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Research Article

**ASSESSMENT OF HYGIENIC PRACTICES OF FOOD SELLING  
VENDORS IN STREETS OF LAHORE**<sup>1</sup>Humera Rafique, <sup>2</sup>Anam Ashraf, <sup>3</sup>Binish Anwar, <sup>4</sup>Syed Mohsin Mehmood,  
<sup>5</sup>Mujeeb Ullah Makki<sup>1</sup>House Officer, Department of Medicine, Services Hospital, Lahore<sup>2</sup>House Officer, Department of Medicine, Services Hospital, Lahore<sup>3</sup>House Officer, Department of Medicine, Services Hospital, Lahore<sup>4</sup>House Officer, Department of Medicine, Abdul Waheed Trust Hospital, Lahore<sup>5</sup>Post-graduate Resident, Department of Medicine, Services Hospital, Lahore**Abstract:**

**Introduction:** The street food industry has an important role in the cities and towns of many developing countries in meeting the food demands of the urban dwellers. Street food sector operates in an unstable and precarious state because the sector lacks legal recognition. There have been noticeable increases of food vendors in Lahore. There are not regulated, they operate haphazardly without any monitoring of what they prepare and how they do it.

**Objectives:** Objective of study was to assess personal hygiene of food selling vendors, their practices during food preparation & handling, to assess environmental hygiene around food selling area. **Study Design:** Descriptive study. **Place and Duration of Study:** Study was conducted at Lahore. **Material and Methods:** A study to determine hygienic and sanitary practices of vendors of street foods in Lahore was carried out using a descriptive survey design. Data was collected using in-depth interview schedules and observation checklists. **Results:** About 50.0% obtained food preparation skills through self-taught while 33.33% were taught by their parents. Sixty seven percent patients did not use aprons, 76.7% wore no hair covering and 93.3% handled food with bare hands. About 66.7% of the vendors had garbage and waste bins beside the food stalls. Mean nasal obstruction in the case of ventilated nasal and with Vaseline nasal pack was observed respectively as (45.62±6.17) & (77.67±4.85) and significant value of  $p = 0.001$  in each group.

**Conclusion:** Street food vendors practiced minimal hygienic and sanitary practices.

**Keywords:** Street foods, hygiene and sanitation.

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**INTRODUCTION:**

Street foods are ready –to-eat foods and beverages prepared and/or sold by vendors, especially on streets and other public places [1]. There is a noticeable increase of food vendors in Lahore capital city of Punjab, Pakistan as a result of dwindling economy and unemployment. Types of vending sites encompass stalls, a variety of push-carts, roadside stands, and hawkers depending upon the ingenuity of the individual, resources available, type of food sold and the availability of other facilities (FAO (1990). In spite of numerous advantages offered by street foods, there are also several health hazards associated with this sector of the economy. Multiple lines of evidence reveal that foods exposed for sale on the roadsides may become contaminated either by spoilage or pathogenic micro-organisms [2]. Evidently; street vended foods have shown epidemiological links with illness [3]. The rise of street food vending has created health problems like improper and unhygienic handling of food.

According to studies done in Africa on street foods, their tremendous unlimited and unregulated growth has placed a severe strain on city resources, such as water, sewage systems and interference with the city plans through congestion and littering adversely affecting daily life [4, 5].

Street food vendors are often unlicensed, untrained in food hygiene and sanitation, and work under crude unsanitary conditions [6]. Food handlers are very important people when considering food safety. Food vendors who sell ready to eat meals on the streets also known as ‘street foods’ (Addo, et al, 2007) [7] are also important factors contributing to food borne related diseases as they are considered to be of very little or no educational background and hence have low understanding of food safety issues (Mensah et al, 1999) [8]. Temperature control of High risk foods which are foods with high moisture and nutrient value, ready to eat and can encourage the growth of food poisoning microorganisms (Wallace, 2006) [9] should be a major concern for all food handlers. According to Codex Alimentarius (2009) [10], food hygiene involves all conditions and measures

necessary to ensure the safety and suitability of food at all stages of the food chain.

According to the Food and Drugs Board of Ghana’s Standard Operating Procedures Manual and the Food Standard Agency of UK’s ‘Guide to food hygiene’ [11]. following minimum requirements should be applicable in all food preparation premises. Standard premises, good purchasing control, effective temperature control, maintenance, pest and waste management, personnel training and personal hygiene. These will hence be the major indicators of the hygiene status of the respondents.

**OBJECTIVES:**

Objective of study was to assess personal hygiene of food selling vendors, their practices during food preparation & handling, to assess environmental hygiene around food selling area.

**METHODOLOGY:**

A descriptive survey design was used to answer questions concerning the current status of food hygiene and sanitation practiced by vendors of street foods. Most street food vendors are ambulant and do not stay at the same place at all times, it was difficult to carry out survey of the given number of street food vendor at one go. Therefore, surveys were carried out among different groups of street food vendors whereby an interview of different street food vendors was done randomly choosing them from group present at a place at a given time. Hygiene and sanitation were determined by the use of structured interview and through observations. Practices such as acquisition of cooking skills, place of preparation, environmental conditions, methods of washing utensils and preservation methods were studied. Location of the street vendor, utensils used, environment surrounding the street food vendors, general processing of the food and hygienic practices were observed and recorded through an observation checklist. Data was analyzed using the Statistical Package for Social Sciences (SPSS) program version 20. Descriptive statistics such as means and frequencies were used to present the findings.

**RESULTS AND DISCUSSION:****Table:1 Survey on Environmental Hygiene**

Question	Answer	N (30)	Percentage
How often do you clean your vending place?	Daily once before opening	17	56.7%
	Daily once before closing	9	30.0%
	Daily once before opening and closing	4	13.3%
	Once a week	0	0.0%
How do you do your dish washing?	With dish washing soap	10	33.3%
	With cloth	9	30.0%
	In bucket	8	26.7%
	Clean water pouring on dish	3	10.0%
Where do you get water from?	WASA hand pump	14	46.7%
	From home	7	23.3%
	From nearby tap	8	26.7%
	From nearby hotel	1	3.3%
Where do you go to toilet?	Nearby mosque toilet	13	43.3%
	Nearby hotel toilet	8	26.7%
	Nearby market toilet	9	30.0%
Where do you wash hands?	In bucket	14	46.7%
	Nearby hotel basin	16	53.3%
How do you control pests?	By covering lids	11	36.7%
	By covering with clothes	11	36.7%
	Closed box	5	16.7%
	Mechanical/electrical	3	10%

**Table 2: Education attainment\*personal hygiene cross tabulation**

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	5.514a	1	.019		
Continuity Correction <sup>b</sup>	3.030	1	.082		
Likelihood Ratio	4.840	1	.028		
Fisher's Exact Test	.048	1		.048	.048
Fisher's Exact Test	5.330	1	.021		
N of Valid Cases	30				

a. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 1.07.  
b. Computed only for a 2x2 table

According to the results of our study, it was seen that 76.7% of food selling vendors were doing Poor hygienic practices and only 23.3% were doing Good hygienic practices. Based on this we found that 56.7% are Poor in Environment hygiene and only 43.3% had good Environment hygiene. Based on this we found that 80.0% are Poor in food hygiene and only 20.0% had good food hygiene. Based on this we

found that 86.7% are Poor in personal hygiene and only 13.3% had good personal hygiene.

Our study showed that there is a significant ( $p$  value= 0.027) relationship food safety practices and environment hygiene. It was seen that vendors who prepare food in good hygienic conditions also keep their environment clean to prevent their food items

from contamination from environment. It has been found that there is a significant ( $p$  value= 0.19) relationship between Age and personal hygiene.it shows that old vendors are good in their personal hygiene than young vendors.

It has been found that there is a no significant ( $p$  value= 0.708) relationship between education attainment and complete hygiene. It has been found that there is a significant ( $p$  value= 0.19) relationship between education attainment and personal hygiene.it shows that better educated vendors are better in their personal hygiene than less educated or illiterate vendors.

The street food industry plays an important role in developing countries in meeting the food demands of the urban dwellers. Street foods feed millions of people daily with a wide variety of foods that are relatively cheap and easily accessible (Latham, 1997) [12]. However there are significant reports of health problems that have been associated with these street foods (Muleta and Ashenafi(2001)[13]; Ashenafi(1995)[14]; El-Sherbeeney et al (1985)[15]; Abdussalam and Kaferstein, (1993)25; Mensah et al (2002)[16] and Omemu and Aderoju (2008)[17]. Street foods are sources of nutrition for many low-income groups at affordable prices in large urban areas. Nevertheless, there are also several health hazards associated with them. These foods could be main vehicle for transmission of severe and fatal diseases that could be life threatening. Contamination of these foods could result from pre or post cooking contamination from the food handlers. Street food vendors are often unlicensed, untrained in food safety, food hygiene and sanitation, and work under crude unsanitary conditions (FAO 1990) [18].

### CONCLUSION:

Street food vendors practiced minimal hygienic and sanitary practices

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