

Street Food Preparation Practices

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Abstract – *Food handling should always follow proper procedure and should maintain orderliness and cleanliness. This study aimed to determine the food sanitation practices of street food vendors in Batangas City. Descriptive type of research was utilized in the study. Results showed that majority of the street food vendors sell isaw because people of the community most likely prefer isaw as their merienda. The street food vendors are practicing a clean working area as part of their sanitation practices. The customers perceived that barely checking of the food if it is free from larva is being practiced by the street vendors.*

Keywords: sanitation, food preparation, street food, street vendor

I. INTRODUCTION

The Food and Agriculture Organization (FAO) defines street foods as “ready-to-eat foods and beverages prepared and sold in streets and other similar public places”. Street foods have become popular not only as source of convenient and affordable food, but as main source of livelihood. However, street food vendors overlook the importance of the safety and nutritional quality of the food they serve which can cause food-related diseases, even poisoning and death to customers, particularly school demand for inexpensive, ready to eat food has increased. Most of the earnings generated in street.

Filipinos are known to enjoy the average three meals a day plus desserts or “merienda” as most Filipinos call it. One of the qualities that Filipinos possess is their ingenuity to make up most anything into something new, creative yet cost-sufficient, including food. People of other countries may prefer dining and eating pizzas when hunger pangs strike. Filipinos on the other hand race to the streets to satisfy their hunger for favorite Pinoy street food for a few pesos. These street foods are easy to find outside school gates, churches, parks and even in malls where they offer most exotic delicacies.

Based on Tourism-Philippines one unifying aspect of Filipino culture is that Filipinos love their food. Filipinos love to eat when they’re happy, sad, angry,

bored and even on the rare occasions that they’re hungry. While the usual restaurants are available on every block to satisfy these cravings, there are also an infinite number of street stalls serving up an array of tasty albeit, strange snacks as well as there’s so much choice when it comes to street foods.

The changing nature of working environments and lifestyles are increasingly creating a need for people to eat inexpensive meals outside their homes or on the run to work or school. On the other hand street foods stimulate the demand for traditional ingredients and best provided by local enterprises and agriculture.

The reason why were conducting this study is for us to know the importance of street foods on our daily life, and how hazardous it is and how it is made. By this we can come up with answers for those questions of the other people wondering about street foods.

II. OBJECTIVES OF THE STUDY

The study aimed to determine the food sanitation practices of street foods in Batangas City. Specifically determine the different street foods sold in Batangas City, assess the different sanitation practices in preparing street foods and identify the problems encountered in employing sanitation practices.

III. REVIEW OF LITERATURE

Street food vendors may be located outdoors or under a roof which is easily accessible from the street. Urban population growth has stimulated a rise in the number of street food vendors in many cities throughout the world. Street food vendors are also known as hawkers or sellers. Migration from rural areas to urban centers has created a daily need among many working people to eat outside the home. Demand for relatively inexpensive, ready-to-eat food has increased as people, especially women, have less time to prepare meals (Winarno & Allain, 2000).

On the other hand, according to Winarno and Allain (2000) that in some parts of Europe and North America street foods, which originated in Asia, Latin America and Africa, have become an integral part of the local food scene. At the same time, one cannot ignore the tremendous expansion of the major fast food

companies. While consumers in industrialized countries are increasingly fascinated by "traditional" or "ethnic" foods, many in developing countries seem to be succumbing to the "hamburger assault".

The growing street food sector in low-income countries offers easy access to inexpensive food as well as new job opportunities for urban residents. While this development is positive in many ways, it also presents new public health challenges for the urban population. Safe food hygiene is difficult to practice at street level, and outbreaks of diarrheal diseases have been linked to street food (Rheinländer et al, 2008).

The innumerable street food industries involve huge amounts of capital and millions of people yet they are often not given the official recognition they deserve. In many countries the street food industry is merely tolerated. Because the industry is spread over a myriad of locations and is not systematically coordinated in any way, it is common for clusters of vendors to be considered impediments to urban planning and hazards to public health. The negative attitude of officials toward street food vendors frequently reflects concerns about poor hygiene and the spread of disease. Lacking staff to enforce rules and regulations, governments have difficulty monitoring street food enterprises (Winarno & Allain, 2000).

The hygienic aspects of vending operations, according to Mensah, et al (2002) are a major source of concern for food control officers. For example, stands are often crude structures, and running water may not be readily available. Also toilets and adequate washing facilities are rarely available. The washing of hands, utensils, and dishes is often done in buckets or bowls. Disinfection is not usually carried out, and insects and rodents may be attracted to sites where there is no organized sewage disposal. Finally food is not adequately protected from flies and refrigeration is usually unavailable.

The health risk of food is not only determined by the concentration of various additives and contaminants in a food product, but also by the cumulative daily intake of a certain contaminant or additive throughout a consumer's diet. Although some street foods have been found to be contaminated and serious illnesses have been related to them, in general very few cases of food poisoning have been found. A survey involving 135 street foods in Iloilo, the Philippines found that only one item caused diarrhea among the study participants (Tinker, 1987; Winarno, 2000). It may be that illnesses occur but are not reported to medical authorities. It has also been suggested that individuals develop immunities to food borne diseases, although detailed studies are

needed to confirm immunity development. The site where street foods are prepared and sold affects their safety significantly; access to a safe water supply can greatly improve food hygiene.

Dr. Ahmed al-Safani (2008), an internist advised all Muslims in the month of Ramadan to avoid consuming the unsafe kinds of food, such as street foods, which become more prevalently purchased and eaten during Ramadan. Such foods can lead to infection by many diseases especially typhoid fever. Typhoid fever is a potentially life-threatening illness that is caused by the bacteria *Salmonella typhi* (*S. typhi*). Persons with typhoid fever carry the bacteria in their bloodstream and intestinal tract and can spread the infection directly to other people by contaminating food or water. Anyone can get typhoid fever if they drink water or eat food contaminated with the *S. typhi* bacteria.

Dr. al-Safani(2008) added that fasting during the Islamic month of Ramadan can be good for one's health and personal development. But people should be careful of having such kinds of street foods, which are mostly contaminated and cooked in bad hygiene, to maintain their bodies in good health during the month of Ramadan. People also must maintain their personal hygiene to avoid health problems.

The researchers reviewed some literatures locally published which discussed the street food as part of the culture in the Philippines.

According to Fernando, "These foods did not undergo proper food preparation. Oftentimes, the vendors do not even bother to cover the foods they are selling. Walang malasakit na gawing ligtas man lamang ang mga pagkaing nilalako nila (They don't even care for the safety of the food they are selling). Fernando stressed that they have the legal mandate to drive away these street food vendors, especially those in the sidewalks.

The Department of Health (DOH) has earlier urged the public not to patronize street delicacies and food outlets that have no health permits, citing an increase in the number of diarrhea cases, cholera and other gastrointestinal diseases among children, particularly in slum areas (PNA, 2009).

Marero (1994) suggested that the research and development sector should continue to do its part in developing appropriate technologies in this aspect. It now remains for policy makers to create a suitable policy environment that will enable fish and meat by-products utilization contribute to the country's nutritional and economic objective.

The researchers reviewed foreign and local related studies from previously drawn results of other authors in the fields of food and health care services.

The consumption of street food is common in many countries where unemployment is high, salaries are low, work opportunities and social programmes are limited, and where urbanization is taking place. Street food vendors benefit from a positive cash flow, often evade taxation, and can determine their own working hours. In selling snacks, complete meals, and refreshments at relatively low prices, they provide an essential service to workers, shoppers, travelers, and people on low incomes. People who depend on such food are often more interested in its convenience than in questions of its safety, quality and hygiene (Mensah, et al, 2002).

A survey was carried out to determine food safety knowledge of street food vendors in Abeokuta. Data on demographics, food safety knowledge and practices was collected from 87 food vendors using a 67-questions standardized survey tool. Few vendors (12%) acquired the knowledge of food preparation by formal training. Only 31% of the respondents had the annual medical health certificate to indicate that they have carried out the recommended physical and medical examination. Volume and price are considered more than freshness and cleanliness when purchasing raw materials. Some of the food safety knowledge of the vendors could not be translated to practice due to the absence of basic facilities such as water and toilets at their vending sites. Training on hygiene and sanitation; provision of basic infrastructures and the establishment of code of practice for the street food industry is recommended (Omemu & Aderoju, 2006).

Previous studies of street food vendors have typically focused on the health factors of their products, and urban energy studies have either been concerned with non-commercial household activities or planning issues at a macro level. Street food vendors use energy for cooking, lighting and transport. This project has focused on the energy aspect of cooking (Tedd, 2007).

The scientific study of food has emerged as a discipline in its own right since the end of the 1939-1945 war. The need for the development of a training program for street food vendors reflects an increasing awareness of the fact that the eating quality of food commodities is determined by a logical sequence of events that starts at the production of the food or the germination of the seed, and culminates in its consumption. From this point of view the street food handler is inevitably involved in certain aspects of nutrition, environmental health and psychology (Mukhola, 2006).

Moreover, apart from the problems of handling and preparation of food, it seems likely that the food handler will become increasingly concerned with enhancing the biological value of traditional food. Further, there is the potential for evolving entirely new ways of preparation and handling as a result of the pressure of increasing population diversity and demand. This is likely to produce a need for the additional training of food handlers and health professionals.

According to Mukhola (2006), street food is one of the major commodities with which Environmental Health Officers are concerned, and is subject of the present inquiry in Polokwane. Despite this, the role of street food in supplying ready-to-eat food has received little official attention; more notice has been paid to the potential dangers arising from the consumption of street food than to any benefits it might offer.

Rheinländer's (2008) study together with his co-researchers study investigated local perceptions of food safety among street food vendors and their consumers in Kumasi, Ghana in order to identify the most important aspects to be included in future public health interventions concerning street food safety. This qualitative study included data from a triangulation of various qualitative methods. Observations at several markets and street food vending sites in Kumasi were performed. Fourteen street food vendors were chosen for in-depth studies, and extensive participant observations and several interviews were carried out with case vendors. In addition, street interviews and Focus Group Discussions were carried out with street food customers.

The study found that although vendors and consumers demonstrated basic knowledge of food safety, the criteria did not emphasize basic hygiene practices such as hand washing, cleaning of utensils, washing of raw vegetables, and quality of ingredients. Future public health interventions within the street food sector should give emphasis to the importance of appearance and neatness when designing communication strategies. Neglected aspects of food safety, such as good hand hygiene and cleanliness of kitchen facilities, should be emphasized. Local vendor networks can be an effective point of entry for future food hygiene promotion initiatives (Rheinländer et. al, 2008).

Urban officials in Pune, India are planning to license street food vending. Commercial banks are extending financial assistance through various credit schemes. To assist with the definition of a coherent policy of assistance, the study examined the socioeconomic and regulatory environment within

which street food vendors operate. The study supported the micro-biological testing of select street foods to identify possible problems related to gastro-intestinal infections (Bapat, 1992).

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Toledo (1998) assessed the nutritional quality and safety of street foods in Legaspi City. She concluded that most of the ambulant hawkers in Legaspi are women in the middle age group, married with low income, belonging to a small family and with a low-level of education. She also found out that the street foods sold by ambulant hawkers are nutritionally adequate but its safety is still wanting and vendors need training to improve their food management and food handling practices.

On the other hand, Toledo (1998) also recommended that vendors should be encouraged to attend special trainings to augment their minimum knowledge in meal planning, food preparation and food handling; health examination of the vendors should be a pre-requisite in application for license for the vending industry; cleanliness and sanitation should be maintained in the selling areas to prevent food contamination; that the government should institutionalize the street food industry with DILG as lead agency in coordination with the NGOs, vendors' association and cooperatives.

Sometimes even the rich and middle-class Filipinos also cater street foods for a special and popular type of meal prepared by a particular vendor (De Guzman, 1994; Toledo, 1998).

The street food in Iloilo found that purchase of non-household food preparations accounted for about 30% all food expenditures and that each purchase are made in the immediate neighborhood of the respondents (Barth, 1984; Toledo 1998).

Food customarily served at lunch is commonly served at breakfast or snacktime by some street food

vendors, an indication of a consumption pattern adopted to clients needs (Recto, 1986; Toledo, 1998).

Perdigon's (1993) study revealed the street food trade in both cities was generally small in scale and was practiced within a family base unit of production. Street vending was labor-intensive and required a small capital to operate. In both places, the practice of street food vending required non-formal skills and education. Street food catered to the needs of the urban population by making food readily available and at a low-cost. However, sanitation of the food and services related to its production, was not assured. The street food business also provided employment to individuals who might have been otherwise jobless. On a daily basis, a majority of the vendors in both cities were found to earn incomes greater than the national minimum wage. Street food vendors offered traditional foods. They were extensive users of domestic food supplies. They played a role in the larger national government policy of increasing production and consumption of domestically produced crops.

IV. METHODS

Research Design

Descriptive method of research was utilized in this study. Descriptive method of research provides data about the population being studied. But it can only describe the who, what, when, and how situation, not what cause (Garcia, 2003) therefore, descriptive research is used when the objective is to provide the systematic description that is as factual and accurate as possible. It provides the number of times something occurs or frequency lends itself to statistical calculations such as determining the average number of occurrences or central tendencies.

Participants

The respondents of the study were 50 street food vendors of Batangas City who are presently vending at the vicinity of LPU and they were deemed to be knowledgeable about the subject the matter and capable of providing factual data that will be necessary in completion of the study.

Instrument

Through research literature the researchers made used of questionnaires and interview to answer the needed information. Assistance of the experts had been helpful too in correcting the errors. Some ideas were from operation manual (food sanitation manual, 2006).

The study made use of self made self task questionnaires. The instrument is composed of three parts. The first part includes the demographic profile of the respondents in terms of age, gender, educational attainment and number of years as vendors. The second part includes the sanitation in terms of food preparation, cooking, serving, and maintenance of working area. The third part will include the level of awareness of the respondents to the food sanitation practices.

Procedure

In the preparation for the first draft of the questionnaire, the researcher consulted several books, thesis, and different websites. When the first draft of questionnaire was made it was presented to the research professor to ask his comments and suggestions for further improvement.

After gathering all the materials for conducting the survey, the researchers proceed to the research venue for the survey. The researchers assured their respondents regarding the confidentiality of their responses. The gathered data was then tallied, analyzed and interpreted by the researchers.

Data Analysis

All needed data were encoded tallied, interpreted and analyzed using descriptive statistics as frequency distribution and weighted. These were computed using SPSS version 18.

V. RESULTS AND DISCUSSION

Table 2. Food Sanitation Practices as Perceived by the Customers (N = 50)

Sanitation Practices	WM	VI	Rank
1. The working area is clean.	3.62	Strongly Agree	1
2. The utensils used are clean	3.44	Agree	7.5
3. Using hairnet, gloves and apron	3.30	Agree	10
4. Separation of cooked foods and raw foods.	3.54	Strongly Agree	3
5. Provide spoons or tongs so hands do not touch food directly.	3.52	Strongly Agree	4.5
6. Areas are generally clean and orderly, free from odor.	3.58	Strongly Agree	2
7. Trash containers are clean on the outside	3.44	Agree	7.5
8. All containers have tight fitting covers	3.40	Agree	9
9. Maintaining the cleanliness of grilled pan and making sure it's not greasy and free from stain causing of coal.	3.46	Agree	6
10. Previously held food on top of freshly cooked food.	3.52	Strongly Agree	4.5
Composite Mean	3.48	Agree	

Table 2 presents the food sanitation practices as perceived by the Customers. As seen from the results, the respondents agree that vendors are practicing good sanitation as revealed by the composite mean of 3.48. among the items mentioned, the working area is clean, areas are generally clean and orderly, free from odor,

Table 1 shows the products sold in the stall by street vendors. The researchers saw the most common product sold in the street which obtained the highest value of 3.71 and rank first. This proves that the people of the community most prefer isaw, and so most of the vendors chose to sell it in the street. It was followed by balut, fishballs, tokneneng and kikiam which have values of 3.60, 3.11, 3.09, and 2.91 respectively.

Table 1. Distribution of the Products Sold in the Stall

Products	Value	Rank
Balut	3.60	2
Isaw	3.71	1
Tokneneng	3.09	4
Kwek Kwek	2.84	6
Fishballs	3.11	3
Kikiam	2.91	5
Betamax (chicken blood)	2.17	11
One Day Old Chicks	2.56	10
Walkman (Grilled Pork Ears)	2.73	7.5
Helmet (Chicken Head)	2.69	9
Adidas (Chicken Feet)	2.73	7.5

The least among the rank were helmet (Chicken head), one day old chicks, and betamax (Chicken blood) with 2.69, 2.56, and 2.17 respectively. These belong to the list of the uncommon street foods and these are not that famous like the others. Accessibility and availability of these products also affects the food choice of the customers.

separation of cooked foods from raw foods, provide spoons or tongs so hands so hands do not touch food directly and previously held food on top freshly cooked food obtained a rating of strongly agree with mean values of 3.621, 3.58, 3.54, and 3.52.

All containers have tight fitting covers (3.40) and using hairnet, gloves and apron in the stall (3.30) got the lowest value and ranked the least. As perceived by the customers, they agreed that the street food vendors are being involved in food sanitation practices.

Food vending is prevailing and distinctive part of large informal sector all over the world. It is commonly viewed in public spaces particularly in the cities and distinctive in the sense that it provides a basic need to the urban inhabitants. The items made available by the street vendors comprise diverse range of selection, starting from small snack such as kwek kwek, isaw, adidas, and etc., each street food enterprise is generally small in size, requires relatively simple tremendous

potential for generating income and employment for the rapidly rising urban population so they should be prioritized in practice of sanitation among food preparation.

Furthermore, the overall increase in population and in urban areas, in particular, poses great challenges to food systems. Rapid urbanization has led to urban services to be stretched beyond their limits, resulting in inadequate supplies of portable water, sewage disposal and other necessary services. Food is also a good indicator of the environment contaminants, such as heavy metals, in the foods. Therefore not only assists in establishing appropriate food safety and control measures.

Table 3. Food Sanitation Practices in food preparation as Perceived by the Customers (N = 50)

Sanitation Practices	WM	VI	Rank
1. Handling foods with bare Hands and not using any spoons or plastic gloves.	2.48	Sometimes	4
2. Serving foods immediately without keeping it hot or cooled down rapidly and reheated completely to a temperature of at least 70 degree Celsius before eating it.	2.32	Sometimes	8
3. Using unsanitized water in rinsing the utensils that will be used in cooking.	2.28	Sometimes	9.5
4. Unclean surroundings when cleaning utensils and preparing food.	2.38	Sometimes	5.5
5. Putting the prepared foods in an old and ragged bowl before selling it.	2.34	Sometimes	7
6. No means to provide hair nets, gloves and other materials in preparing the products.	3.04	Often	2
7. Barely check if the food is free from larva.	3.30	Often	1
8. Dipping foods as many times as you want.	2.66	Often	3
9. Evidence of rats, holes or nest in vicinity.	2.38	Sometimes	5.5
10. Using used condiments as a sauce for food.	2.28	Sometimes	9.5
Composite Mean	2.55	Often	

Table 3 shows that the top 3 sanitation practices in food preparation include the following: Barely check if the foods are free from fly's eggs, having a mean value of 3.3.; No means to provide hair nets, gloves and other materials in preparing the products with a mean value of 3.04; and dipping foods as many times as you want having a mean value of 2.66.

The least 3 items were using unsanitized water in rinsing the utensils that will be used in cooking, using used condiments as a sauce for the food, and serving immediately without keeping it hot or cooled down rapidly and reheated completely to a temperature of at least 70 degrees Celsius before eating it with a value of 9.5 and 8. It means that some of the vendors are using unsanitized water that causes bacteria.

The vendors are often practice food sanitation when they prepare food so they practice cleanliness in food

sanitation because they know that it will lessen the risk of transmitting microorganism to their customers.

The vendors are using clean utensil before starting to cook. When selecting cooking utensils one needs to look for the right kind of materials, as it not only tends to affect the quality of the recipe i.e. flavor, texture, aroma, but even the nutrient value of the cooked food. This should be cleaned before it is used in cooking. Purposes of cleanliness include health, beauty, absence of offensive odor, avoidance of shamed, and to avoid spreading of dirt and contaminants to oneself and others.

The items used clean plates, paper plates. Spoon, and fork, is among the lower value items. This is because they used disposable indirect materials such as Styrofoam, plastic cups, paper plates and disposable spoon and fork. There are many disposable cups that are available in different materials. Plastic Styrofoam and

paper cups are all good choices when one is on the go. Each one may be more expensive. Another may have a quicker decomposition rate, where areas one doesn't even biodegrade. Though the cups may serve the same purpose, they are very different.

In short, Styrofoam, plastic cups and disposable spoon and fork though already cheap, make for an even greater cost saving asset. The whole sale price of these products is often approximately two to three times less than paper containers, and four to five times less than the reusable food service item when the costs of equipment, labor, water, electricity, and detergent costs are included. In short, the economically, and environmentally sensitive aspect of the material make it a viable reusable service where product for any company's consideration.

VI. CONCLUSIONS

Majority of the street food vendors sell isaw because people of the community most likely prefer isaw as their merienda. The street food vendors are practicing a clean working area as part of their sanitation practices. The customers perceived that barely checking of the food if it is free from larva is being practiced by the street vendors.

VII. RECOMMENDATIONS

The researchers' recommendation meant to promote street food as available business model and contributor to the viability of city streets and public space. It is not their intention to recommend any change to either the City code of ordinances or the Philippines food code that may threaten the public health, safety and welfare of the general public. In fact, street food has the potential to improve civic life in metro area by providing jobs for residents and providing places for the people to gather and interact. The vendors may use more innovative ways of cooking their products and give them new touches to make their products more unique and appetizing. The local government may provide training and seminars that will help the vendors to gain knowledge about food safety and sanitation procedures. The vendors may use a disposable utensils in serving. And in terms of condiments they may use disposable glass or plates.

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