing as a food street vendor to making sure the food is serving to keep clean and safe.

3.8 DATA ANALYSIS

Part A is a questionnaire for brief analysis concerning the respondent's demographic information based on their gender, age, race, education level, and duration of Food vending years) from a street food vendor. Part B deals with independent variables: food safety practice, food knowledge, and attitude to respond the research questions. The data obtained from the questionnaire was then analysed using the Statistical Package for the Social Sciences (SPSS). These data are presented in various forms such as percentages, tables, charts and diagrams so that the results of the study are easy to understand. This software can control and handle information easily with the help of several techniques. This technique is used to analyse, modify and generate characteristic pattern data between different variables.

Researchers use SPSS software to analyse and process data obtained. SPSS is a comprehensive technology program for data mining and solutions for making it easy to make decisions. Besides, SPSS can plot the data in histograms, scatterplots, and other ways. Using

this SPSS system, food safety practice, food knowledge and attitude are known to be more precise and able to analyse and identify these effects.

3.8.1 Descriptive statistic

Descriptive statistics are used to describe the fundamental characteristics of a finding of the study. Descriptive statistics are the basic summary of the sample and tests. Descriptive statistics are usually separated from inferential statistics. Descriptive statistics are used to give quantitative explanations and to condense a large amount of data into a reasonable summary. A study report has a lot of steps to it. Furthermore, any measure that involves a significant number of people should be calculated.

3.8.2 Reliability test

Reliability analysis the which way of estimating the quality of the measurement procedure used to collect data during doing a research or thesis. Reliability also concerned with consistency or how far to the questions used in a survey which is the same. Cronbach's Alpha are used in testing the consistency of internal and measuring the scale of reliability in this research. According to Nunally & Bernstain (1994), the acceptance range for alpha value estimates from between 0.7 to 0.8. Table 3.5 are show in below is the rule of thumb of Cronbach’s Alpha on testing reliability.

Table 3.5: Rule of Thumb Cronbach's Alpha

Cronbach's Alpha	Internal Consistency
$0.9 \leq \alpha$	Excellent
$0.8 \leq \alpha < 0.9$	Good
$0.7 \leq \alpha < 0.8$	Acceptable
$0.6 \leq \alpha < 0.7$	Questionable
$0.5 \leq \alpha < 0.6$	Poor
$\alpha < 0.5$	Unacceptable

3.8.3 Pearson correlation

The test statistic Pearson's correlation coefficient measures the statistical relationship, or association, between two continuous variables. Furthermore, because it is based on the method of covariance, it also is regarded as the greatest method of determining the relationship between the variables of interest.

Pearson Correlation Coefficient can determine the measure of the strong of linear relationship between the independent variables (IV) and the dependent variable (DV). This analysis identifies if the correlations exist between the food safety practice, food knowledge and attitude as independent variables (IV), and food safety implementation as a dependent variable (DV).

A rule of thumb has been given for the interpretation of the scale of the correlation coefficient. The thumb rule of Guildford claimed that the Pearson correlation coefficient (r) can be used to calculate the relationship's degree, magnitude and strength. (Fadhil, 2007). The intensity of the relationship between the dependent variable (DV) and the independent variable

was therefore determined (IV). Table 3.6 is below is the rule of thumb about Correlation Coefficient size.

Table 3.6: Rule of Thumb about Correlation Coefficient

Value (range)	Association (strength)
< 2.0	Negligible Relationship
0.2 to 0.4	Low Relationship
0.4 to 0.7	Moderate Relationship
0.7 to 0.9	High Relationship
> 0.9	Very high Relationship

3.9 CONCLUSION

This chapter is about methodology for conducting this research, population and sample, collection procedure, instrument, and data analysis. From this study, the researcher will be able to identify using the study research design and its function as well as other components which are the population, sample, sampling procedure, instrument, and data analysis. This chapter also explains the questionnaire that was used, as well as how the content of the questionnaire can be applied in this research. The researcher also explains each question and the use of each question. At the end of this chapter, researchers first analysis by completing this chapter.

CHAPTER 4

RESULT AND DISCUSSION

4.1 INTRODUCTION

This chapter presents detailed information on the sample, descriptive analysis in this study. The results are primary based on the quantitative data obtained through a questionnaire survey with street food vendors in Malaysia. The objective of this study is to examine the relationship between food knowledge, attitude, food safety practice and food safety implementation among street food vendors in Malaysia.

4.2 RELIABILITY ANALYSIS

Before conducting the actual questionnaire, a pilot test has been done to determined possible error in the questionnaire such as an ambiguous question. It provides opportunities for the researcher to find out and remedies a wide range of the potential problems in preparing the questionnaire and correcting it before the actual questionnaire is conducted.

The pilot test has been done with 30 respondents before the questionnaire was distributed to 375 respondents through an online survey method. After the questionnaire was collected, the reliability test was conducted by using SPSS Version 26. The most common

technique in reliability tests to examine the internal consistency in Cronbach's Alpha. Cronbach's Alpha is the reliability coefficient average values obtained from standardized items in particular research. Table 4.1 presents the results of reliability Cronbach's Alpha for the variables.

Table 4.1: Reliability Statistic for 30 Respondents

No	Variables	Cronbach' Alpha	No. of Item	N
1.	Food Knowledge	0.748	9	30
2.	Attitudes	0.816	10	30
3.	Food Safety Practice	0.752	10	30
4.	Food Safety Implementation	0.805	8	30
	All Variable	0.909	37	30

The result of the pilot test is shown in Table 4.1. According to the result of the pilot test, all variable shows result in excellent which is more than 0.9. The result for the reliability for the independent variable attitudes as well dependent variable, food safety implementation records the very good results. This is due to the variables results in Cronbach's Alpha is more than 0.8. Meanwhile, the independent variable food knowledge and food safety practice obtained acceptable results on the reliability test with more than 0.7. Based on the result, this section could be concluded that the entire questionnaire is reliable. This mean that this research could continue to distribute questionnaire to target the actual sample among the respondents, food streets vendors in Malaysia.

Table 4.2: Reliability Statistic for 375 respondents

No	Variables	Cronbach' Alpha	No. of Item	N
1.	Food Knowledge	0.823	9	375
2.	Attitudes	0.904	10	375
3.	Food Safety Practice	0.894	10	375
4.	Food Safety Implementation	0.931	8	375
	All Variable	0.925	37	375

The result of the pilot test is shown in Table 4.2 is based on Cronbach's Alpha. According to the result of 327 respondents, all variable shows result with an excellent with more than 0.9. The result for the reliability for the independent variable attitudes as well dependent variable, food safety implementation records the very excellent results. This is due to the variables results in Cronbach's Alpha is more than 0.9. Meanwhile, for the independent variable food knowledge and food safety practice obtained good result on the reliability test with more than 0.8. Based on the result, the overall of questionnaire could be concluded as a reliable.

4.3 RESULT OF DESCRIPTIVE ANALYSIS (RESPONDENTS PROFILES)

This questionnaire has a Section A, Section B and Section C. The purpose Section A is to gain more about the respondents who answered this questionnaire

4.3.1 Gender

Table 4.3: The Gender of Respondents

Gender	Frequency	Percent (%)
Male	158	42.1
Female	217	57.9
Total	375	100.0

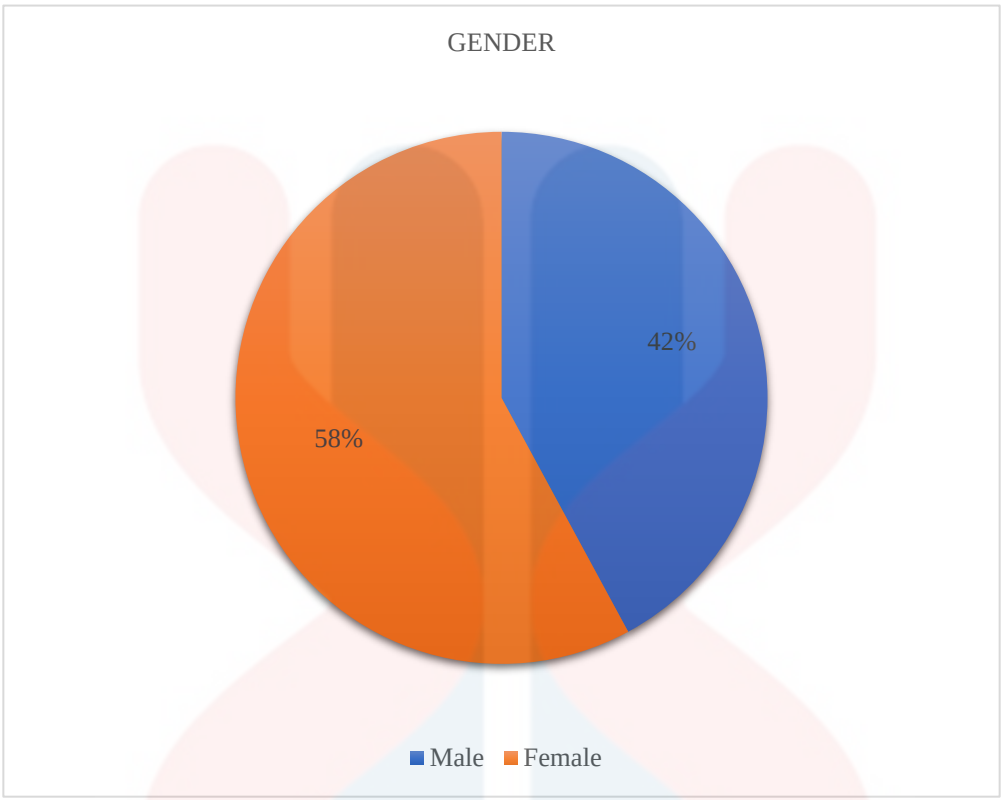


Figure 4.1: The Percentage of Gender

Based on the result, the pie chart shows the gender distributions of the respondents. There was a total of 375 respondents. In this survey, female respondents were higher with 58% with 217 respondents and 42% with 158 respondents.

4.3.2 Race

Table 4.4: The Race of Respondents

Race	Frequency	Percent (%)
Malay	225	68
Chinese	83	22.1
Indian	37	9.9
Total	375	100.0

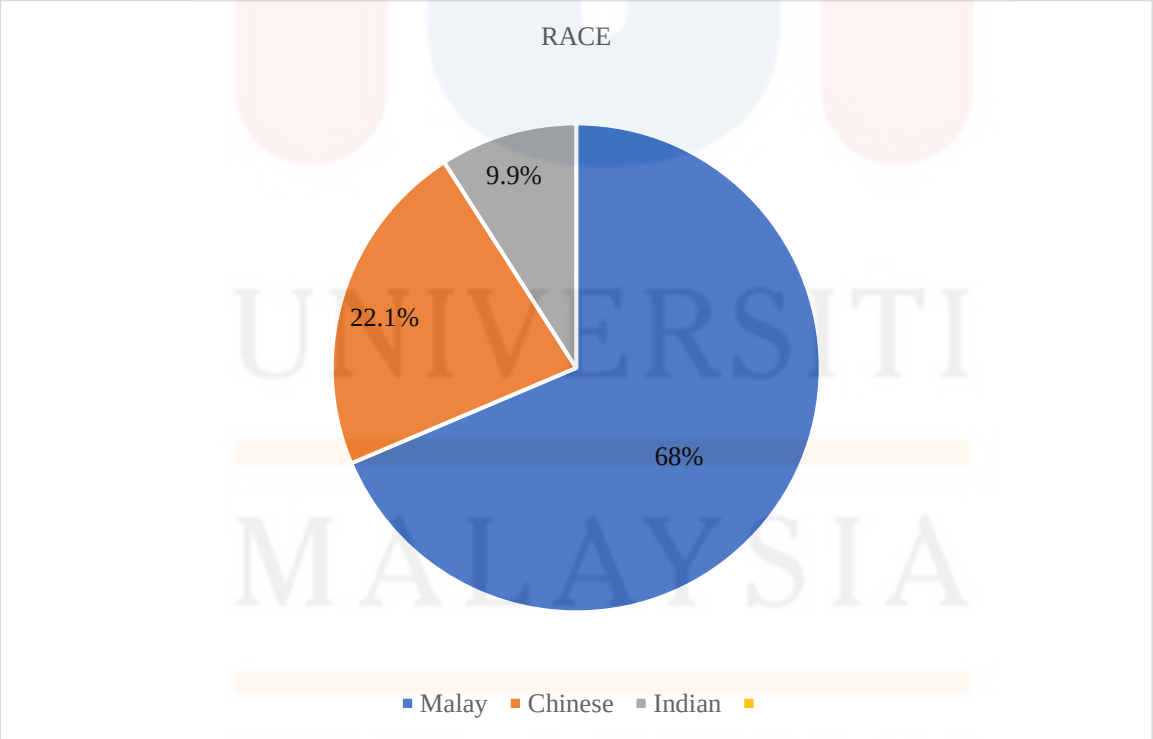


Figure 4.2: The Percentage of Race

The result shows that the highest number of race groups involved in the questionnaire is Malay with 68% for 255 respondents, followed by Chinese with 22% for 83 respondents. Last, Indian is a minority with 10% of 37 respondents answered this questionnaire.

4.3.3 Age

Table 4.5: The Age of Respondents

Age	Frequency	Percent (%)
<22 years old	33	8.8
23 – 38 years old	112	29.9
39 – 54 years old	178	47.5
> 55 years old	52	13.9
Total	375	100

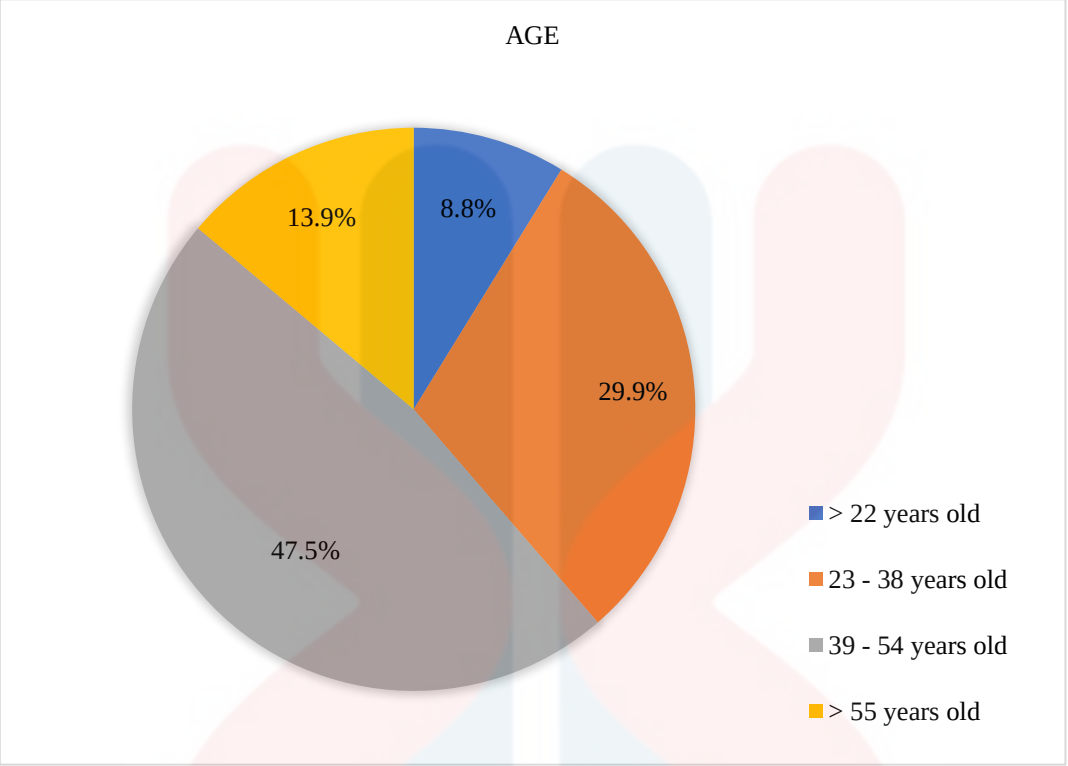


Figure 4.3: The percentage of Age

Figure 4.3 shows that mostly answered this questionnaire is 47.5% were between the ages of 39 until 54 years old. Meanwhile 29.9% of people aged 23 to 38 years old. Then, 13.9% of those over 55 years old responded to the questionnaire. 8.8% of those who responded to this survey have a circle of fewer than 22 years old.

4.3.4 Education Level

Table 4.6: The Education Level Respondents

Education	Frequency	Percent (%)
Primary school	40	10.7
Secondary school	222	59.2
STPM / DEGREE	113	30.1
Total	375	100.0

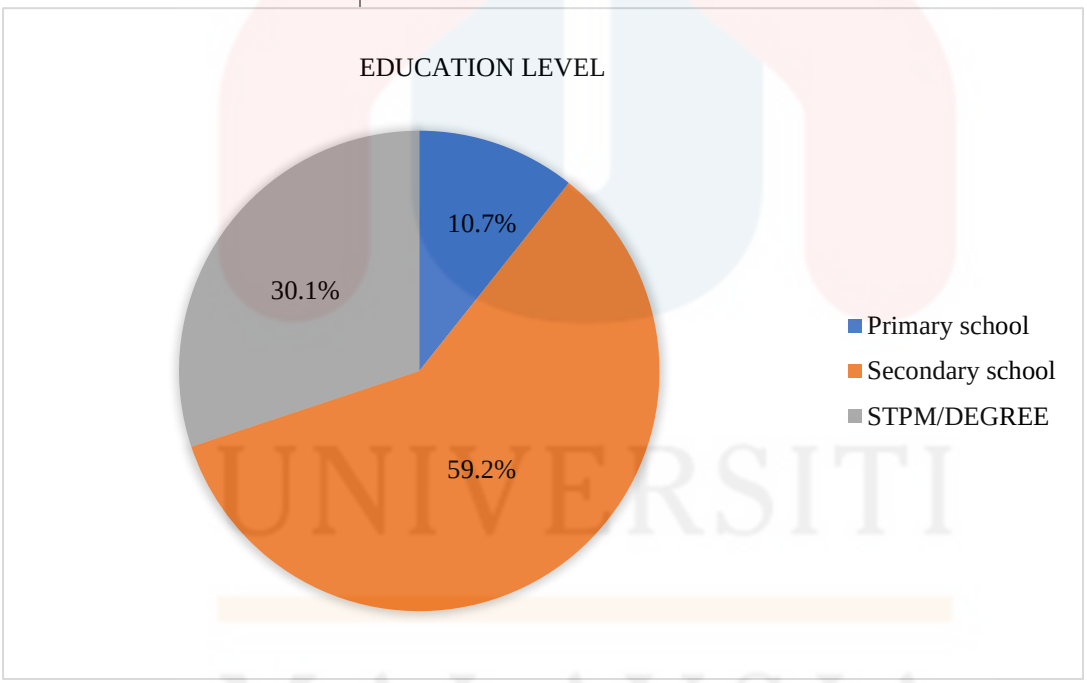


Figure 4.4: The percentage of Education Level

Figure 4.4 shows that majority that answered this survey has a secondary school level education which is 59.2% by 222 respondents. Then, level education respondents from STPM

or Degree are 30.1% with 113 respondents. Lastly, the minority answered is primary school education level only 10.7% for 40 respondents. Total respondents have 375.

4.3.5 Duration of Food Vending

Table 4.7: The Duration of Food Vending of Respondents

Duration of Food Vending	Frequency	Percent (%)
< 1 years	25	6.7
2 – 4 years	110	29.3
5-7 years	108	28.8
> 8 years	132	35.2
Total	375	100.0

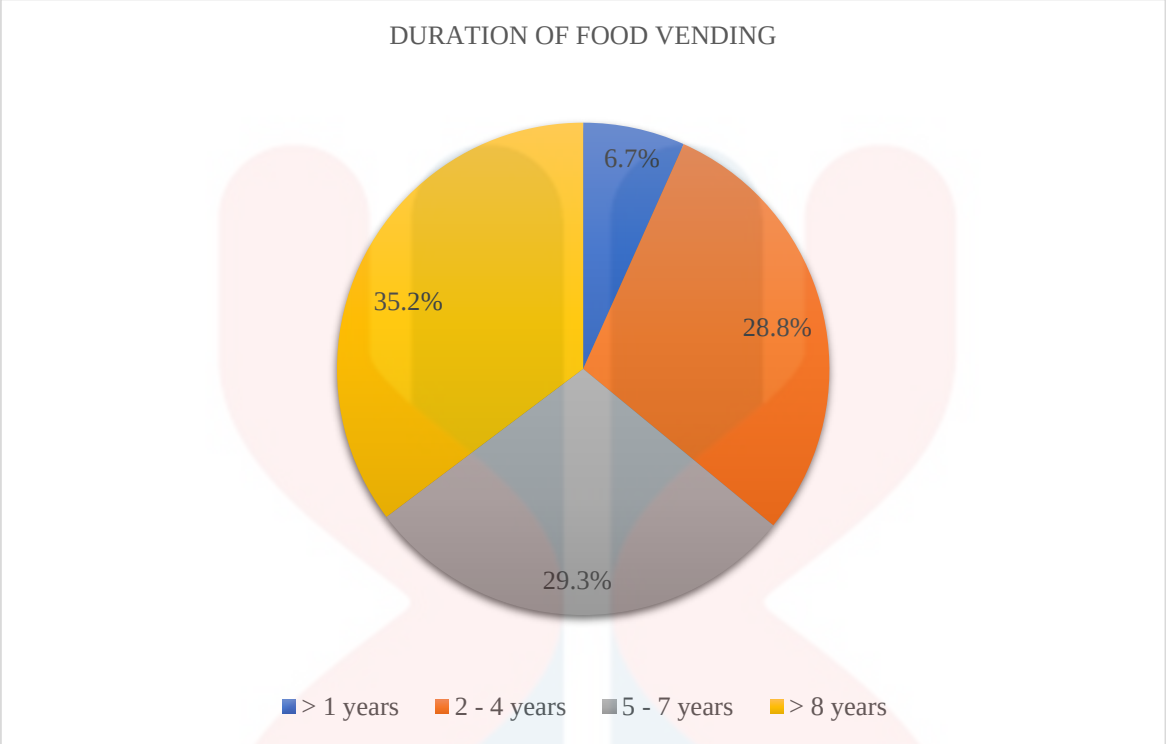


Figure 4.5: The percentage of Duration of Food Vending

Figure 4.5 represents the duration of food vending among respondents. The longest involved in food vending is more than (8) eight years which is 35%. Then, respondents involved in (2) two until (4) four years is 29.3%. The third longer duration of respondents involved in food vending is (5) five until (7) seven years is 28.8%. Lastly, respondents less than (1) one years involved in food vending is minority answered this survey which is 6.7%.

4.4 RESULT OF INFERENTIAL ANALYSIS

4.4.1 UNIVARIATE ANALYSIS

This Section presents the results of the univariate analysis conducted on the items for each variable reported in the form of frequency distribution, mean, and standard deviation. All the Independent Variable and Dependent Variable items were measured using a five (5) Likert Scale.

4.4.1.1 Food Knowledge

Table 4.8 shows the descriptive statistics for the food knowledge collected from 375 respondents.

Table 4.8: Descriptive statistics for the Food Knowledge

No	Item	Mean	Std. Deviation
FK 1	I wash my hands before start work	4.66	0.474
FK 2	I use the gloves while handling food to reduce of food contamination.	4.53	0.588
FK 3	I do proper cleaning and sanitation of utensils to decrease the risk of food contamination	4.68	0.479

FK 4	I regularly reheat foods can contribute to food contamination.	3.91	0.994
FK 5	Use a detergent when wash utensils will leave them free contamination.	4.69	0.490
FK 6	Salmonella is such of food borne pathogens can bring to food poisonous	4.60	0.547
FK 7	Food prepare in advance reduces the risk of food contamination.	4.63	0.662
FK 8	Workers have skin disease must avoid to come for working.	4.71	0.486
FK 9	Typhoid fever can made transmitted by food exposed by bacteria such as Salmonella	4.57	0.514

Table 4.8 shows the mean and standard deviation for the item used to measure the food knowledge. There were nine (9) questions measured with one (1) of the items had the highest mean 4.71 for items FK8 on statements 'Workers have skin disease must avoid to come for working'. Meanwhile, FK4 was the item with the lowest mean 3.91 on the statement of 'I regularly reheat cooked foods can contribute to food contamination'. The mean value for other (7) items for FK1, FK2, FK3, FK5 FK6, FK7 and FK9 were 4.66, 4.53, 4.68, 4.69, 4.60, 4.63 and 4.67 respectively

4.4.1.2 Attitudes

Table 4.9 shows the descriptive statistics for the attitudes collected from 375 respondents.

Table 4.9: Descriptive statistics for the Attitudes

No	Items	Mean	Std Deviation
A 1	A well-cooked food can prevent food poisoning.	4.78	O.460
A 2	Clean hand hygiene can prevent food borne disease.	4.78	0.419
A 3	Raw and cooked foods need be stored separately to reduce the risk of food contamination.	4.83	0.400
A 4	Compulsory to evaluate health of status workers before employment.	4.79	0.417
A 5	It is compulsory to check the temperature of refrigerators or freezers usually to reduce the food contamination.	4.75	0.445
A 6	I wear a mask to avoid of food contamination	4.74	0.465
A 7	I wear a glove to avoid of food contamination.	4.63	0.556
A 8	I wear cap to avoid of food contamination	4.76	0.476
A 9	Eggs must be washed after purchase.	4.83	0.444
A 10	Knives and cutting boards must be properly sanitized to before use it.	0.487	0.342

Table 4.9 shows the mean and standard deviation for the item used to measure the attitudes. There were ten (10) questions measured with one (1) of the items had the highest mean 4.87 for items A10 on statements 'Knives and cutting board must be properly sanitized before use it'. Meanwhile, A7 was the item with the lowest mean 4.63 on the statement of 'I wear gloves to avoid of food contamination'. The mean value for others (8) items for A1, A2, A3, A4, A5, A6, A8 and A9 were 4.78, 4.78, 4.83, 4.79, 4.75, 4.74, 4.76 and 4.83.

4.4.1.3 Food safety practice

Table 4.10 shows the descriptive statistics for the food safety practice collected from 375 respondents.

Table 4.10: Descriptive statistics for the Food Safety Practice

No	Items	Mean	Std Deviation
FSP 1	I do a preparation at home because keep safe and does not exposed by external bacteria.	4.76	0.510
FSP 2	Before the handling, preparation and serving the food, I will wash my hands in clean water.	4.83	0.410
FSP 3	I wash my hands after visiting the toilet.	4.86	0.352
FSP 4	Use the aprons when handling, preparation and serving the food.	4.73	0.510

FSP 5	I wear clean cloth and presentable.	4.86	0.346
FSP 6	I have a clean short nail.	4.91	0.291
FSP 7	I do not wear jewellery during handling, preparation and serving the food.	4.87	0.360
FSP 8	I do not smoke during manage or serving the foods.	4.91	0.291
FSP 9	During prepare raw and cooked food product or to cut raw vegetables, fresh meat and poultry, I do not use the same knives and cutting board.	4.87	0.391
FSP 10	I cover hair when handling, preparation and serving the food.	4.90	0.319

Table 4.10 shows the mean and standard deviation for the item used to measure the food safety practice. There were ten (10) questions measured with two (2) of the items had the highest mean 4.91 for items FSP6 and FSP8 on statements 'I have clean short nail and I do not smoke during handling, preparation and serving the food on item FSP6 and 'I do not smoke during handling, preparation and serving the food' on the item FSP8. Meanwhile, FS4 was the item with the lowest mean 4.73 on the statement of 'Use the apron when during handling, preparation and serving the food'. The mean values for other (7) items for FSP1, FSP2, FSP3, FSP5, FSP7, FSP9 and FSP10 were 4.76, 4.81, 4.86, 4.86, 4,87, 4.87 and 4.90 respectively.

4.4.1.4 Food Safety Implementation

Table 4.11 shows the descriptive statistics for the food safety implementation collected from 375 respondents.

Table 4.11: Descriptive Statistic for Food Safety Implementation

No	Item	Mean	Std Deviation
FSI 1	Food street vendors need keep remember about food safety during served food.	4.66	0.476
FSI 2	Food street vendors will intend to implement food safety with better ways during preparation and cooking next time.	4.67	0.487
FSI 3	Food street vendors are compulsory to implement food safety during preparing a meal before served to customers.	4.71	0.55
FSI 4	Food street vendors need to make sure food safety implementation must be practiced during preparing and cooking.	4.78	0.416
FSI 5	Food street vendors must ensure the personal hygiene each of worker is priority.	4.77	0.424
FSI 6	Food street vendors need to apply the safety practice during handling or served a food.	4.79	0.406
FSI 7	Food street vendors must have knowledge about food safety before deciding to open a business.	4.81	3.96

FSI 8	Attitudes is a crucial thing as a food street vendor for make sure the food are serving a keep clean and safe.	4.84	3.67

Table 4.11 shows the mean and standard deviation for the item used to measure the food safety implementation. There were eight (8) questions measured with one (1) of the items had the highest mean 4.84 for item FS18 on statement 'Attitudes is a crucial thing as a food street vendor for make sure the food was serving a keep clean and safe'. Meanwhile, FSI1 was the item with the lowest mean 4.66 on the statement of 'Food Street vendors need to remember about food safety during served the food. The mean value for other (6) items for FSI2, FSI3, FSI4, FS15, FSI6, and FSI 7 were 4.67, 471, 4.78, 4.77, 4.79 and 4.81 respectively.

4.4.2 PEARSON CORRELATION ANALYSIS

Pearson 's Correlation Coefficient aims to identify hygiene and sanitation practice and significant relationships between the IVs (food knowledge, attitude, food safety practices) and DV (Food safety implementation). Table 4.12 shows the correlation analysis of hygiene and sanitation practices on street food vendors in Malaysia.

Table 4.12: Result of Correlation Analysis

	Food Knowledge	Attitude	Food Safety Practice	Food Safety Implementation
Food Knowledge	1			
Attitude	0.680**	1		
Food Safety Practice	0.482**	0.645**	1	
Food Safety Implementation	0.089	0.131*	0.145**	1

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

*Correlation is significant at the 0.05 level (2-tailed)

Table 4.13: Rule of Thumb of Correlation Coefficient Size

Correlation Coefficient (r)	**Strength of Relationship**
0.90 to 1.0 (-0.90 to -1.0)	Very high positive (negative) correlation
0.70 to 0.90 (-0.70 to -0.90)	High positive (negative) correlation
0.50 to 0.70 (-0.50 to -0.70)	Moderate positive (negative) correlation

0.30 to 0.50 (-0.30 to -0.50)	Low positive (negative) correlation
0.0 to 0.30 (-0.0 to -0.30)	Little if any correlation

Source: Hinkle, Wiersma, & Jurs 2003

Based on table 4.12, Pearson 's correlation analysis was used in testing the relationship between hypotheses on a significant relationship such as food knowledge, attitude and food safety practices with food implementation. As a result, all hypotheses were accepted at a 0.01 significant level.

There was a significant correlation at $r = 0.089$, $p < 0.01$ between food knowledge and food implementation. The correlation coefficient shows a little, if any, the correlation between food knowledge and food implementation. Firstly, there was a statistically significant correlation between attitude and food implementation with $r = 0.131$, $p < 0.01$. The correlation coefficient shows a little, if any, correlation between attitude and food implementation. Next, was a statically significant correlation between food safety practices and food implementation with $r = 0.145$, $p < 0.01$. The correlation coefficient shows a little, if any, correlation between food safety practices and food implementation. In conclusion, food knowledge, attitude, and food safety practices were significantly correlated with food implementation.

4.5 HYPOTHESIS / BASED ON RESEARCH OBJECTIVES

Table 4.14 shows the summary for hypothesis testing in this study.

Table 4.14: Summary for Hypothesis

Hypothesis	Pearson ‘s Correlation	Results
H1: There is a positive relationship exists between food knowledge and food safety implementation	r = 0.089, p < 0.01	Supported
H2: Attitude has a positive relationship between attitude and food safety implementation.	r = 0.131, p < 0.01	Supported
H3: The food safety practices have a positive impact between food safety implementation.	r = 0.145, p < 0.01	Supported

The hypothesis based on table 4.12 was tested using Pearson's Correlation Analysis. The relationship between hypotheses on a significant relationship, such as food knowledge, attitude, and food safety practices have a positive value in the relationship with food implementation that are little if any correlation. All variables have values between 0.089 to 0.145. All hypotheses stated in the results were accepted at a 0.01 significant level.

4.6 SUMMARY

In conclusion, this chapter discussed the data analysis used by researchers to analyze the data collected using reliability analysis, descriptive analysis, and Pearson's correlation analysis. The discussion and conclusion of this research will discuss in the next chapter.

CHAPTER 5

FINDING AND CONCLUSION

5.1 INTRODUCTION

This chapter aims to determine the recapitulation of the finding, limitations, recommendations for future research and summary.

5.2 RECAPITULATION OF THE FINDING

5.2.1 Discussion Based on Research Objectives

The discussion focused on summarizing descriptive analyses of demographic which were gender, age, race, education level and duration of food vending (year). Next, the discussion focused on the major findings of this study.

5.2.1.1 Summary Result of Descriptive Analysis

Table 5.1 shows the mean values for the dependent variable, food safety implementation. As shown from the table above, the highest mean, 4.84, the attitude is a crucial as a food street vendor to ensure the food was served to keep clean and safe. Meanwhile, the lowest mean is 4.66 which is food street vendors need to remember about food safety during served food.

Table 5.1: Food Safety Implementation

Question	Frequency					Mean	Standard Deviation
Food Safety Implementation	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree		
FSI 1				129	246	4.66	0.476
FSI 2			3	117	255	4.67	0.487
FSI 3				109	266	4.71	0.455
FSI 4				83	292	4.78	0.416
FSI 5				88	287	4.77	0.424
FSI 6				78	297	4.79	0.406

FSI 7				73	302	4.81	0.396
FSI 8				60	315	4.84	0.367

Table 5.2 shows the mean values for the independent variable, food knowledge. As shown from the table above, the highest mean 4.71 which the workers with skin disease need to take leave from work. Meanwhile, the lowest mean 3.91 which 'I regularly reheat cooked foods can contribute to food contamination.

Table 5.2: Food Knowledge

Question	Frequency					Mean	Standard Deviation
Food Knowledge	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree		
FK 1				127	248	4.66	0.474
FK 2			18	139	218	4.53	0.588
FK 3			2	117	256	4.68	0.479
FK 4	8	19	97	124	127	3.91	0.479
FK 5		1	2	108	264	4.69	0.490

FK 6	1		5	136	233	4.60	0.547
FK 7	2	4	14	92	263	4.63	0.662
FK 8			6	95	274	4.71	0.486
FK 9			8	107	260	4.76	0.514

Table 5.3 shows the mean values for the independent variable, attitude. As shown in the table above, the highest mean 4.87 for items that knives and cutting board for items that should be properly sanitized to prevent cross-contamination. Meanwhile, the lowest mean 4.63 on the statement of 'wearing gloves is the important practice to reduce risk of food contamination.

Table 5.3: Attitudes

Question	Frequency					Mean	Standard Deviation
Attitude	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree		
A 1	1		1	78	295	4.78	0.460
A 2			1	79	295	4.87	0.419

A 3		3	59	313	4.83	0.400
A 4		2	73	300	4.79	0.445
A 5		2	89	284	4.75	0.445
A 6		4	91	280	4.74	0.465
A 7		14	111	250	4.63	0.556
An 8		8	75	292	4.76	0.476
A 9	2	5	46	322	4.83	0.444
A 10		1	46	328	4.87	0.342

Table 5.4 shows the mean values for the independent variable, food safety practice. As showed from table above, the highest mean. 4.91 which I have a clean short nail and I do not smoke during the handling, preparation and serving the foods. Meanwhile, the lowest mean 4.73 which I use the apron when during handling, preparation and serving the food.

Table 5.4: Food Safety Practice

Question	Frequency					Mean	Standard Deviation
Food Safety Practice	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree		
FSP 1		2	8	65	288	4.76	0.510
FSP 2			3	69	304	4.81	0.410
FSP 3				54	321	4.86	0.352
FSP 4	1		6	84	284	4.73	0.510
FSP 5				52	323	4.86	0/346
FSP 6				35	340	4.91	0.291
FSP 7			3	43	329	4.87	0.360
FSP 8				35	340	4.91	0.291
FSP 9	1		2	39	333	4.87	0.391
FSP 10			2	34	339	4.90	0.319

5.2.1.2 Major Findings

This research examined the relationship between three independents variables: food knowledge, attitudes and food safety practice. In contrast the dependent variable is the food safety implementation among street food vendors in Malaysia. The result has determined that food knowledge, attitude and food safety practice have a significant relationship with the food safety implementation. Based on Pearson Correlation Coefficient has been done to prove that the dependent variable, food knowledge, attitude, food safety practice impact and influence the dependent variable, which is the food safety implementation among street food vendors in Malaysia.

Table 5.5 summarizes the result regarding the objective to examined the relationship between food knowledge, attitude and food safety practice on food safety implementation among street food vendors in Malaysia. According to the result Table 5.5 there showing the result for the significance of the research.

Table 5.5: Hypothesis and Results

No	Hypothesis	Result
1	H1: There is a significant relationship between food knowledge and the food safety implementation among street food vendors in Malaysia	H1 accepted
2	H2: Attitude has a significant relationship between food safety implementation among street food vendors in Malaysia	H2 accepted

3	H3: There is a significant relationship between food safety practice and the food safety implementation among street food vendors in Malaysia	H3 accepted

5.2.1.2.1 Food Knowledge

Table 5.6: Relationship between Food knowledge and Food Safety Implementation among Street Food Vendors in Malaysia

Research Objective	Research Question
To examine the relationship between food knowledge and the food safety implementation among street food vendors in Malaysia	What are the impacts of food knowledge towards implementing food safety among street food vendors in Malaysia? How does food knowledge influence the implementation of food safety among street food vendors in Malaysia?
H1: There is a significant relationship between food knowledge and the food safety implementation among street food vendors in Malaysia	

According to table 4.12, the Pearson Correlation study's, independent food knowledge correlated with the food implementation among street food vendors. This relates to the Pearson Correlation value (r- value) of 0.089, which indicates a little if any correlation between the independent variable food knowledge and the dependent variable food safety implementation.

Based on the previous study done by Rahman, Arif, Bakar, & Talib (2016), they found that knowledge has a positive impact on the recipient 's attitude development and understanding of health facts. This study's findings could help in the development of food handler health intervention program to enhance their knowledge, attitude, and practices regarding food-borne diseases and food safety. Furthermore, food-borne illness morbidity and mortality will be

reduced as a result. Among of them, shows have a lack of knowledge and attitudes toward food safety in several studies undertaken to measure their knowledge and attitudes towards food safety. (FAO, 2013). Street food vendors' food knowledge appears to be unaffected by demographic factors such as age and gender. (Soares et al., 2012). While there was strong correlate between vendors education stage and their awareness of food safe. According to (WHO, 2000), the lack of knowledge will cause food-borne disease prevalence. Other than that, training and education play an important role in providing the knowledge, so it does not automatically translate to safe food handling practices. (Clayton & Griffth, 2008). These findings are supported by this study as well. Based on the result, this Section could be concluded that the entire questionnaire is reliable.

Thus, the study's goal of *examining the relationship between food knowledge and food safety implementation* among street food vendors is achieved. This study also answered the research question, *"What are the impacts of food knowledge towards implementing food safety among street food vendors in Malaysia?"* and *"How do food knowledge, attitudes, and food safety practices influence the implementation of food safety among street food vendors in Malaysia?"* is also answered through this research.

5.2.1.2.2 Attitude

Table 5.7: Relationship between Attitude and Food Safety Implementation among Street Food Vendors in Malaysia

Research Objective	Research Question
To examine the relationship between attitude and the food safety implementation among street food vendors in Malaysia	What are the impacts of attitude towards implementing food safety among street food vendors in Malaysia? How does attitude influence the implementation of food safety among street food vendors in Malaysia?
H2: Attitude has a significant relationship between food safety implementation among street food vendors in Malaysia	

According to the Pearson Correlation analysis in Table 4.12 show the result of Pearson's Correlation is $r = 0.131$. There was a statistically significant relationship between attitude and food implementation with $r = 0.131$, $p < 0.01$. The correlation coefficient shows a little if any correlation between attitude and food implementation. Then, there is a positive relationship between attitude and food implementation. The individual's attitude had been positive and also inside their life have advanced from other people for their business. When attitude was good, then customers will come to find them because their service was excellent.

As a result, before this Kalua (2001) indicate that knowledge effect attitude formation in a positive way. Positive attitude formation leads to positive behaviour. Therefore, they significant towards behaviour. As an example, individual has a positive attitude toward good habits on hands wash, so they were confirmed keep and likely to wash their hands (Simelane, 2005). As a result, there is a positive relationship between attitudes and food safety implementation among Malaysian street food vendors. It's also been argued that one's attitude could influence one's motivation to engage in a behaviour or practise (Rutter & Quine, 2003).

Then, the research objective is “to examine the relationship between attitude and food safety implementation” is achieved. While the research question “what are the impacts of food knowledge, attitudes, and food safety practices towards implementing food safety among street food vendors in Malaysia?” and “how to do food knowledge, attitudes, and food safety practices influence the implementation of food safety among street food vendors in Malaysia?” is also answered through this research.

5.2.1.2.3 Food Safety Practice

Table 5.8: Relationship between Food Safety Practice and Food Safety Implementation among Street Food Vendors in Malaysia

Research Objective	Research Question
To examine the relationship between food safety practice and the food safety implementation among street food vendors in Malaysia	What are the impacts of food safety practice towards implementing food safety among street food vendors in Malaysia? How does food safety practice influence the implementation of food safety among street food vendors in Malaysia?
H2: There is a significant relationship between food safety practice and the food safety implementation among street food vendors in Malaysia	

According to the Pearson Correlation analysis in Table 4.12, the result showed that food safety practices had a small positive correlation relationship towards food safety

implementation. Based on the result, a little if any positive correlation relationship between food safety practice and food safety implementation at $r=0.145$, $p<0.01$ are shown.

Based on the study, the level of knowledge and behaviour associated with food safety was low. According to (Akabanda, Hlortsi, & Owusu-Kwarteng, 2017), training will be trained about food safety knowledge among food street vendors, but this cannot ensure their behaviour and attitudes made a positive behaviour. Thus, street food vendors must have knowledge before starting a job. This is to prevent unwanted things from happening, such as food poisoning.

Codex Alimentarius Commission (CAC) mentions "Food safety includes the assurance that food will not cause effect among to the consumer when it is ready to taken for eat." The food is safe for consumers' consumption to guarantee food safety for food products free from contamination, physical, chemical, and microbiological. Lack of knowledge and awareness about food safety is one of the problems of healthcare consumers and food handlers, sellers, or hawkers.

Thus, the research objective is *"to examine the relationship between food safety practices and food safety implementation"* is achieved. While the research question *"what are the impacts of food knowledge, attitudes, and food safety practices towards implementing food safety among street food vendors in Malaysia?"* and *"how to do food knowledge, attitudes, and food safety practices influence the implementation of food safety among street food vendors in Malaysia?"* is also answered through this research.

5.3 LIMITATION

The study's objectives discussed the relationship between food knowledge, attitude and food safety practice towards food safety implementation among food street vendors in Malaysia. This research was based on the primary data: quantitative research methods and the data were collected using a questionnaire. However, the researcher faced a few challenges in this study during the distribution of questionnaires.

5.3.1 Limitation: Theoretical Recommendation for Future Research

This research is focused on context of food safety implementation of food street vendors, so one theory can explain it which is KAP Model. According to the KAP Model, it refers to an individual's behaviour; it depends on the individual's knowledge, and the provision of knowledge will directly lead to changes in attitude and practice. A lack of knowledge will cause food-borne disease prevalence. Some journals also only focus on knowledge and practice, while others combined are knowledge, attitudes, and practice as a complete variable.

5.3.2 Limitation: Methodology Recommendation for Future Research

Firstly, a low of response rate among the food street vendors. However, the scope among food street vendors in Malaysia it's quite hard to get a respondent. It will take a long

time about three to four weeks, to completely get all the respondents according to the sample in this research.

Next, a lack of knowledge about the uses of technology among food street vendors, especially among 45 years old above, will give food streets vendors hard to answer the questionnaire. Other than that, some of the respondents also did not have knowledge about the questionnaire. It because some food street vendors do not understand about the questionnaire or not. Furthermore, they maybe were too busy to handle the food vendors. For example, some respondents were frying food or serving customers.

Besides that, make sure the respondents fully understand the questionnaire and another challenge, especially in the English language. Not every food street vendor has the same level of English language understanding especially ability on their level of education, making some respondents misunderstand or misinterpret the survey questionnaire. Therefore, they would answer the questions according to their guessing and intuition to complete answering the questionnaire. This increases the possibility of the inconsistency of the final results.

5.3.3 Limitation: Practical Recommendation for Future Research

Other than that, the researchers also noticed among of the food street vendors are lack of encourage about the awareness of nutrition courses. Furthermore, they just ignore about this nutrition course without adapt during running their business. As an example, in term of food preparation, cooking, selling food and beverages. At the end, food street food vendors who had

lack of the knowledge about the nutrition course will make the food and beverage easier to be contaminated from the bacteria.

Next, a less practice to know about the benefit and awareness of typhoid injection among of street food vendor are also high. Difference with the small traders that running new business as vendors that assume that the typhoid injection will costly and make it as a burden on them to bear the cost. Furthermore, there are also food street vendors who are take it lightly about the benefit of taking these injections and only work to generate an economic income without prioritize a health and hygiene.

5.4 RECOMMENDATION

5.4.1 Theoretical Recommendation for Future Research

This research aimed this research for hygiene and sanitation practices on street food vendors in Malaysia. Research has shown variable which are food knowledge, attitude and food safety practice independent variable towards food safety implementation dependent variable. There is a positive correlation relationship. The Pearson's Correlation value r value are 0.089, 0.131 and 0.145 respectively.

The attitude of food handlers positively affects their perception of disease control measures. (Kwol et al., 2020). Also, the attitude of food handlers positively affects their understanding of personal hygiene. (Kwol et al., 2020). Consumers' attitude was shown to have a positive impact on good hygiene activities such as hand washing and cooking practices such

as using a cooking thermometer. (Shapiro et al., 2011). This study for evaluating the relationship between food safety implementation with food knowledge, attitude, and food safety knowledge.

Other than that, training and education play a main role in providing the knowledge, so it does not automatically translate to safe food handling practices. It is important part to know the level of knowledge among food vendors. Besides that, a useful skill of practice about safe food handling and the priorities practiced in the work environment so that the relevant and useful food training program can be planned. Besides, it is crucial to understand the interaction of prevailing food safety KAP of food vendors to maximize the occurrence of food-borne disease.

As preparation practice had been recommended as an antecedent variable. It because this practice affected the quality of food. At the same time quality food in street food despite their inability to indicate the existence of specific pathogenic microorganisms and the hygienic conditions present during food preparations. Every street vendor had to seriously take the quality of their food because their customers will persist in buying if the food was good quality and nutritious. Then customers will decide to buy or not. This is because, the customer holds the purchasing power. In the end, food handling and preparation practice will influence the implementation of food safety. Environmental hygiene will gain implementation of food safety from street food vendors towards these food and beverage industries.

5.4.2 Methodology Recommendation for Future Research

The first recommendations, firstly was to enlarge the target population of street food vendors. The researchers can enlarge it from a target population of in one area only. For example, focus on the only population in the Kota Bharu area all over Kelantan. This will make it easier to collect data and increase the number of sample data.

The second recommendation was the study carried out by using the qualitative method. Some of them prefer to choose interview session. With the interview session with the respondents that they can answer all their questions directly, rather than having them interpret the questions themselves and results in a bad performance their behalf. This method can clarify any ambiguity that the respondents held, and it can also help researchers obtain more answers through their observation of their respondents. This method also can help reduce misunderstanding and produce better results for the study.

Next, a multi-lingual questionnaire that can be used to mitigate the language barrier faced by some respondents was recommended in the future study. Respondents should provide the English version and other languages such as Malays, Mandarin, and Tamil versions to understand the survey question. This is because it can help the respondents in different races fully understand the meaning of the question when answering the questionnaire. Hence, it can help the respondents collect data from the questionnaire more efficiently, accurately, and effectively.

5.4.3 Practical Recommendation for Future Research

For practical recommendation, the researcher suggests that street food vendors follow a nutrition course to know proper hygiene and prepare food properly. Cleanliness is the main symbol of street food stalls where before a person enters the premises or the street food stalls, they will make sure whether the street food stalls clean. Therefore, the street food vendor must always ensure that the street food stalls are clean and that the street food vendor himself is clean and tidy.

Furthermore, researchers suggest that typhoid injections be given free of charge to street food vendors. With the injection are help stimulate the body's immune system to produce high of antibodies to fight Salmonella bacterial infections. These injections are essential to prevent any infectious diseases that can spread through food or drink. These injections are not too expensive but quite expensive for small traders. The practice of a healthy lifestyle and hygiene in a daily diet is important to prevent this infection. Frequent hand washing and hand hygiene are essential in avoiding typhoid infections. Avoid selling food that has been spoiled, exposed, contaminated, or raw to prevent poisoning.

Besides that, the researcher suggests the Malaysian Ministry of Health (MOH) always controls and ensures that street food vendors follow the proper standards. For example, wash their hand before work, use gloves while handling food and wearing a cap. If they do not comply with the set standards, they need to be compounded, maintain cleanliness and be mindful.

Lastly, improvements should be made to improve and enhance customer satisfaction. It will be able to cause customers to revisit street food. These improvements can be made so that the customers are always come to eat at street food. With the improvement, the atmosphere or environment can be better and more comfortable. The customer experience is essential and should be taken seriously. This can help increase customer satisfaction, and create more loyal customers who will visit a street food.

5.5 CONCLUSION

In this research, food knowledge, attitude and food safety practice towards food safety implementation were tested. According to the result, all variables caused impacts and influence the implementation of food safety among street food vendors. This has been proving from the Pearson correlation value for each variable that the researcher got. A little, if any, the correlation and significant relationship between food knowledge and the food safety practice among street food vendors which is the p-value was 0.089. Secondly, a little, if any, the correlation and significant relationship between attitude and food safety implementation among street food vendors, the p-value was 0.131. Lastly, a little, if any, the correlation and significant relationship between food safety practice and food safety implementation among street food vendors, the p-value was 0.145. Then it can be concluded that there is a significant relationship between food knowledge, attitude and food safety practice towards food safety implementation among street food vendors in Malaysia. In addition, limitations and recommendations when carried out this research also include that for further studies.

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APPENDIX: QUESTIONNAIRE

HYGIENE AND SANITATION PRACTICES ON STREET FOOD VENDORS IN MALAYSIA

Dear participant,

We are the final students of Bachelor of Entrepreneurship (Hospitality) from of Faculty Hospitality, Tourism and Wellness (FHPK) at University Malaysia Kelantan. We are currently conducting a research project to fulfil our degree requirement. This academic questionnaire examined the hygiene and sanitation practices on street food vendors in Malaysia. Your answer is extremely valuable for us to pass this course.

We are sincerely inviting to spend 3-5 minutes to complete the questionnaire. There is no personal information will be made public. Please assure that you answer will be handled in strict confidence. The information provided by you will be kept confidential and used for research purposes only.

Thank you for your precious time and assistance.

SECTION A: Demographic Information / *Maklumat Demografi*

Instruction: Please tick (/) the related statement about demographic information

Arahan: Sila tandakan pernyataan yang berkaitan mengenai maklumat demografi

1. Gender / *Jantina*

☐ Male / *Lelaki* ☐ Female / *Perempuan*

2. Age / *Umur*

☐ < 22 years old / *< 22 tahun* ☐ 39-54 years old / *39-54 tahun*

☐ 23-38 years old / *23-38 tahun* ☐ > 55 years old / *> 55 tahun*

3. Race / Kaum

☐ Malay / *Melayu* ☐ Indian / *India*

☐ Chinese / *Cina* ☐ Other / *Lain- lain*

4. Education Level / *Tahap Pendidikan*

☐ Primary / *Sekolah Rendah* ☐ STPM/DEGREE / *STPM / Ijazah*

☐ Secondary / *Sekolah Menengah*

5. Duration of food vending (years) / Tempoh penjualan makanan (tahun)

☐ < 1 / < 1 tahun ☐ 5-7 / 5-7 tahun

☐ 2-4 / 2-4 tahun ☐ > 8 / > 8 tahun

Instruction: Please respond to each statement by circling your answer using the scales given below. / *Sila maklum balas setiap pernyataan dengan membulatkan jawapan anda menggunakan skala di bawah.*

Strongly Disagree / *Sangat Tidak Setuju*	Disagree / *Tidak Setuju*	Neutral / *Nuetral*	Agree / *Setuju*	Strongly Agree / *Sangat Setuju*
1	2	3	4	5

SECTION B

Food knowledge, attitudes and food safety practice */ Pengetahuan makanan, sikap dan amalan keselamatan makanan.*

	Food Knowledge / *Pengetahuan Makanan*					
1.	I wash my hands before starts work *Saya mencuci tangan sebelum mula bekerja*	1	2	3	4	5
2.	I use the gloves to reduce of food contamination. *Saya menggunakan sarung tangan untuk mengurangkan pencemaran makanan.*	1	2	3	4	5

3.	I do proper cleaning and sanitation of decrease the risk of food contamination. *Saya melakukan pembersihan dan sanitasi yang betul untuk mengurangkan risiko pencemaran makanan.*	1	2	3	4	5
4.	I reheating cooked foods can contribute to food contamination. *Saya kerap memanaskan semula makanan jadi boleh menyumbang kepada pencemaran makanan.*	1	2	3	4	5
5.	Use a detergent when wash utensils will leave them free contamination. *Gunakan bahan pencuci semasa membasuh peralatan akan membiarkannya bebas daripada pencemaran.*	1	2	3	4	5
6.	Salmonella is an example of food borne pathogens can bring to food poisonous. *Salmonella adalah contoh pathogen bawaan makanan yang boleh membawa kepada keracunan makanan.*	1	2	3	4	5
7.	Proper food prepration can reduce of food poisoning. *Penyediaan makanan yang baik dapat mengurangkan keracunan makanan*.	1	2	3	4	5
8.	Workers have skin disease must avoid to come for working.	1	2	3	4	5

	Pekerja yang mempunyai jangkitan penyakit kulit, mesti elakkan untuk datang bekerja.					
9.	Typhoid fever made transmitted if the food exposed by bacteria such as Salmonella *Demam kepialu buat penyebaran oleh makanan yang terdedah dengan bakteria seperti Salmonella*	1	2	3	4	5

	Attitudes / *Sikap*					
1.	A well-cooked food can prevent food poisoning. *Makanan yang dimasak dengan baik boleh mengelakkan keracunan makanan.*	1	2	3	4	5
2.	Clean hand hygiene can prevent food borne disease. *Kebersihan tangan dapat mengelakkan penyakit bawaan makanan*.	1	2	3	4	5
3.	Raw and cooked foods need be stored separately to reduce the risk of food contamination. *Makanan mentah dan dimasak perlu disimpan secara berasingan untuk mengurangkan risiko pencemaran makanan.*	1	2	3	4	5
4.	The health of status workers should be evaluated before employment.	1	2	3	4	5

	Kesihatan pekerja status harus dinilai sebelum bekerja.					
5.	It is compulsory to check the temperature of refrigerators or freezers periodically to reduce the food contamination. *Kewajipan pemeriksaan suhu peti sejuk atau penyejuk beku secara selalu adalah untuk mengurangkan pencemaran makanan.*	1	2	3	4	5
6.	I wearing a mask to avoid of food contamination. *Saya memakai topeng muka untuk mengelakkan risiko pencemaran makanan.*	1	2	3	4	5
7.	I wearing gloves to avoid risk of food contamination. *Saya memakai sarung untuk mengelakkan risiko pencemaran makanan.*	1	2	3	4	5
8.	I wearing cap to avoid o food contamination. *Saya memakai topi untuk mengelakkan pencemaran makanan.*	1	2	3	4	5
9.	Egg need be washed after purchase. *Telur perlu dibasuh selepas dibeli.*	1	2	3	4	5
10.	Knives and cutting boards must be regular sanitized to before use it.	1	2	3	4	5

	Pisau dan papan pemotong mesti dibersihkan sebelum digunakan.					

	Food Safety Practice / *Amalan Keselamatan Makanan*					
1.	I do a preparation at home because keep safe and does not exposed by external pollution. *Saya membuat penyediaan di rumah kerana lebih selamat dan tidak terdedah kepada pencemaran luar.*	1	2	3	4	5
2.	Before handling, preparation and serving the food the food, I will wash my hands in clean water. *Sebelum mengendalikan, menyediakan dan menghidangkan makanan, Saya akan mencuci tangan menggunakan air yang bersih.*	1	2	3	4	5
3.	I wash my hands fter visiting the toilet. *Saya sentiasa mencuci tangan selepas melawat tandas.*	1	2	3	4	5
4.	Use the aprons when handling, preparation and serving the food. *Gunakan apron semasa mengendalikan, menyiapkan dan menghidangkan makanan.*	1	2	3	4	5
5.	I wear clean cloth and presentable. *Saya memakai pakaian yang bersih dan kemas.*	1	2	3	4	5

6.	I have a clean short nail Saya mempunyai kuku yang pendek.	1	2	3	4	5
7.	I do not wear jewellery during handling, preparation and serving the food. *Saya tidak memakai barang kemas semasa mengendalikan, menyiapkan dan menghidangkan makanan.*	1	2	3	4	5
8.	I do not smoke during the handling or preparation of foods. *Saya tidak merokok semasa mengendalian atau penyediaan makanan.*	1	2	3	4	5
9.	During prepare raw and cooked food ingredient or to cut raw vegetable, fresh meat and poultry, I do not use the same knives and cutting board. *Semasa menyediakan bahan makanan mentah dan dimasak atau memotong sayur mentah, daging segar dan ayam. saya tidak menggunakan pisau dan papan pemotong yang sama.*	1	2	3	4	5
10.	I cover hair when handling, preparation and serving the food. *Saya menutup rambut ketika mengendalikan, menyediakan dan menghidangkan makanan.*	1	2	3	4	5

SECTION C

Food safety implementation / *Pelaksanaan keselamatan makanan*

	Food Safety Implementation / *Pelaksanaan Keselamatan Makanan*					
1.	Food street vendors need to remember about food safety during served food. *Penjual jalanan makanan perlu ingat tentang keselamatan makanan semasa makanan disajikan*	1	2	3	4	5
2.	Food street vendors will intend to implement food safety with better ways during preparation and cooking next time. *Penjual makanan akan berhasrat untuk menerapkan keselamatan makanan dengan cara yang lebih baik semasa penyediaan dan memasak lain kali.*	1	2	3	4	5
3.	Food street vendors are compulsory to implement food safety during preparing a meal before served to customers. *Penjual jalanan makanan wajib melaksanakan keselamatan makanan semasa menyediakan makanan sebelum disajikan kepada pelanggan.*	1	2	3	4	5
4.	Food street vendors need to make sure food safety implementation must be practiced during preparing and cooking.	1	2	3	4	5

	Penjual jalanan makanan perlu memastikan pelaksanaan keselamatan makanan mesti diamalkan semasa penyediaan dan memasak.					
5.	Food street vendors must ensure the personal hygiene each of worker is priority. *Penjual makanan mesti memastikan kebersihan diri setiap pekerja menjadi keutamaan.*	1	2	3	4	5
6.	Food street vendors need to apply the safety practice during handling or served a food. *Penjual makanan perlu menerapkan amalan keselamatan semasa mengendalikan atau menghidangkan makanan.*	1	2	3	4	5
7.	Food street vendors must have knowledge about food safety before deciding to open a business. *Penjual jalanan makanan mesti mempunyai pengetahuan mengenai keselamatan makanan sebelum membuat keputusan untuk membuka perniagaan.*	1	2	3	4	5
8.	Attitudes is a crucial thing as a food street vendor for make sure the food are serving a keep clean and safe. *Sikap adalah perkara penting sebagai penjual makanan untuk memastikan makanan yang disediakan sentiasa bersih dan selamat.*	1	2	3	4	5

APPENDIX: TURNITIN REPORT

6

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