

Food Safety Awareness and Practices of Street Food Vendors in Iloilo City

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Abstract—This study was pursued to ascertain the level of awareness and the degree of practices of street food vendors in Iloilo City. Employing the Descriptive-Correlational design, the two (2) questionnaires were used as data gathering instrument and statistics involved t-test and ANOVA for the analysis of data. Forty (40) street food vendors were conveniently chosen to determine the level of awareness and degree of practices on food safety. Findings revealed that the level of awareness is *Higher* compared to the degree of practices of street food vendors for the entire process. It is recommended that the local government should focus on the food safety practices of street food vendors in Iloilo City and must implement rules by strictly inspecting the area and monitoring the business operation of these vendors.

Keywords— food safety awareness, food safety practices, street foods consumption.

I. INTRODUCTION

Most of the streets are replete with so many things that one can think of. If there is one thing that is most saleable for the pedestrians, it would be street foods.

Filipino street foods are common in most other countries. These are convenient, relatively cheap and readily available. Fried or roasted, in scoops or in sticks, all these yummy treats that are prepared and sold in public outdoor areas are part of most Filipinos' everyday fare.

Health experts suggest that people should think twice before buying and eating street foods. Vendors often lack access to potable water supply, garbage disposal and sometimes to a clean working environment making these foods exposed to harmful elements which may result in consumers getting water-borne and food-borne illnesses like diarrhoea, hepatitis and even food poisoning [1].

Food safety is a corporate social responsibility as food is a product where consumption is not just a matter of choice, but it is ultimately a matter of life and death. Food handlers are very important people when considering food safety. Their hygiene practices affect the people who consume it and depend on them for their meals. Food safety should be a major concern for all food handlers.

The city health officials cited the growing number of street food vendors is increasing as the main reason of food and water-borne diseases. They have not issued sanitation permits for the street food vendors because they do not have permanent business addresses. It is difficult to monitor street food vendor's

sanitary practices in their personal hygiene, food preparing, handling, serving, and storing of foods. These concern health officials and even repeatedly informing people to become cautious in eating foods sold in streets.

It is in this light that the researchers conducted this study to be able to evaluate the food safety awareness and practices of those involved in selling foods along the streets of Iloilo City.

General Objectives

This study aims to determine the awareness and practices of street food vendors in Iloilo City on food safety.

Specifically, this investigation will try to:

1. Determine if the street food vendors are aware of food safety.
2. Determine whether the street food vendors apply food safety practices.
3. Ascertain the level of awareness of the street food vendors on food safety when taken as a whole group and when classified according to age, gender, educational attainment, type of business operation, number of years operating and availability of sanitary permit.
4. Ascertain the practices of street food vendors on food safety when taken as a whole group and when classified according to age, gender, educational attainment, type of business operation, number of years operating and availability of sanitary permit.
5. Measure the significant differences on the levels of awareness of the street food vendors on food safety when classified according to age, gender, educational attainment, type of business operation, number of years operating and availability of sanitary permit.
6. Measure the significant differences on the practices of the street food vendors on food safety when classified according to age, gender, educational attainment, type of business operation, number of years operating and availability of sanitary permit.
7. Measure the significant relationship between the level of awareness and practices of street food vendors on food safety.

Scope and Limitation of the Study

This investigation is concerned on determining the Food Safety Awareness and Practices of the Street Food Vendors in Iloilo City in terms of personal hygiene, food preparation, cooking, serving, and storing.

This study however, admits certain limitation. This descriptive-correlational type of research is conducted in months of July 2014 – March 2015 equivalent to 9 months.

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The conduct of this study is only confined to forty (40) street food vendors covering the areas of Ledesma Street, Valeria Street, Rizal Street and J.M Basa Street in Iloilo City.

Conceptual Literature

A Filipino street food is a huge part of our culinary culture, a showcase of how we Filipinos can squeeze fun and flavour from the unlikeliest and least palatable ingredients. It is both pop-art and comfort food in one portable package, pushed around on wheels or carried on backs [2].

Street Foods

The term street foods are ready-to-eat foods and beverages that are prepared and/or sold by itinerant or stationary vendors, especially on streets and in other public places (FAO, 2009).

Street foods often reflect traditional local cultures and exist in an endless variety. Vendors’ stalls are usually located outdoors or under a roof which is easily accessible from the street. Street food businesses are usually owned and operated by individual or families but benefits from their trade extend throughout the local economy.

In order to reduce the burden of food-borne diseases, developing countries should strengthen the role of street food vendors by providing training, guidelines, legislation and infrastructure to ensure food security and nutrition [3].

Republic Act No. 10611

“An Act To Strengthen The Food Safety Regulatory System In The Country To Protect Consumer Health And Facilitate Market Access Of Local Foods And Food Products, And For Other Purposes” (IRR Food Safety Act 2013).

This Act shall be known as the “Food Safety Act of 2013”.

Food Law Objectives

Food law shall aim for a high level of food safety, protection of human life and health in the production and consumption of food. It shall also aim for the protection of consumer interests through fair practices in the food trade.

Food Safety

Food safety is the responsibility of every person who is involved in foodservice. Serving safe food to children and adults who participate in child nutrition programs is a top priority for every foodservice employee regardless of the job assignment. Every action in foodservice has the potential to impact the safety of the food, whether during purchasing, storing, preparing, holding, serving, or cleaning [4].

Personal Hygiene

Every person who works in or around food has the potential of contaminating a food with bacteria and viruses that are present on our bodies. An important way to prevent food contamination is to maintain a high standard of personal hygiene and cleanliness.

Even healthy people carry food poisoning bacteria on their bodies. By touching parts of your body, such as your nose, mouth, hair, or your clothes you can spread bacteria from your hands to the food.

Good personal hygiene also makes good business sense. Customers like to see food handling staff who take hygiene seriously and practice safe food handling.

Food handlers’ personal hygiene practices and cleanliness must minimize the risk of food contamination.

Conceptual Framework

The study determined the Food Safety Awareness and Practices of Street Food Vendors in Iloilo City. The independent variables of the study are the respondents categorized according to age, gender, educational attainment, type of business operation, number of years operating and availability of sanitary permit while the dependent variables are the level of awareness and the degree of practices of the street food vendors.

The process variables are the assessment in the level of awareness and the degree of practices on food safety among the vendors, measurement of the significant difference in their level of awareness and the degree of practices on food safety, and the measurement of the significant relationship in the level of awareness to the degree of practices on food safety among them.

II. METHODOLOGY

Research Design

This study adapted a Descriptive-Correlational type of methodology which employed an investigation of the characteristics of a given population, measuring the specified variables of awareness and practices of street food vendors regarding food safety. According to Fraenkel and Wallen (2010) a descriptive survey is used to extract answers to questionnaires concerning the status of the nature of the research problem investigated. While a correlational study is a quantitative method of research in which you have 2 or more quantitative variables from the same group of subjects, and trying to determine if there is a relationship (or covariation) between the 2 variables; a similarity between them, not a difference between their means (Adams, 2005). This method of research was considered appropriate for the study to describe how the existence, extent, association of awareness and practices of street food vendors on food safety.

Respondents of the Study

The respondents of the study were the 40 street food vendors in selected street of Iloilo City who are presently vending at the vicinity of Ledesma Street, De Leon Street, Rizal Street and J.M. Basa Street.

TABLE I. DISTRIBUTION OF RESPONDENTS

Street Vendor’s Profile		F	P
Age	Young Adult (18 - 45)	36	90.0
	Middle Adult (46 - 65)	4	10.0
	TOTAL	40	100.0
Gender	Male	27	67.5
	Female	13	32.5
	TOTAL	40	100.0
Educational Attainment	Elementary Level / Elementary Graduate	7	17.5
	High School Level / High School Graduate	20	50.0

	College Level / College Graduate	13	32.5
	TOTAL	40	100.0
Type of Business Operation	Weekend	13	32.5
	Whole Week	27	67.5
	TOTAL	40	100.0
Number of Years Operating	10 years and below	36	90.0
	Above 10 years	4	10.0
	TOTAL	40	100.0
Availability of Sanitary Permit	Yes	34	85.0
	No	6	15.0
	TOTAL	40	100.0

Sampling Technique

The study utilized an accidental sampling method in selecting its respondents. Accidental sampling is a type of non – probabilities sampling which the researchers meet by chance are included in this sample. The researchers chose this method since there are residents who are working and thus, choosing them randomly is very difficult. But since the researchers used the accidental sampling method, anybody in the selected streets of Iloilo City during the survey had the opportunity of being chosen.

Data Gathering Instrument

The data gathering instrument used is the researchers-made questionnaire. Assistance of the experts had been helpful too refining the instrument. In the preparation for the first draft of the questionnaire, the researchers consulted several books, thesis, and different websites. When the first draft of questionnaire was made, it was presented to the research-adviser for her comments, feedbacks, and suggestions for further improvement.

The instruments are composed of three parts. The first part includes the demographic profile of the respondents in terms of age, gender, educational attainment, type of business operation, number of years operating, and availability of sanitary permit. The second part includes the food safety awareness and practices in terms of personal hygiene, food preparation, food cooking, food serving, and food storing. The questionnaire is given to the selected street food vendors in Iloilo City.

Validity of the Questionnaire

A questionnaire is very important in a descriptive type of study because this was the only source of data that can be used to answer the problem of the study. With this, the validation of the questionnaire was applied.

The questionnaire was first submitted to the adviser for corrections. The corrected questionnaire was then forwarded to the four jurors who are experts in the field of research for content validation. The suggestions, feedbacks, and comments made by the validators were incorporated on the final copy of the instrument.

Reliability of the Questionnaire

The questionnaire was pre-tested among the 15 respondents from the selected streets of Iloilo City for the purpose of ascertaining its reliability. Cronbach Alpha is computed from the answered questionnaires with the use of the

Statistical Package for Social Sciences (SPSS). A coefficient of 0.70 or higher indicated that the questionnaire is reliable [5].

The questionnaire is determined valid and reliable with the coefficient equal to .936 and ready to be distributed for final survey.

Data Gathering Procedures

After validating and pre-testing the questionnaire for reliability, a letter addressed to the officer-in charge of City Health Office II asking permission to conduct the study on his jurisdiction was sent. Upon approval, copies of the questionnaires were personally distributed to the chosen respondents after talking with them. The respondents were able to answer the questionnaire with an ample time given to them. The researchers assured the respondents regarding the confidentiality of their responses. The questionnaires were then gathered, tabulated and analysed with the use of both descriptive and inferential statistics.

Data Processing and Statistical Treatment

The data gathered from the processed questionnaire were tabulated and processed using the SPSS or the Statistical Package for Social Sciences. With this program, several statistical tools were used in order to answer the problems of the study.

Descriptive statistics used frequency, percentage, standard deviation and mean. Frequency and percentage were used to describe the profile of the respondent. The standard deviation was used in order to describe the homogeneity of the response of the respondents. In order to determine the level of awareness and the degree of practices in food safety, mean was used.

For the interpretation of the mean, the following scale was used:

A. For the level of awareness on the food safety

Scale	Description
4.21-5.00	Extremely Aware
3.41-4.20	Highly Aware
2.61-3.40	Aware
1.81-2.60	Moderately Aware
1.00-1.80	Least Aware

B. For the degree of practices on food safety

Scale	Description
4.21-5.00	Always Practiced
3.41-4.20	Practiced most of the time
2.61-3.40	Often Practiced
1.81-2.60	Sometimes Practiced
1.00-1.80	Seldom Practiced

For the inferential statistics, this study employed the nonparametric test because based on the questionnaire and the variables of this study, the data gathered from the respondents were nominal and ordinal data. With this, the statistical tools used were T-test, Pearson r, Kruskal Wallis and the Spearman Rank order coefficient of correlation (r_s).

T-test was used to determine the significant difference in the level of awareness and the degree of practices on food safety of the street food vendors when group according to gender, type of business operation, number of years operating and availability of sanitary permit.

ANOVA was used to determine the significant difference in the level of awareness and the degree of practices on food safety of the street food vendors when grouped according to their age and educational attainment

Pearson r was used to determine the significant relationship in the level of awareness and the degree of practices on food safety of the street food vendors in Iloilo City.

To interpret the results of the inferential statistics, the following scales were used:

A. In finding the significant difference and significant relationship, the scale below was used;

Scale	
p <.05	Significant
p >.05	Not Significant

B. For determining the strength of relationship

Correlation Value	Degree of Relationship
Less than ±0.20	Slight Correlation
±0.21 to ±0.40	Low Correlation
±0.41 to ±0.70	Moderate Correlation
±0.71 to ±0.90	High Correlation
±0.91 to ±1.00	Very High Correlation

III. SUMMARY CONCLUSION ND RECOMMENDATIONS

This study revealed the following findings:

1. Twenty-five (25) of the street food vendors of Iloilo City were **“Aware”** of the Republic Act 10611 or the Food Safety Act of 2013 while the rest are not.

2. **As a whole**, the street food vendors of Iloilo City were **“Extremely Aware”** in terms of personal hygiene, proper preparation, cooking, serving and storing of streets foods . Further, they are **“Extremely Aware”** in all categories when grouped to **age**, (young adult and middle adult), **gender** (male and female), type of business operation (whole day and whole week). When grouped **according to educational attainment**, vendors who are high school and college level/graduate were almost **“Extremely Aware”** in all categories while vendors who are elementary level/graduate were **“Extremely Aware”** in terms of serving and storing but highly aware in terms of personal hygiene, preparation, and cooking. When grouped according to **number of years operating**, those who are about 10 years and below, were almost **“Extremely Aware”** in all categories while those who are above 10 years were only **“Extremely Aware”** in terms of personal hygiene, preparation and serving but highly aware in terms of cooking and storing. When grouped according to **availability of sanitary permit**, vendors who have a sanitary permit were **“Extremely Aware”** in all categories while those who have no sanitary permit were **“Highly Aware”** in terms of personal hygiene.

3. All street food vendors practiced the proper handling of foods.

4. **When taken as a whole**, the degree of practice of street food vendors in terms of personal hygiene, preparation, cooking, serving, and storing were **“Practiced Always”** on food safety. When grouped according to **age** (young adult and middle adult), **gender** (male and female), **educational attainment**, (elementary, high school and college level/graduate), **type of**

business operation (whole day and whole week), and **availability of sanitary permit** (yes and no) were **“Always Practiced”** in all categories. In addition, when grouped according to number of years operating, those who are about 10 years and below were **“Always Practiced”** in all categories while those who are above 10 years were **“Always Practiced”** the terms of preparation, cooking, and serving but **“Mostly Practiced”** the terms of personal hygiene and storing.

IV. CONCLUSIONS

Street food vendors are all over the place in most cities. This study has shown that street food vendors practiced minimal hygienic and sanitary practices. The hygienic practices in question included food preparation, cooking, serving and methods of storing cooked food. Due to lack of proper knowledge and guidance on street food vending, vendors prepared their foods in explicitly unhygienic and sanitary conditions.

The influence of training was evident in some street vendors. Trained vendors had more knowledge in some of the hygienic practices and had a more positive attitude than the untrained street food vendors. The attitude of street food vendors to food safety can also be regarded as attuned to the need to ensure safe practices in food preparation.

After analysing the results, the following conclusions were made:

The first hypothesis which states *“there is no significant difference on the levels of awareness of street food vendors on food safety when group according to age, gender, educational attainment, type of business operation, number of years operating and availability of sanitary permit,”* is **rejected**. The second hypothesis which states *“there is no significant difference on the degree of practices of street food vendors on food safety when group according to age, gender, educational attainment, type of business operation, number of years operating and availability of sanitary permit,”* is **rejected**. The third hypothesis which states *“there is no significant relationship between the level of awareness of street food vendors on food safety and level of practices,”* is also **rejected**.

Lastly, the findings indicate the need for stricter implementation of the food sanitation code and the licensing of street food vendors. Public health authorities should intensify efforts to monitor conditions of sanitation and hygiene in establishments serving food and drink to the public.

Recommendations

Based on the results of the study, the following measures are duly recommended:

1. Street food vendors of Iloilo City should regularly practice food sanitation when preparing and serving food, especially by using proper clothing and wearing some shields like gloves, hairnet and aprons when serving food. These practices ensure the neatness and cleanliness of those preparing and serving food to the general public.

2. All street food vendors must be required to get a sanitary permit from the health authorities of the city government. The regulation could compel the street food vendors to comply with sanitation standards and requirements related to sanitary

practices in food services to forestall or avoid foodborne and waterborne illness due to food contamination or poisoning. The imposition of sanitary permits ensures inspection of quality of food served by street vendors. Strict compliance with getting sanitary permit by street food vendors doing business should be regularly monitored by the city government's health employees. In this regard, street vendors must be subjected to regular sanitary inspection as regards the place where street food vendors operate to ensure that the food served is not exposed to contaminants, thus making the food sold safe from any health hazards. In connection with this suggestion, the street food vendors should have designated areas or spaces along the city streets, so that their operations can be properly and conveniently inspected or monitored by the city health authorities.

3. The street food vendors should undergo more training in new and sanitary ways of preparing, cooking, serving, and storing of food sold to the general public. This is to ensure that they follow the required rules for proper hygiene and sanitation. Attention should be given to the use of indigenous ingredients when preparing different dishes, and improving food service to satisfy customers. For improved storing, street food vendors must be taught the practice of FIFO, so that food cooked first is also served first, and the labeling of food products for easy and convenient identification. When street food vendors could adequately demonstrate their practices of food sanitation, people are assured of safety and cleanliness of products offered, hereby increasing their opportunity to have more customers and earn higher income.

4. The city health authorities should consider establishment of street food centres with adequate facilities and utility services. Such centres will provide an environment for storing, preparing and serving safe food. They will provide the necessary utilities such as potable water, adequate light, and drainage and solid/water disposal, provide conducive environment for consumers to be served with safe food and provide good setting for the relevant authorities to conduct information, education and training programs for vendors and consumers.

5. Lastly, an expanded study should be conducted involving larger target population or sample size of street food vendors, preferably covering the other districts of the city where street food vendors are also doing business. In conducting a similar study in the future, a premise-probe type of instrument should be used to enable respondents to explain their views better without being required to merely scale the values of their owners based on predetermined items. Furthermore, this type of inquiry allows the street food vendors more opportunity to explain or justify what they are aware of and the practices concerning food sanitation, thereby improving the quality of research.

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