



## Is Eating Out Really Safe: Assessing Attitudes and Practices of Street Vendors' in Peshawar, Pakistan

Romana Ayub<sup>1\*</sup> • Saad Siddiqui<sup>2</sup> • Mahnoor Inamullah<sup>3</sup>

<sup>1</sup> Assistant Professor of Community Medicine, Khyber Medical College, Peshawar, Pakistan

<sup>2</sup> Resident Physician, Department of Radiology, Aga Khan University, Karachi, Pakistan

<sup>3</sup> Undergraduate in Medicine, Khyber Girls Medical College, Peshawar, Pakistan

[saadsiddiqui.5@gmail.com](mailto:saadsiddiqui.5@gmail.com)

### ABSTRACT

**Background:** Street food consumption is a common occurrence in public places, particularly in cities where it often fulfills a basic need to the urban inhabitants. Street food vendors prepare food in informal settings and are thus exposed to climate and temperature changes, poor sanitation and unsafe water supply. This aim of this study was to assess knowledge, attitudes and practices of food vendors in preparation of food, its storage and dispensing.

**Objective:** The aim of the current study was to assess knowledge, attitudes and practices of food vendors in preparation of food, its storage and dispensing.

**Materials and Methods:** Cross sectional survey conducted by interviewing 120 street food vendors in two towns of the city of Peshawar.

**Results:** Only fifty percent of participants reported hand washing before and after handling of food. More than half disagreed with the fact that street food can lead to outbreaks. Only 18 % thought that the proper training was needed to improve their practices regarding food handling despite the majority of them accepting that safe food handling as part of their responsibility. A good financial return and self-dependency were viewed as encouraging points for opting this profession.

**Conclusions:** Street vendors form a significant source of food consumption, requiring education and interventions in order to prevent outbreaks.

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**Keywords:** Food Safety, Hand Hygiene, Food Contamination, Public health surveillance.

#### 1. Introduction:

A street vendor is broadly defined as a person who offers goods for sale to the public without having a permanent built-up structure from which to sell. Street vendors may be stationary i.e. occupying space on the pavements or other public/private spaces or, they may be mobile. The street food industry plays an important role in cities and towns of many developing countries both economically and in meeting food demands of city indwellers (Muinde & Kuria, 2005)

Street food is a common occurrence in public places, particularly in cities where it often fulfills a basic need to the urban inhabitants (Rahman et al., 2016). An urban survey in Bangkok revealed 39.6%

people eating at restaurants and/or street-vended food at least once a day and 32.6% consuming it twice a day (Wattanasiriwit, 2007). Availability and accessibility rather than individual income or stage of national development seem to determine street food consumption patterns. In many countries, workers as well as students have their first meal of the day from the street food vendors (Winarno & Allian, 2017). According to a 2007 study from the Food and Agriculture Organization, 2.5 billion people eat street food every day (Fellows & Hilmi, 2011).

Street food vendors prepare food in informal settings and are thus exposed to climate and temperature changes, poor sanitation and unsafe

water supply. The food prepared in these conditions is usually unsanitary and unhygienic. It poses a health risk to the consumer in the form of foodborne diseases (World Health Organization, 2003). The World Health Organization (WHO), in 1996 recommended its member nations to regulate street food vending and ensure proper education of the vendors regarding hygienic practices (World Health Organization, 1996). Food borne diseases are on a rise in both developed and developing countries, in particular, diarrheal diseases which result in estimated 1.9 million deaths annually (Farthing et al., 2013)

This aim of this study was to assess attitudes and practices of food vendors in preparation of food, its storage and dispensing.

## 2. Materials and Methods:

This study is a cross sectional survey conducted by interviewing 120 street food vendors in two towns of the city of Peshawar. Simple random sampling was employed for selection of participants. Responses of participants were employed on a pre-designed proforma, standardization of which was done by an initial pilot study. Participation in this study was optional and it did not pose any risk to participants.

## 3. Results:

The majority (48%) of the respondents were aged between 30 and 45 years with 12% being less than 15 years of age. All of the participants in this study were males. A staggering 57% of respondents were illiterate followed by 20% having received education up to secondary school (Figure.1).

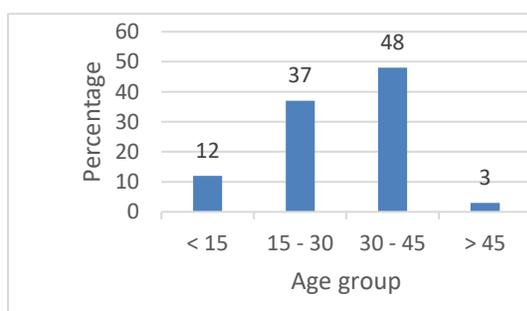


Figure 1. Age distribution of participants.

Fifty percent of study participants reported hand washing before and after handling of food where as 10% admitted of not washing their hands all together. Only 15% used masks and caps to cover face and hair compared to 35% who never used one.

More than half (54 %) of respondents disagreed with the fact that street food can lead to outbreaks compared to 31% who were aware of

street food as a cause of the outbreak. 23 % of participants had no knowledge regarding the need to keep raw and cooked food separately, however, 46 % were keeping them separate. Sixty four percent (64%) had a habit of regularly cleaning their surroundings where 23 % never did it.

Only 18 % thought that the proper training was needed to improve their practices regarding food handling compared to 32 % who were against formal training and 38 % who were not certain. Thirty-four (34 %) of participants thought regular health checkup to be unnecessary (Figure: 2).

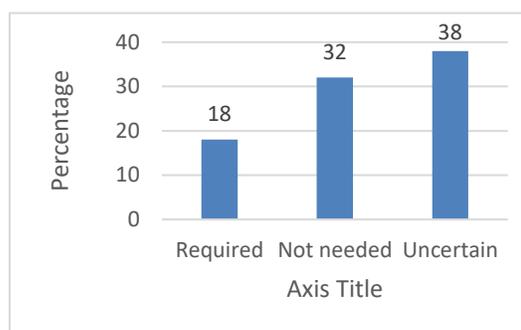


Figure 2. Perception of participants regarding need for formal training in food handling.

The majority (63%) of respondents accepted that safe food handling as part of their responsibility. Most of them (93 %) were in a habit of washing raw materials before preparation, 67 % were regularly washing surfaces coming in contact with food, and 83 % had a habit of regularly trimming their nails. Most of the participants (75 %) were using prepared food on the same day with 17.5 % using it over the next 1 to 2 days.

Almost half (49 %) of study participants thought hygiene to be very important part of food preparation however, 79 % reported working with the active flu. Most of the respondents used to work even while having lesions on hand with 24 % not even taking additional precaution of hand washing with soap or water in such circumstances.

A good financial return and self-dependency were viewed as encouraging points for opting this profession. The majority (95 %) were supported by their families and 54 % perceived views of society regarding their profession to be encouraging and respectful.

## 4. Discussion:

Street food is consumed by a significant number of people around the globe on a daily basis. In Malaysia alone, street food is reported to generate a business worth \$2.2 billion annually (Winarno &

Allain, 1991) Considering the importance of street food, a survey was conducted by WHO, findings of which reported street food to constitute a major source of food consumption for urban population in 74 % of countries. In this work contamination from raw food, inadequate hygiene and soiled equipment were determined as major causes of food borne outbreaks (World Health Organization, 1996).

In our study, the socioeconomic strata and education level was towards the lower side, this was in keeping with published literature from other developing nations like Nigeria and in contrast to literature from countries with relatively developed health care system and better infrastructure like South Africa (Von Holy & Makhoane, 2006; Abdulraheem, 2007)

Up to 10 % of respondents in our study admitted of not washing their hands before handling food and a significant proportion continued to work with active lesions on hand. It has been a well reputed fact that the simple practice of hand washing significantly decreases chances of bacterial contamination (Green, 2007).

Only 18% of respondents in our study deemed training for proper food handling as necessary. The problem of lack of infrastructure and training for handling street food has been prevalent in developing regions like ours and Africa (Omemu & Aderoju 2008; Muyanja et al., 2011). However, in some countries where proper training is available, there is a lack of application in daily practices by food handlers, requiring for extensive invigilation and implementation of public health policies (Khairuzzaman et al., 2014).

The majority of study participants in this work were satisfied by their profession and enjoyed the support of their families. These observations were in keeping with international market trends in which street food vendors make a significant labor force, however being an informal workforce sector it requires diligent measures to regulate this sector and in the result, bring out improvements in practices.

Limitations of this study were a relatively less sample size and the fact that this study was carried out in an urban setting, the facilities where could vary significantly from a rural area. However, by highlighting the problems, this paper tends to initiate the process of policy making and intervention by relevant quarters, in order to decrease chances of food borne diseases.

### 5. Conclusion:

Street vendors form a significant source of food consumption worldwide. Regulation and proper training are needed in order to prevent the burden of food borne diseases.

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### 7. Conflict of Interest:

None.

### Corresponding Author:

Saad Siddiqui, MBBS.

Resident Physician, Department of Radiology, Aga Khan University, Karachi, Pakistan.

E-mail: [saadsiddiqui.5@gmail.com](mailto:saadsiddiqui.5@gmail.com)

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