

# Symptoms Based Assessment of Food Borne Diseases among the Hostelide Students Living in Islamabad, Pakistan

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**Abstract** – Food borne diseases are the major problems associated with the consumption of contaminated food. Among the population, People and students that are hostelides (living away from home) are considered to be most affected by Food borne diseases. However, the approach towards hygienic measures may vary as with level of awareness or consciousness among these students. The present study was conducted to determine the prevalence of symptoms associated with food borne diseases among the hostelide students living in Islamabad.

**Keywords** – Food bore diseases, Hygienic food, Food borne threats.

## 1. Introduction

Food borne diseases can be considered as a major problem worldwide [1]. Food borne diseases can be defined as the acute illnesses caused by the use or consumption of food by an individual that has been contaminated with microorganisms. The food involved is usually contaminated with a disease pathogen or toxicant. Such food contains enough organisms or toxins that are capable to make a person sick. The consumption of hygienic food and lack of hygienic practices can be the major reason among the population to a greater extent [3]. The common symptoms that arise because of unhygienic measures or contaminated food include diarrhea, fever, abdominal pains, Cramps, vomiting, bloody diarrhea etc. [2].

In the present study the issue has been evaluated using the number of students, enrolled for their graduation study at various universities in Islamabad and all were hostelides as their routine food consumption is not considered hygienic that is from university cafeteria or private restaurants having medium or low facilities etc. The cause for such diseases can not only be based on the food available at these restaurants or cafeteria but also the hygienic measures adopted by an individual itself.

Thus, the hygienic measures adapted by any individual are influenced by various factors like education, family, friends, previous illnesses or awareness campaigns etc.

The study was conducted to assess the extent of illnesses that are food borne among the hostelide students in Islamabad.

## 2. Methodology

The study was based on questionnaire survey. A self-developed, pre-validated questionnaire containing both the open ended as well closed ended type of questions was asked. The study population comprised of hostelide students (living

far from home or families) in Islamabad. The population is comprised of both men and women of ages between 20 to 25 years, all participants were healthy, not taking any kind of medication and all were Pakistani nationals. Nature of study and the necessary guideline to fill the questionnaire was explained. All the participants had completed the questionnaire with personal attention. The sample was consisting of the 200 students of the said category. The inclusion criteria was the age that should be above 20 years and only the students of said category i.e, Hostelides can only be participated. The data was analyzed using MS excel and the results are summarized as counts and percentages.

## 3. Results

The questionnaire was distributed among the 200 hostelide students living (far from their families or home) in Islamabad. Among these 150 were male (75%) and 50 were female (25%). The age of respondents was between 20 to 25 years. First the respondents were questioned that weather they visit to the cafeteria or a restaurant having average, below average, or low facilities, the response observed is 13% students (both male and female) visit to an average facility restaurant/cafeteria and 85 % visit to below average facility restaurant/cafeteria routinely while only 2% students very often visit to low facility cafeteria. This response can be seen in figure 1.

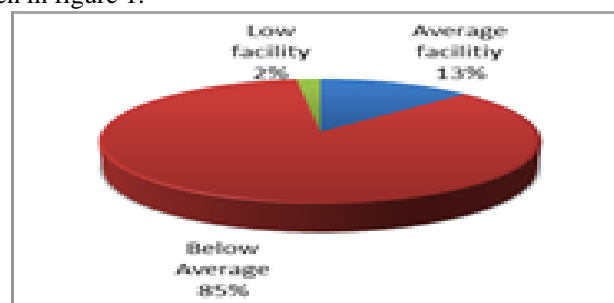


Figure 1. Students attending restaurant facilities

Then these students were asked about the hygienic measures that can be taken on individual basis. All the participants were strongly agreed regarding the hygienic measures that can be taken on individual basis before taking any kind of food. 23% were found to be conscious to wash hands properly with an antiseptic soap before taking food and they do it so; and 45 % of these respondents said that they strongly believe that they eat in properly washed utensils. However, 35% students said that they are sure that the food they consume is pure or is properly cooked and hygienic. 65% students said that they used properly distilled water that is free from contaminants. Thus study found that only 23% students take appropriate hygienic measure before taking food.

In response to the question whether respondents had faced the symptoms that could most likely to be associate with unhygienic food in the preceding 12 months, all of these students admitted that they have faced such sort of symptoms that could be because of the food they taken. The common symptoms that arise because of unhygienic measures or food include diarrhea, fever, abdominal pains, Cramps, vomiting, bloody diarrhea etc. [2]. Symptoms that were the most frequently faced among the respondents was vomiting (20%), diarrhea (19%), abdominal cramps(12%), and abdominal pain (08%) as shown below in Figure 2.

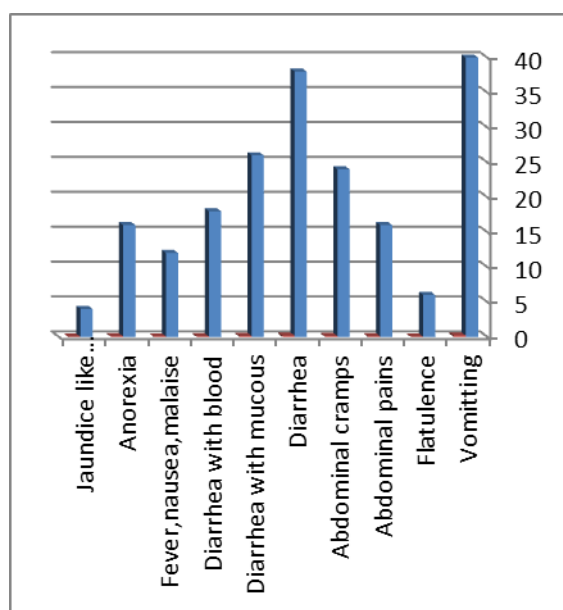


Figure 2. Symptoms associated as Food borne diseases

The questionnaire also provided the consciousness or understanding of students towards these symptoms. Among all, only 2% students considered their ailment as being mild and did not visited to doctor while 6% of these students took the medicines from their previous experiences or as advised by friends or family members or through internet surfing. However, 70% of these students visited to the community pharmacies to obtain their medication in consultation with community pharmacist, while 22% of these students attended the physician's clinic and took the medication as advised by clinician as can be seen in figure 3.

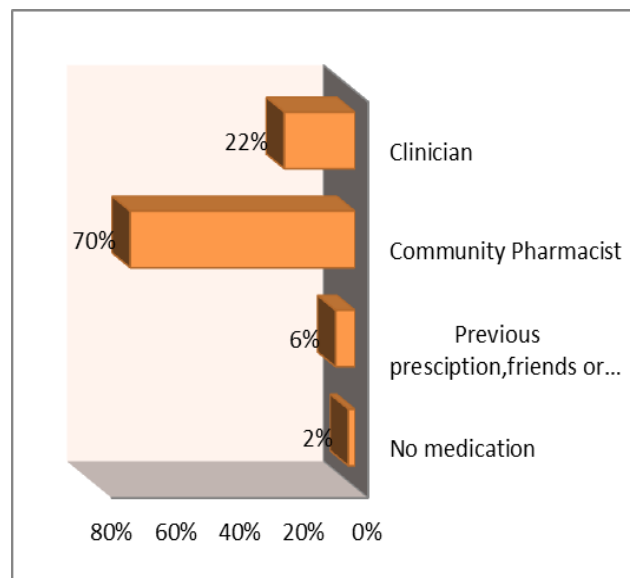


Figure 3. Source of medication vs. No. of students

#### 4. Discussion

We acknowledge that this type of study, using a self-administered questionnaire, is largely dependent upon information given by respondents. Although students were encouraged to complete the questionnaire independently, mutual influence between students could not be entirely ruled out. However, given the high level of response, the results should closely approximate that all these students have gone through the symptoms that are usually food borne, many times in a year while admitting that they didn't properly adapt the hygienic measures before taking any kind of food. Moreover, students provided the information that the restaurants they use or the campus cafeteria should not have many facilities that is also a factor towards the provision of hygienic and quality food to participated students. The illness that majority of students faced is vomiting that might be typically a sign of food poisoning. However, the diarrhea, abdominal cramps and abdominal pain are also the characteristic symptom that is associated with food borne infections. Major reasons cafeteria facility, lacking in principles of hygiene and behavior to take medication at student level were time saving, did not need advice from prescriber for minor illness, Economic, fear from crowd at clinic. The increasing trend that higher number of students seeking the medication in consultation with community pharmacist, enhances the role and responsibilities of community pharmacist towards community and assures the importance of a community pharmacy itself as first screening point. However, the practice to seek medication from previous experience or with advice of friends or family members has implications, because many diseases have similar symptoms and a person using previous experience may be exposed to the dangers of misdiagnosis and consequently wrong treatment while the students who faced such food borne symptoms and didn't seek medication, should be conscious about their health. Thus, patient education and awareness campaigns about such diseases, their prevention and the principles of hygiene are necessary to promote the health and thus remedy to avoid the food borne illnesses.

## 5. Conclusion

This descriptive survey shows that the majority of students had a poor practice of hygienic measures while the knowledge of benefits and risk was not adequate. Thus, to avoid or minimize the dangers of Food borne illnesses, Firstly the students should be educated about the dangers of inadequate food sources or importance of hygienic measures. Secondly, the Govt. of all the developing countries including Pakistan Should made certain regulatory bodies like FDA etc. to implement the proper hygienic measures as food determines the health. The proper check and balance can be made by using the help of food inspectors. Finally, there should be Hygiene EMERGENCY which aims to aware or educate the population about the food borne diseases, their source, transmission, prevention and principles of hygiene. This area is ignorant despite of the fact that many cases that are more likely to be because of contaminated food are daily presented to most of the clinics even today, and even a large amount of money is utilized in treating such kind of illnesses by community. These three measures would definitely help to reduce in the incidence of food borne diseases and also in maintaining the good health and quality of life of individuals and society.

## Acknowledgment

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## References

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- [2] Center for Food Security and Public Health : [www.cfsph.iastate.edu](http://www.cfsph.iastate.edu)
- [3] Bad Bug Book: U.S. Food & Drug Administration Center for Food Safety & Applied Nutrition Food borne Pathogenic Microorganisms and Natural Toxins Handbook; [vm.cfsan.fda.gov/~mow/chap4.html](http://vm.cfsan.fda.gov/~mow/chap4.html).