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PERSONAL HYGIENE PRACTICES AMONG STREET FOOD VENDORS IN INTRAMUROS, MANILA

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Abstract

This study determined the personal hygiene practices among the street food vendors in Intramuros, Manila and how these practices were related to their socio-economic status. Results showed that majority were 39 years old, female, married, high school and spent 10 years as food vendor. Above ¼ attended foods safety and sanitation trainings, majority are solo plight vendors, invested ≤ Php 5000, daily sales Php 2,500.00, spent 12 hours vending and did not pay rentals. Of the 48 probing statements on personal hygiene practices, 56.25% were incorrectly responded: 100% gloves usage, 83.33% handwashing, 60% mannerisms that can contaminate food and 44.44% work attire. Correlational analysis showed that vendors' rental and working hours, and daily sales had low correlations on their scores on grand mean on personal hygiene practices, overall mean on hand-hygiene practices, handwashing, gloves usage, and handwashing, respectively. Vendors' attendance to food safety and sanitation trainings and manpower had negative low correlation on their scores on hand maintenance, and illness and injury, respectively. Corrections of these incorrectly held practices must be addressed through effective trainings from all sectors of society spearheaded by government and non-government agencies like the Department of Health, Intramuros Administration, and Lyceum of the Philippines University, Manila.

Keywords: Food safety and sanitation, Personal hygiene practices, Street food vendors

1. INTRODUCTION

As stated in the Rules and Regulations Governing the Development of Intramuros (1981) under the Land Use Policies and Regulations, foodservice establishments like restaurants, sidewalk cafes, among others, should be positioned in the ground floors of most buildings within the city. Pastry shops specializing in Spanish delicacies, coffee shops and restaurants are allowed to operate even in Special Zones such as the walls and fortifications, including Fort Santiago and

all Gates, to name a few. However, street food vendors are proliferating in all the areas of Intramuros. Migration from rural areas to urban centers resulted to urban population growth which stimulated a rise in the number of street food vendors in many cities throughout the world including the walled city of Intramuros. The demand for relatively inexpensive, ready-to-eat food has increased, as working people have less time to prepare meals (<http://www.fao.org>, 2011).

As local and foreign tourists come for a visit to Intramuros, some of them will possibly eat and drink one or two of these street foods (Tanquezon, 2010). When the demands of time, prices of food, fuel resources, cooking tools and equipment and other considerations are weighed, people will opt to street foods because of quite economical costs. If the vendors have easy access to decent stalls with acceptable sanitary conditions, then the value of foods they are selling to their consumers could be raised (Winarno & Allain, n.d.).

This study is important to the society for the reason that it could be an eye-opener to the consumers of the food-vended products offered in Intramuros, Manila. Street food vending is a very important income generating activity for a vast number of people which contribute to economic self-reliance (EC *Matthews-Njoku, et. al.2006*). However, street-vended foods may pose significant public health problems which should be addressed properly by various regulating agencies (Muzaffar, 2009; Mankee, et al 2003).

Objectives

The study sought to determine the personal hygiene practices among the street food vendors in Intramuros, Manila and how were these practices related to their socio-economic status.

1. To find out the socio-economic factors of the street food vendors in Intramuros, Manila in terms of: age, gender, civil status, educational attainment, number of years as food vendor, attendance to food safety and sanitation trainings, manpower, amount of capital invested, average daily sales, number of hours spent per day as street food vendor, rentals fees
2. To probe the personal hygiene practices of the street food vendors in Intamuros, Manila in terms of:
 - A. Hand-hygiene Practice: Handwashing, Hand maintenance, Gloves usage
 - B. General Personal Cleanliness: Proper work attire, Guidelines regarding mannerisms which can contaminate food, Guidelines regarding illness and injury
3. To determine the relationship between socio-economic factors and the personal hygiene practices of the street food vendors in Intramuros, Manila.

Hypothesis

H₀: There is no significant relationship between the socio-economic factors and personal hygiene practices of the street food vendors in Intramuros, Manila.

2. METHODS

Research Design

Descriptive research was used in analyzing the socio-economic profile and personal hygiene practices of Intramuros street food vendors. Correlational method as one of the many types of descriptive-explanatory method defined the relationship between two or more variables which was used in determining the relationships between socio-economic profile and personal hygiene practices of the street food vendors in Intramuros, Manila.

Research Instrument

Intramuros as the haven of the Lyceum of the Philippines University, provided opportunities for the researcher to conduct ocular visitations and keen observations regarding the day to day activities of the street food vendors. During those visitations and observations, inappropriate and unsanitary practices of the vendors with regard to hand hygiene, general personal cleanliness and their actions which can contaminate the food they sell and serve to the customers were noted by the researcher which resulted to the formulation of research instrument (Tanquezon, et.al. 2011). The items in the research instrument had resemblance to ServSafe Food Safety Evaluation Checklist which were modified to suit to the street food vendors' setting. The research instrument was composed of socio-economic factors and forty-eight (48) probing statements on personal hygiene practices of street food vendors in Intramuros, Manila.

Data Collection

Street food vendor is any merchant that sell any meal on the sidewalk or roadside, usually via a portable food stall, kiosk or cart or temporary set up. All of them (93 vendors) were the subjects of this study. Each respondent was interviewed at their own food stall, where observable information was noted. All cases and exact quotes of respondents were noted while injecting follow-up questions to gather qualitative data. Data collection was done last November 2011.

3. RESULTS AND DISCUSSION

Socioeconomic Profile

Table 1 presented the summary of the demographic profile. The mean age of the respondents was 38.82 years, majority of the vendors are female, married and attended high school. They are into food vending business for quite a considerable long period of time with 9.97 years as mean number of years as food vendors. More than one-fourth claimed that they were able to attend food safety and sanitation trainings. In terms of the respondents' business profile, more than half of them do the food vending activities on his/her own. Almost two-thirds started food vending with Php 1001 to 5000 capital invested with the mean average daily sales of Php 2,503.33. Almost three-fourths spent between 9 to 16 hours vending foodstuffs and majority did not pay rentals while vending foodstuffs in Intramuros.

Vendors' Food Safety and Sanitation Practices on Personal Hygiene

Of the forty-eight (48) probing statements designed to decipher the vendors' food safety and sanitation practices in terms of personal hygiene, 56.25% were incorrectly responded (Table 2). The respondents oftentimes agreed to some of the statements when they should not have and vice versa. In particular, they failed to respond correctly to the following probing statements: 100% on gloves usage, 83.33% on handwashing, 60% on guidelines regarding mannerisms that can contaminate food, and 44.44% on proper work attire.

With respect to the mean score for each of the components of personal hygiene practices, results revealed that the respondents reported safe food safety and sanitation practices on guidelines regarding illness and injury (**3.8871**), hand maintenance (**3.6631**) and proper working attire (**3.5185**). However, respondents mostly did not report safe food safety and sanitation practices on guidelines regarding mannerisms that can contaminate food (**3.4462**), handwashing (**3.3478**) and gloves usage (**2.1685**). This is very alarming since it is a known fact that the culprit of the majority of the foodborne illnesses and foodborne illness outbreaks are the very hands of the food handlers.

Respondents' overall mean score showed high on general personal cleanliness (**3.6173**) implying that they reported safe food safety and sanitation practices. However, overall mean scores on hand hygiene practices (**3.0598**) was low because some statements were indecisively responded demonstrating that they did not report safe food safety practices. Thus, the **grand mean score on personal hygiene (3.3386)** indicated that they reported **not safe food safety and sanitation practices**. This is worrying because one of the five reasons why food becomes unsafe is associated with **poor personal hygiene**. The other four reasons include: failing to cook food adequately, holding foods at improper temperatures, purchasing food from unsafe sources, and using contaminated equipment.

Relationship between Socio-economic Factors and the Personal Hygiene Practices of the Intramuros Street Food Vendors

Correlational analysis showed that vendors' rental fees had low correlations ($r = .278^*$), ($r = .328^*$), ($r = .319^*$), ($r = .354^{**}$), indicating definite but small relationships on their scores on grand mean on proper personal hygiene, overall mean on hand-hygiene practices, handwashing, and gloves usage, respectively. Fixed street food vendors paying rental fees were practicing safer personal hygiene practices compared to the mobile vendors who were not paying rentals. According to Nirathron (2006) in her study entitled *Fighting Poverty from the Street: a Survey of Street Food Vendors in Bangkok*, "vendors are relocated and arrested in some areas and because of this there are times they have to pay bribes in exchange for *rights* to sell in non-designated locations." Their unprotected conditions would result to lack of interest to invest on proper tools and equipment, proper outfit, handwashing facility, potable water instillation, effective drainage and waste management system, thus aggravating the already low standards of

food safety and sanitation rampant in the area. Apparently, these groups of vendors had no opportunity to wash their hands even if they want to, which explained their low scores on handwashing. In contrast, those renting legitimately are fixed street food vendors; there is a possibility that they have access to adequate handwashing facilities. With these findings, it is evident that there is a strong need to address directly the intervention programs concerning food safety and sanitation trainings to mobile vendors more than the fixed vendors.

The number of working hours as street food vendor has r value of .277** and average daily sales ($r = .235^*$) which has a low correlation indicating definite but small relationship on their scores in handwashing. These suggest that handwashing was given emphasis by most of the vendors who worked long hours and earned high daily sales because of their intention to attract customers and to patronize the products they offered. The positive direction of the relationship means that as the number of working hours as street food vendor increases, their scores on handwashing increases. This suggests that handwashing was given emphasis by most of the vendors who worked long hours because of their intention to attract customers and to patronize the products they offered.

On the other hand, results of Pearson r correlation test ($r = -.256^*$) and the vendors' scores on guidelines regarding illness and injury which implies that as the manpower increases, the vendors' scores on guidelines regarding illness and injury decreases. Vendors selling on a commission-basis scheme, tend to ignore their illnesses and injuries problems. They need to work despite being ill to be able to earn a living. Thus, increasing manpower by employing commission-based vendors turned out to be detrimental in their scores on guidelines regarding illness and injury.

Another inversely related relationship was between manpower ($r = -.299^{**}$) indicated a low correlation, definite and small relationship with a negative direction between the vendors' attendance to food safety and sanitation trainings and their scores on hand maintenance. Their attendance to food safety and sanitation trainings did not do any good in terms of their hand maintenance practices. Of all the socio-economic variables considered in the correlational analysis, *although not statistically significant*, the vendors' attendance to food safety and sanitation trainings found out to be negatively related to gloves use, overall mean on hand hygiene practices, proper work attire, guidelines regarding mannerisms that can contaminate food and grand mean on proper personal hygiene. These findings should be taken as a great challenge among the agencies tasked to provide food safety and sanitation trainings to the street food vendors like (Samahan ng Nagkakaisang Manininda ng Intramuros), Barangay officials-initiated trainings, Intramuros Administration, DOLE, Camp Crame, and school-based seminars/trainings conducted by LPU, Letran, PLM and PUP. This means that the number of food safety and sanitation training the vendors attended proved to be less effective in reaching out their minds and hearts. These findings should be taken as a great challenge among the agencies tasked to provide food safety and sanitation trainings to the street food vendors. The contents of the upcoming food safety and sanitation trainings should be focused on hand maintenance, gloves use, overall mean on hand hygiene practices, proper work attire, guidelines regarding mannerisms

that can contaminate food and grand mean on proper personal hygiene. Mobile street food vendors should be given extra attention than fixed street food vendors for the succeeding food safety and sanitation trainings in Intramuros, Manila.

4. CONCLUSION

The presumption that the food safety and sanitation seminars and trainings attended by the vendors are influential in keeping sound food safety and sanitation practices was negated because based on the data it was found out that it had inverse relationships to their scores on hand maintenance. Their attendance to food safety and sanitation seminars and trainings did not create that much impact on their scores on hand maintenance. The previous food safety and sanitation seminars and trainings they attended could not be that effective in reaching out their cognitive and affective domains. That is the reason why their psychomotor skills are not aligned with the standards on food safety and sanitation set by ServSafe. True, they may have barely passing scores on hand maintenance, but it was due to their incapacity to buy stuffs like nail polish, artificial fingernails and jewelries and not because of their convictions that these stuffs are potential vehicles of threats on their vending activities. Another ineptness of the of the food safety and sanitation seminars and trainings attended by the vendors can be linked to their scores on gloves use, overall mean on hand-hygiene practices, proper work attire, guidelines regarding mannerisms that can contaminate food, guidelines regarding illness and injury and grand mean on proper personal hygiene; although not statistically significant. With these findings, future food safety and sanitation seminars and trainings must be revolutionized to something catchy to the attentiveness of the vendors.

With the above both positive and negative relationships between the vendors' socio-economic profile and their food safety and sanitation practices in terms of proper personal hygiene, the null hypothesis is hereby partly rejected.

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APPENDICES

Table 1. Summary of the demographic profile of the respondents

Variable	Percent	Mean
Age (years)		38.82
Gender (female)	63.4	
Civil status (married)	57	
Educational attainment (years)		9.90 (Third year High School)
Number of years as a vendor		9.72
Attendance to food safety trainings (not attended)	72	
Manpower (solo plight)	50.5	
Capital invested		PHP 14, 312.56 or USD 320.92
Average daily sales		PHP 2, 503.33 or USD 56.13
Number of working hours per day		11.74
Rental fees (None)	58.1	
(With rental fees)	41.9	PHP 3, 221.31 or USD 72.23

Table 2. Personal hygiene practices of vendors

Probing Statements	Mean	Interpretation
A.1. Handwashing		
Required in preparing foods.	3.9677	Not Safe
Apply soap	3.5806	
After taking out the garbage.	3.4194	
Before and after handling foods.	3.3978	
Rinse thoroughly.	3.3548	
Clean water supply	3.3011	
Scrub hands and arms vigorously.	3.2796	
Handwashing soap.	3.2609	
Dry hands and arms with a clean towel.	3.2581	
Handwashing area in workplace.	3.2366	
After sneezing or coughing.	3.1828	
About 20 seconds.	2.957	
Overall Mean on Handwashing	3.3478	
A.2. Hand Maintenance		
Not wearing nail polish.	3.8602	Safe
Short and clean fingernails.	3.6237	
Not wearing jewelries when preparing foods.	3.5054	
Overall Mean on Hand Maintenance	3.6631	Safe

A.3. Gloves Usage		
Change every four hours.	2.2903	Not Safe
Don't reuse	2.2366	
Don't use "cellophane" gloves	2.1828	
Proper size	2.1613	
Change before beginning a different task.	2.0860	
Change as soon as they become torn.	2.0538	
Overall Mean on Glove Use	2.1685	Not Safe
Overall Mean for Hand-hygiene Practices	3.0598	Not safe
B.1. Proper Work Attire		
Bathe daily	4.6129	Safe
Shampoo hair	4.6129	
Wear clean clothes daily.	4.6022	
Brush teeth daily	4.5484	
Tie hair	3.9032	
Hairnet	2.6559	Not Safe
Non-skid closed shoes	2.3656	
Mask	2.1935	
Apron	2.1720	

Table 2. Cont'd.

Probing Statements	Mean	Interpretation
Overall Mean on Proper Work Attire	3.5185	Safe
B.2. Mannerisms which can Contaminate Food (Don'ts During Food Preparation)		
Chewing gum	4.0323	Safe
Wiping or touching nose	3.7849	
Holding food items after handling money.	3.5914	
Drinking	3.5161	
Smoking	3.4731	Not Safe
Touching a pimple or wound	3.4301	
Spitting	3.3871	
Coughing or sneezing	3.1828	
Scratching body	3.1075	
Eating	2.9570	
Overall Mean on Guidelines Regarding: Mannerisms which Can Contaminate Food	3.4462	Not Safe
B.3. Guidelines Regarding Illness and Injury (Don't deal with food on these health problems)		
Wear a single-used glove or finger cover over bandages on hands and	4.1935	

fingers.		Safe
Flu/fever	4.0753	
Open cuts and wounds	4.0000	
Diarrhea	3.9462	
Bandage over wounds on hands and arms.	3.9462	
Hepatitis.	3.7849	
Colds	3.7634	
Coughs	3.3871	Not Safe
Overall Mean Guidelines Regarding Illness and Injury	3.8871	Safe
Overall Mean for General Personal Cleanliness	3.6173	Safe
Grand Mean for Proper Personal Hygiene	3.3386	Not safe

Response Code: 1-1.5 = Strongly Disagree; 1.51-2.5 = Disagree; 2.51-3.5 = Undecided; 3.51-4.5 = Agree; 4.51-5 = Strongly Agree

Interpretation: 1-3.5 = Not Safe Food Safety Practice; 3.51-5 = Safe Food Safety Practice

Table 3. Correlation between vendor’s socio-economic profile and personal hygiene practices

Socio-economic Profile	Handwashing		Hand Maintenance		Glove Use		Overall Mean (Hand-Hygiene Practices)	
	Pearson Correlation	Sig. (2-tailed)	Pearson Correlation	Sig. (2-tailed)	Pearson Correlation	Sig. (2-tailed)	Pearson Correlation	Sig. (2-tailed)
Age	-.101	.340	-.122	.246	.062	.553	-.057	.589
Educ. Attainment	.051	.631	.034	.749	.077	.466	.071	.498
Yrs. as Vendor	-.061	.564	-.160	.128	.051	.631	-.084	.429
Trainings Attended	.055	.616	-.299**	.005	-.086	.429	-.153	.162
Manpower	.159	.131	-.140	.181	.057	.586	.032	.759
Capital Invested	.078	.469	-.138	.195	.126	.236	.053	.619
Daily Sales	.235*	.026	-.125	.241	.081	.446	.080	.454
Working Hours	.277**	.008	-.173	.096	.100	.338	.106	.316
Rental Fees	.319*	.013	.066	.615	.354**	.005	.328*	.010

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

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

Table 3. (Cont'd.)

Socio-economic Profile	Proper Work Attire		Guideline (Mannerisms)		Guideline (Illness/Injury)		Overall Mean (Gen. Personal Cleanliness)		Grand Mean (Proper Personal Hygiene)	
	Pearson Correlation	Sig. (2-tailed)	Pearson Correlation	Sig. (2-tailed)	Pearson Correlation	Sig. (2-tailed)	Pearson Correlation	Sig. (2-tailed)	Pearson Correlation	Sig. (2-tailed)
Age	-.007	.945	-.029	.782	.101	.335	.028	.788	-.025	.816
Educ. Attainment	.034	.744	.123	.242	.000	.997	.071	.497	.078	.458
Yrs. as Vendor	-.019	.855	.059	.577	-.061	.566	-.005	.961	-.055	.604
Trainings Attended	-.205	.059	-.107	.328	-.030	.786	-.133	.223	-.158	.149
Man-power	-.008	.938	-.089	.397	-.256*	.013	-.159	.128	-.051	.627
Capital Invested	-.019	.859	-.034	.750	-.167	.116	-.097	.365	-.012	.911
Daily Sales	.123	.249	-.029	.784	-.170	.109	-.046	.667	.031	.770
Working Hours	.128	.223	-.059	.573	.058	.583	.042	.691	.086	.414
Rental Fees	.051	.698	.188	.146	.043	.745	.135	.298	.278*	.031

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

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