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Food Sanitation and Hygiene Practices among Food Handlers in Food Joints in Hyderabad

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ABSTRACT

AIM: The aims and objective of the present study was to know the level of awareness of the food handlers regarding food sanitation and hygiene while handling food. To observe and study the sanitation and hygiene practices followed by the food handlers of the food joint.

OBJECTIVE: Diseases spread through food still remain a common and persistent problems resulting in appreciable morbidity and occasional mortality. Food handlers play an important role in ensuring food safety throughout the chain of production, processing, storage and preparation. (1)

In large scale cooking, food is handled by many individuals, which increases the chances of food contamination due to improper handling and service. Intentional or accidental contamination of food during large scale production might endanger the health of consumers, and have very expensive repercussions on the public. The purpose of this study was to evaluate the food safety knowledge, and sanitation practices among institutional food- handlers in Hyderabad.

MATERIALS AND METHODS: The survey was administered orally, and responses were recorded on questionnaires by the handlers. The survey included 35 questions that had information on restaurant and food handler demographics, food safety knowledge, behaviors, and personal hygiene. The knowledge questions were in true-false, multiple-choice, and open-ended format. The primary subject areas in this study included appropriate temperatures for cooking, heating, and cooling foods, cross contamination, and behavioral questions such as working while ill and hand hygiene practices.

RESULT: We learn that most of the food service establishments in Hyderabad are aware of the basic hygiene practices. They are very particular about the personal hygiene of the staff and sanitation of the food being prepared. They take proper care of the ingredients and are concerned about their hygiene. Majority of the personnel have not undergone a food safety training program but wanted to be a part of it.

CONCLUSION: The study suggests that even though the knowledge, attitude and practice level of the food handlers was satisfactory, some of the aspects related to hygiene and time and temperature control need to be stressed. Continuous education and training should be organized to strengthen food handlers' knowledge in areas which seem to be lacking.

Keywords: *teacher, professional development, education, Mongolia*

INTRODUCTION AND REVIEW OF LITERATURE

The rapidly growing and changing food demands by urban dwellers has resulted in the need for cheaper and convenience foods. Food poisoning and other food borne diseases could occur through poor hygiene practices, especially in areas where food and drinks are served.

It is of good concern that World Health Organization (WHO, 2007) reported in the year 2005 that 1.8 million people died from diarrhea one of vary food borne diseases. For this reason, food borne diseases have captured public awareness worldwide in recent years. Centre Disease (3) Control and Prevention (CDC, 2000) identified five risk factors of food handling that add to food borne illnesses which include improper cooking procedure, temperature abuse during storage, lack of hygiene and sanitation by food handlers, cross contamination between raw and fresh ready to-eat foods.

In large scale cooking, food is handled by many individuals which increase the chances of food contamination due to

improper handling and service. Intentional or accidental contamination of food during large scale production might endanger the health of consumers, and have very expensive repercussions on the public. The purpose of this study was to evaluate the food safety knowledge, attitudes, and practices among institutional food- handlers in Hyderabad.

Food-borne disease is attributed to a wide variety of bacteria, parasites and viruses. It is worldwide and cause human illness just about everywhere (Scott and Sockett, 1998; Tauxe, 1998; WHO, 1998). (2)

Food poisoning occurs as a result of consuming food contaminated with microorganisms, the contamination arising from inadequate storage methods, unhygienic food handling, cross-contamination from food contact surfaces, or from persons with poor hygiene.

Unhygienic practices during food preparation, handling and storage create the condition that allows the transmission of disease causing organisms such as bacteria, viruses and other food-borne microorganisms. Additionally, increased food borne illnesses have been attributed to careless food hygiene practices in big kitchens.(4)

The Food Safety and Standards Authority of India (FSSAI) is the governing body under the ministry of health and family welfare, Govt of India. It has been established under Food Safety and Standards , 2006 which consolidates various acts & orders that have hitherto handled food related issues in various Ministries and Departments. FSSAI has been created for laying down science based standards for articles of food and to regulate their manufacture, storage, distribution, sale and import to ensure availability of safe and wholesome food for human consumption.

To provide assurance of food safety, Food businesses must implement an effective Food Safety Management System (FSMS) based on Hazard Analysis and Critical Control Point (HACCP) and suitable pre- requisite programmes by actively controlling hazards throughout the food chain starting from food production till final consumption.

Hence a need was felt to assess the knowledge and practices regarding food sanitation and hygiene among food handlers of food joints were felt and hence this survey was planned and executed.(8)

90 students of B.sc Final year studying Applied Nutrition and Public health at department of Nutrition in St. Ann's college for Women conducted a survey on food sanitation and hygiene practices among food handlers in fast food joints across Hyderabad during the months of August-October 2018. A total of 110 persons aged 25 and above were interviewed.

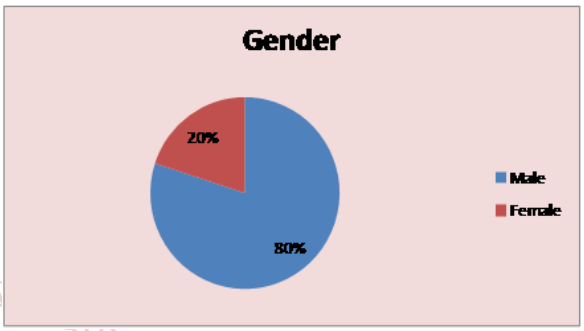
MATERIALS AND METHODS

The study was conducted using a descriptive, structured questionnaire in 25 restaurants by conducting face to face interview of food-handlers. The questionnaire was used to elicit information to collect information on (i) age, education qualification, , (ii) knowledge on food safety, (iii) attitudes towards food safety and (v) sanitation and hygiene practices. Some aspects of the study also comprised of observations made by the interviewer.Face-to-face interviews were conducted using structured questionnaire to collect information on the knowledge, attitudes and practices of the food-handlers on food sanitation and hygiene practices.

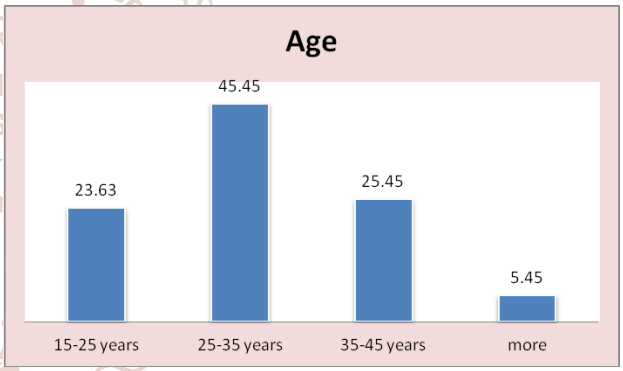
The questionnaire consisted of questions with food sanitation knowledge comprising close-ended questions with three possible answers; "true", "false", and "do not know". These questions specifically dealt with respondents' knowledge of personal hygiene, cross contamination, food-borne diseases, microorganisms, temperature control and hygienic practices.

In section five, which dealt with food hygiene practices, the good hygienic practices of respondents (institutional food-handlers) were assessed and evaluated based on self-reporting of personal hygiene and other safe food handling practices.

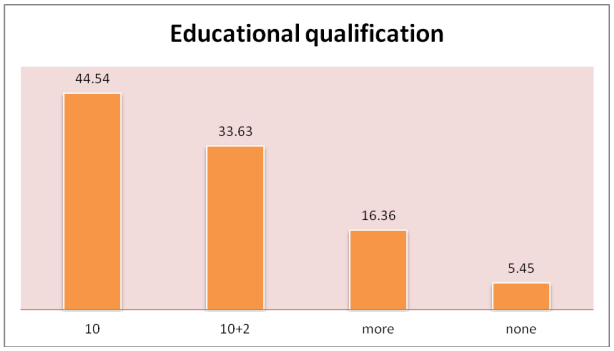
RESULTS



1. The survey was conducted in 110 food handlers of which 80% people questioned were men and 20% were women.

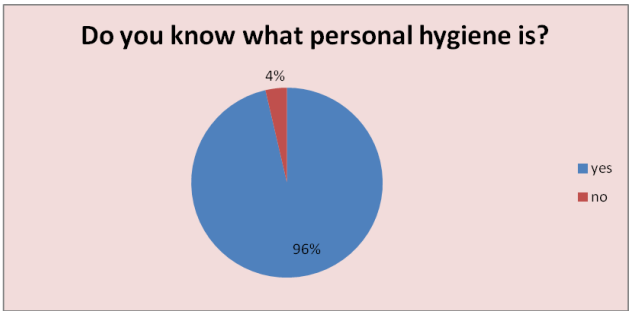


2. 45.45% participants were in the age group of 25-35 years, 25.45% and 23.63% people were between 35-45 years and 15-25 years of age. While only 5.45% of the participants were above 35 years of age

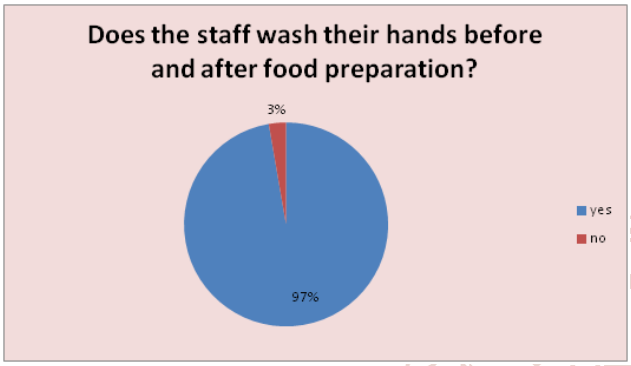


3. 44.54% participants were 10th passed and around 33.63% people had studied intermediate. About 16.36% participants were graduates and some have done a diploma course in hotel management. There were only 5.45% people who had no education qualification.

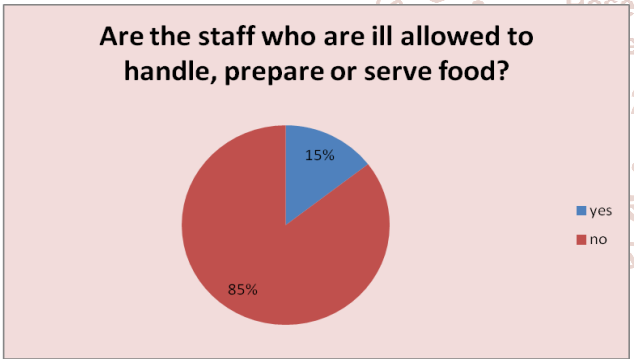
4. Most of the people questioned were food handlers and serving waiters. Few chefs and staff members were also questioned.



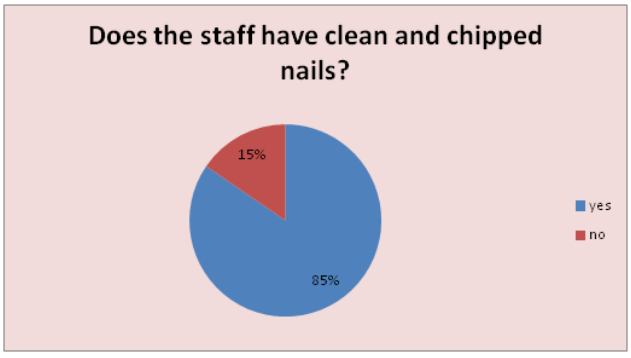
About 96.36% of the participants know about personal hygiene through food safety training they received. There were only 3.63% people who were unaware of what personal hygiene is.



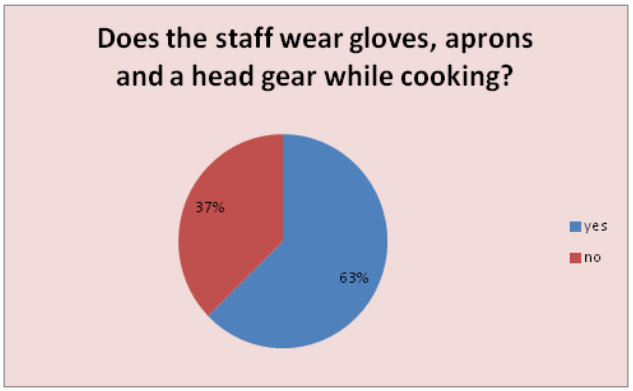
5. Most of the people about 97.27% wash their hands thoroughly before and after preparation of food. Only 2.63% people don't practice hand washing



6. In 85.45% of outlets, the staff member is not allowed to handle, prepare or serve food when he is ill. 14.54% places allow their staff to work even when ill.

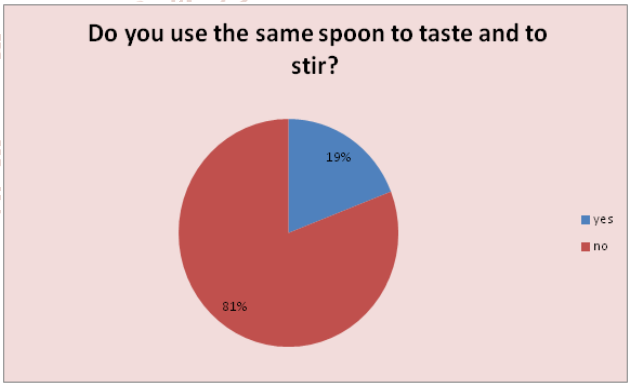


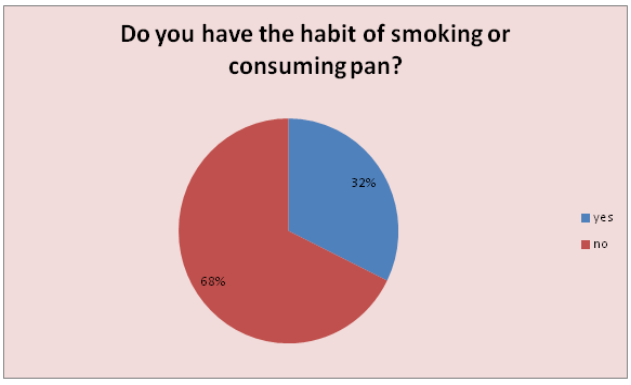
7. 84.54% have staff with clean and clipped nails while 15.45% do not follow this practice



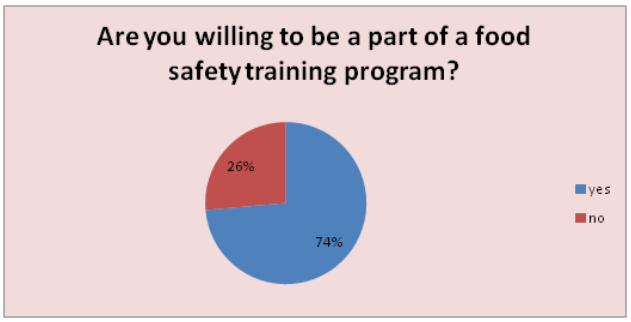
8. In 62.72% outlets the staff work with proper head gears, gloves and aprons. While 37.27% work without these.

9. 86.36% chefs taste the food they prepare of which 80.90%people use different spoons to stir and taste the food, while 19%use the same spoon to stir as well as taste. About 13% chefs do not taste the food prepared.

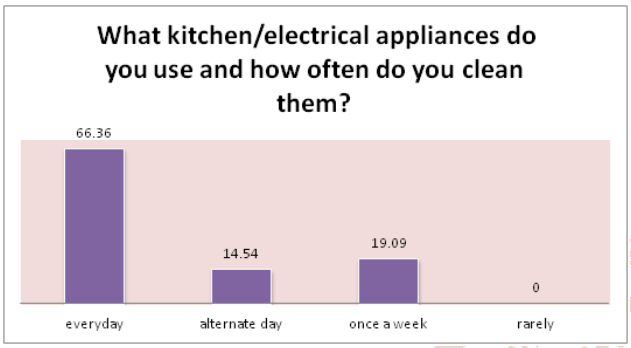




10. 67.72% people do not have the habit of smoking or consuming pan. 32.27% people smoke



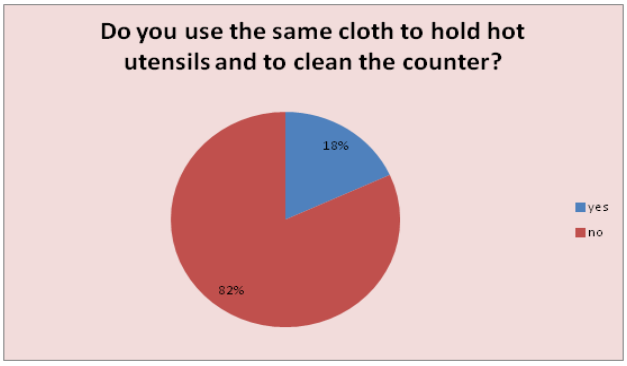
11. 73.62%people showed interest in being part of food safety programs while 26.36% people do not want to be part of any such program.



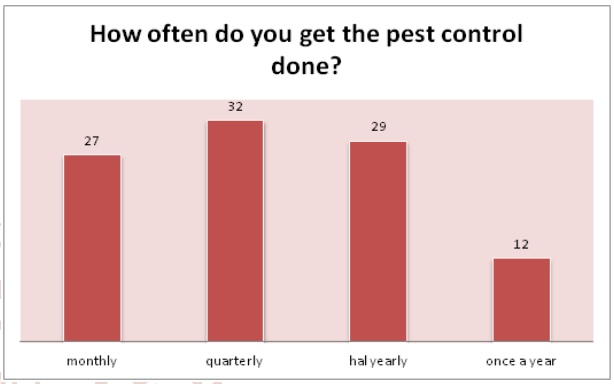
12. Restaurants had a wide range of electrical appliances. Most of outlets nearly 66.36% clean their appliances everyday, 14.54% clean the appliances every alternate day while 19% clean them once a week.

13. 46.36% clean their cooking counters very often nearly 4-5 times a day, 31.81% clean the counters twice a day and 20.90% clean it once a day.

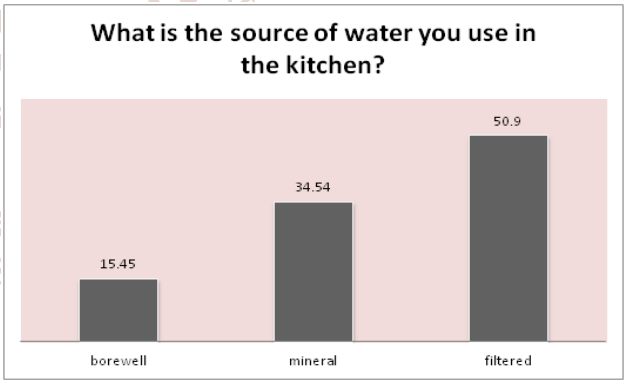
14. In 40% restaurants basic soaps are used for cleaning and 36.36% use powdered detergents.16.36% uses antibacterial liquids like dettol, lizol etc. 7.27% use different products for cleaning



15. 81% people use different clothes to hold hot utensils and clean the counters whereas 18% use the same cloth to both hold and clean

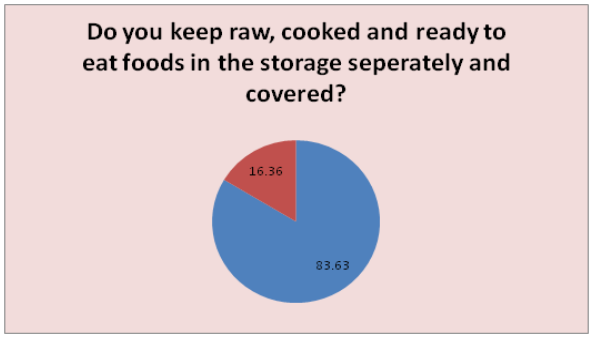


16. 32% restaurants get pest control done every 4 months, 29% do it half yearly and 27% do pest control every month. Only 12% restaurants do the pest control once in a year

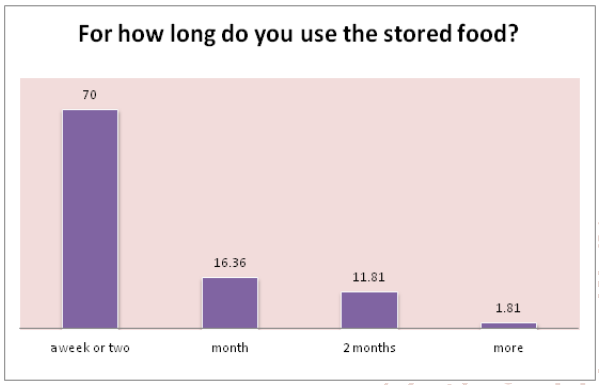


17. 50.90% restaurants use filtered water in the kitchen for all purpose, 34.54% use mineral water and 15.45% restaurants use bore well water in the kitchen

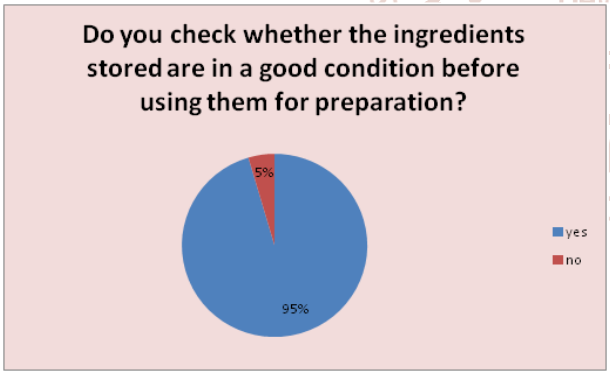
18. Refrigeration is the main form of storage 68.18% of restaurants while 25.45% use walk in freezers.6.36% have other means for storing ingredients like chillers, freezing drawers etc.



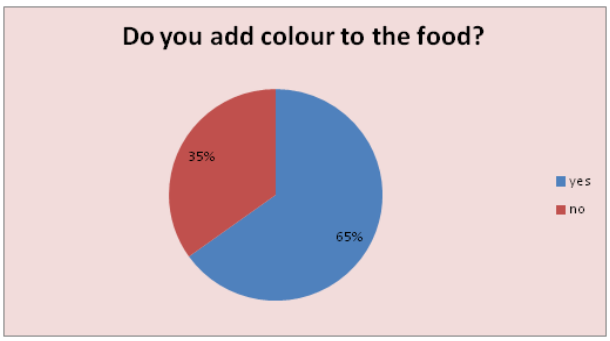
19. 83.63% restaurants prefer to store raw, cooked and ready to eat foods separately and properly covered and 16.36% don't.



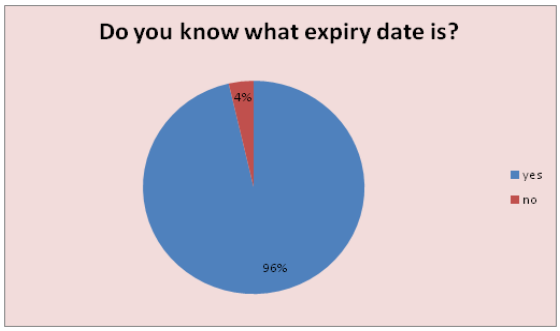
20. 70% restaurants use up the stored ingredients within a week or two. 16.36% use the food for 1 month and 11.81% use the stored food for approx 2 months. Only 1.81% uses the stored food beyond2months.



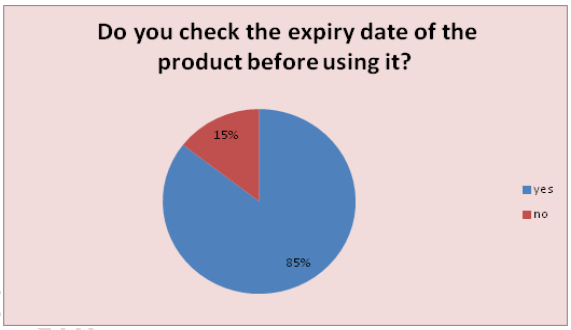
21. 95.45% people check the ingredients every time they use it for preparation while 4.54% don't.



22. 65.45% use artificial color in their food preparation. 34.54% avoid adding of any kind of food color.



23. 96.36% people know what an expiry date means while 3.63% people do not know what expiry date is.

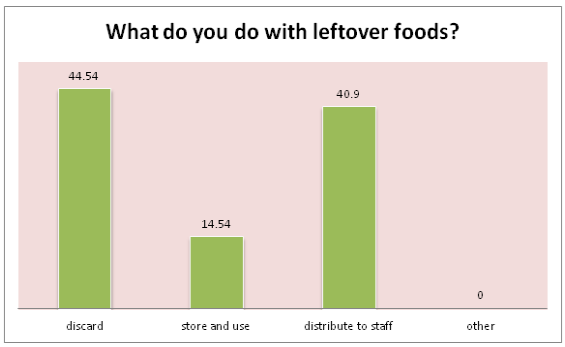


24. 85.45% check the expiry date of the product every time they use it whereas 14.54% people do not check the expiry date.

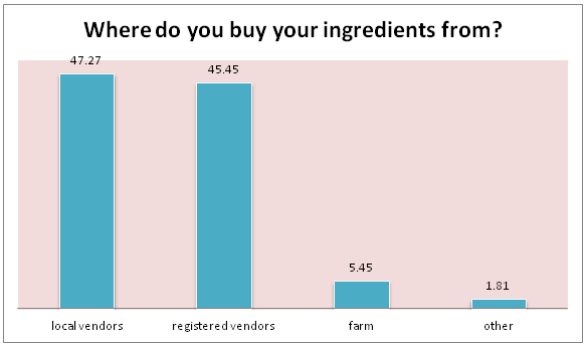
25. most of the restaurants cook the food at a temperature of 100°C and above, and serve it hot at a temperature range of 60°-80°C

26. 63.63%people questioned know what a danger zone is while 36.36% people were unaware of danger zone.

27. Most of the restaurants buy non vegetarian ingredients every day and few buy it once every 2-3 days. Some buy once a week.



28. 44.54% discard the leftover food 40.90% distribute the leftover food among their staff. Only 14.54% store it for future use.



29. 47.27% restaurants buy the raw ingredients from local vendors, 45.45% buy the ingredients from registered vendors. Only 5.45% buy the ingredients directly from the farms and 1.81% buy ingredients from other means.

DISCUSSION

The awareness of such important hygienic procedures by majority of the institutional food-handlers in this study is very appropriate. This is because the hands of food-handlers can serve as vectors in the spread of food borne diseases due to poor personal hygiene or cross-contamination. Proper hand washing by food-handlers has been reported to significantly decrease the threat of diarrheal disease in and can therefore be encouraged as it could similarly help minimize the risk of diarrhea and other food borne diseases in similar institutions.

Hand washing practices should be emphasized to food handlers as the hands need to be washed carefully before touching food or any sort and particularly after handling raw food ingredient, which will introduce bacteria daily to the kitchen and before continuing with Roberts, 1993). (4)

Food handlers should therefore receive suitable training in the basic principles of food safety (WHO, 1998) (5).

Through the data received it was observed that majority of the working staff would gladly like to be a part of food hygiene training program. The program can be conducted among the entire team of managing staff based on the importance of food hygiene, personal hygiene, cross contamination and safer temperatures of cooking, serving and storage of foods.

At the end of the training period, the knowledge and understanding of food safety on the part of food handlers should be tested. The use of attractive and explicit poster-type displays in workrooms is considered to be effective way of reminding food handlers of various aspects of food safety (WHO, 1988b) (6).

CONCLUSION

From the above survey, we are able to draw out various conclusions. We learn that most of the food service establishments in Hyderabad are aware of the basic hygiene practices. They are very particular about the personal hygiene of the staff and sanitation of the food being prepared. We also come to know that they take proper care of the ingredients they use when it comes to selection and storage. We learn that they are concerned about the cleanliness of their establishments and their sanitation and pest control routine. Apart from all of this we can understand the educational qualifications of the people working in such establishments and their interest and vigor in learning more about food sanitation and its importance and methods.

Particular attention should be given to the importance of time and temperature control, personal hygiene, cross contamination, sources of contamination and the factors determining the survival and growth of pathogenic organisms in food (WHO, 1988b; Goh, 1997). (7)

By doing the survey we are able to understand the situation of food sanitation in various establishments in Hyderabad. Such information is very helpful to evaluate the occurrences of food borne illness and helps us come about at various ways in which we can combat it.

From the present study the situation of food sanitation and hygiene practices in various establishments in Hyderabad was concluded. Such information is very helpful to evaluate the occurrences of food borne illness and helps us come about at various ways in which we can combat it.

RECOMMENDATIONS

The following recommendations can be advised.

- Food vendors' education is important issue as the vendors should be adequately educated about the relation between the food and disease transmission as well as on principles of personnel hygiene.
- The major authorities may issue the licenses to the street food vendors only once they fulfil the basic and essential food safety and hygiene principles.
- A routine health examination of the food handlers at these street food stalls must be carried out by the health officers to keep a check and maintain the hygienic conditions at the food stalls.
- Periodic training of these vendors can help improve and maintain the conditions.

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The survey was done taking into consideration the results and the methodology of reference published reports. The referred articles are hereby listed:

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