
An observational study to identify the food hygiene practices among caterers in hotels in selected areas of Andhra Pradesh



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Abstract: Objectives: Introduction: The main components of foods are proteins, carbohydrates, fats, minerals, and vitamins. Food safety is a scientific discipline that described the handling, preparation, and storage of food in always that prevents food borne illness. Food hygiene can be grouped under different types such as milk hygiene, fish hygiene, meat hygiene, vegetable hygiene, and fruit hygiene. **1.** To assess the level of practice on food hygiene among caterers. **2.** To associate the level of practice on food hygiene among caterers with their selected socio-demographic variables. **3.** To provide an information booklet on food hygiene practices. **4.** An observational study to identify the food hygiene practices among caterers in hotels in selected areas of Andhra Pradesh. **Methodology:** A quantitative research approach and descriptive design was adopted. The study was conducted in hotels in selected areas of Andhra Pradesh. Total 370 caterers were selected by using a simple random sampling technique. The observational checklist was used to identify the food hygiene practices among caterers. Data were analyzed by using descriptive and inferential statistics. Prior formal permission from concerned authorities was taken to conduct the study. Written informed consent was taken from the caterers after explaining the purpose of the study and establishing good interpersonal relationships. A sample of 370 caterers was selected using the simple random sampling technique-lottery method. The data was collected from 29/10/2021 to 11/11/2021. An observational checklist was used to assess the food hygiene practices among caterers. It will take 30 minutes for each caterer to complete. The information booklet was provided on food hygiene practices for caterers were distributed. The data was collected and organized for statistical analysis. **Results:** About the level of food hygiene practices among caterers, 85(23%) had safe practices, 185(50%) had moderately safe practices and 100(27%) had unsafe practices. There was a significant association between the level of practices on food hygiene with their selected socio-demographic variables like age, educational status, monthly income, religion, area of living, and type of family. There was no significant association between practices on food hygiene with their selected socio-demographic variable like gender. **KEYWORDS: Food hygiene practices, Caterers.**

STATEMENT OF THE PROBLEM

An observational study to identify the food hygiene practices among caterers in hotels in selected areas of Andhra Pradesh.

INTRODUCTION

Food is one of the important and basic biological needs of man. The food we eat is digested and assimilated in the body and used for its



maintenance, growth, and repair of the human body, regulation of body mechanism, and production of energy for work. The above Functions of food can be achieved only through adequate nutrition that should consist of essential nutrients and in the revered proportion.

Food-borne disease outbreaks are often associated with the poor personal hygiene of people handling foodstuffs. Food handlers, therefore, have a significant role in ensuring food safety. Risk factors are therefore a diet high in sugars and poor dental hygiene. Patients are at risk of developing complications. Meat hygiene includes various tissues of animal origin. The diseases which may be tapeworm infections, Tania sodium, Tania stagnate and bacterial infections are anthrax, tuberculosis, and food poisoning.

A food handler is anyone who works in a food business and handles food or surfaces that are likely to come into contact with food. The chance of food becoming contaminated depends largely on the health status and knowledge and practices of food safety of food handlers. Current statistics on food borne illnesses in various industrialized countries show that up to 30% of cases may be caused by poor food handling techniques and by contaminated food served in food service establishments.

NEED FOR THE STUDY:

The World Health Organization (WHO) indicated that each year as many as 600 million people in the world fall ill of which 420,000 die after consuming contaminated food.

30% of food-borne deaths occur among children. WHO estimated that 33 million years of healthy lives are lost due to eating unsafe food globally each year, and this number is likely an underestimation.

A study was conducted to assess the hygiene practices and food safety among street food vendors

in the city of Chandigarh. It includes 100 samples of vendors. 50 vendors were mobile and the other 50 were fixed vendors. A self-planned questionnaire was used for data collection for the vendors. The questionnaire included questions about demographic information, hygiene practices, and food safety. 38% of vendors used stalls, but did not uphold their stalls well. 83% of the vendors had thrown garbage in the open vessel and 14.0% used dustbins to dispose of garbage. Personal hygiene was also observed which indicated that the vendors never wear the head covers, handled food with bare hands and did not wear overcoats/aprons as well. Street food vendors were not aware of the hygienic and sanitary practices.

So the researcher found that there is a need for the study to assess food hygiene practices among food handlers to prevent food-borne diseases and interested to do the study on the practice of food hygiene among caterers in hotels.

OBJECTIVES

To assess the level of practice on food hygiene among caterers.

To associate the level of practice on food hygiene among caterers with their selected socio-demographic variables.

To provide an information booklet on food hygiene practices

ASSUMPTION

The caterers may practice food hygiene while handling and preparing the food in hotels.

OPERATIONAL DEFINITION

Observational study: Refers to a study in which individuals are observed outcomes are measured to assess food hygiene practices among food handlers.

Practice: refers to an act of doing an activity, again and again, to become better at food hygiene.



Caterer: Refers to the person preparing and providing food in hotels.

Hotel: Refers to an establishment providing food for travelers.

Delimitations: The study was limited to 370 caterers only. The study was limited to caterers in hotels in selected areas of Andhra Pradesh only.

MATERIALS AND METHODS

Research Approach: Quantitative approach was used for the study to explore the food hygiene practices among caterers in hotels at selected areas of Andhra Pradesh.

Research design: Descriptive design was used to conduct for the present study.

Setting of the Study: The study was conducted in hotels at selected areas of Nellore District, Andhra Pradesh.

POPULATION:

Target Population: The target population for the present study includes Caterers.

Accessible Population: The Accessible population for the present study includes caterers in hotels at selected areas of Andhra Pradesh.

Sample: Caterers in hotels at selected areas of Andhra Pradesh.

Sample Size: A sample size of 335 was calculated by using the Yamen's formula. By considering the 10% attrition, a sample of 33 is added and sample size is rounded to 370. A total of 370 caterers will be recruited for the study.

Yamen's formula

$$n = N/1+N(e^2)$$

Where n = Sample size

N = Total Population = 2041(2017-2018 census)

e = desired level of precision = 0.05

$$n = N/1+N(e^2) = 2041/1+2041(0.05)^2 = 2041/6.1 = 334.5.$$

Sampling Technique: Probability Simple random sampling technique was adopted to select the Caterers.

Criteria for Selection of the Sample

Inclusion Criteria: The Caterers

- Both male and female caterers
- Who are present at the time of data collection

Exclusion Criteria:

- The Caterers who are not willing to participate in the study.

Variables of the Study:

Variables of the study are selected socio demographic variables and research variables.

Demographic Variables: The Socio demographic variables such as age, gender, educational status, monthly income, religion, area of living, type of family.

RESEARCH VARIABLES

The food hygiene practices among caterers.

DESCRIPTION OF THE TOOL

Part-I: Deals with Socio demographic variables such as age, gender, educational status, monthly income, religion, area of living, type of family.

Part-II: Observational Checklist on food hygiene Practices among caterers.

The tool consists of 35 items each correct response was scored with one mark. The total possible score was 35 and each wrong answer was scored with 0 marks.

SCORE INTERPRETATION:

The score were interpreted of practice as follows:

S.No	Practice	Score	Per
1	Unsafe practice	<16	<45%
2	Moderately safe practice	16-24	46-70%
3	Safe practice	25-35	71-100%

Data Collection Procedure: Prior formal permission from concerned authorities was taken to conduct the study.



Written informed consent was taken from the caterers after explaining the purpose of the study and establishing good interpersonal relationships. A sample of 370 caterers was selected using the simple random sampling technique-lottery method. The data was collected from 29-10-2021 to 11-11-2021. An observational checklist was used to assess the food hygiene practices among caterers. It will take 30 minutes for each caterer to complete. The information booklet was provided on food hygiene practices for caterers were distributed. The data was collected and organized for statistical analysis.

Plan for data analysis: The data was analyzed in terms of objectives of the study using descriptive and inferential statistics. The plan for data analysis as follows.

- The frequency and percentage distribution of demographic variables.

Association of demographic variables with the level of practices by using descriptive and inferential statistics.

Data Analysis	Method	Objectives
Descriptive Statistics	Frequency Percentage distribution	Distribution of demographic variables
	Mean, Standard Deviation	To assess the knowledge, attitude and practice in prevention of COVID-19 among elderly.
Inferential Statistics	Chi-Square test	To find out the level of food hygiene practice among caterers
	Chi-square test	To find out the association between the level of food hygiene practices among caterers with the socio demographic variables

RESULTS

Table No-1: Frequency and percentage distribution of caterers based on age. (N=370)

Age in years	Frequency (F)	Percentage (%)
a.18- 25	90	24
b.26-35	140	38
c.36-45	100	27
d.46-55	40	11
Total	370	100

Table No 1: Revealed age of caterers, 90 (24%) were between the age group of 18-25 years, 140(38%) were between the age group of 26 - 35 years, 100(27%) were between the age group of 36 - 45 years and 40 (11%) were between the age group of 46 - 55 years.

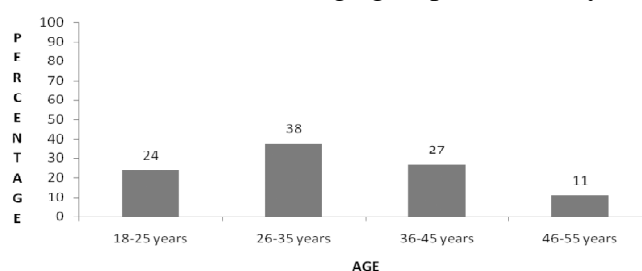


Fig no - 1: Percentage distribution of caterers based on age

Table No - 2 Frequency and percentage distribution of level of caterers based on gender (N=370)

Gender	Frequency (F)	Percentage (%)
a.Male	290	78%
b.Female	80	22%
Total	370	100%

Table No 2: With context to gender of caterers 290 (78%) are males and 80(22%) are females.

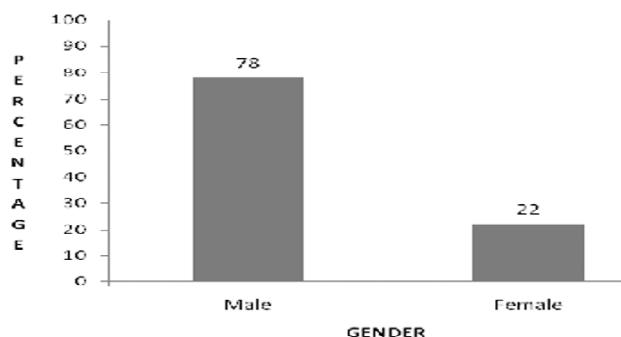


Fig no 2: Percentage distribution of caterers based on their gender.

Table No 3: Frequency and percentage distribution of caterers based on educational status

(N= 370)

Educational status	Frequency (F)	Percentage (%)
a. Illiterate	90	24%
b. Primary education	113	31%
c. Secondary education	147	40%
d. Graduate	20	5%
Total	370	100%

Table No 3 : Illustrate with regard to educational status 90 (24%) are Illiterate, 113(31%) studied primary education, 147(40%) done secondary education and 20(5%) are graduate.

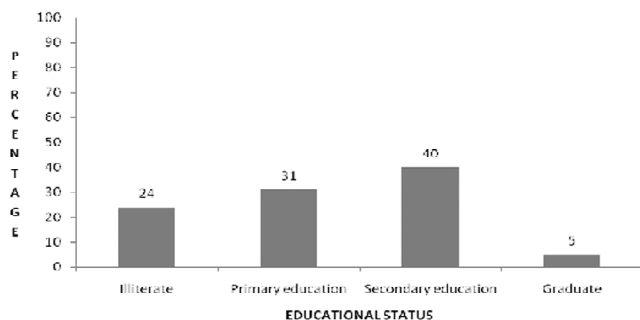


Fig No 3: Percentage distribution of caterers based on educational status.

Table No 4: Frequency and percentage of caterers based on monthly income

(N = 370)

Monthly income	Frequency (F)	Percentage (%)
a. Rs < 5000/	90	24%
b. Rs 5001 - 7000/	135	36%
c. Rs 7001 - 10000/	124	34%.
d. Rs 10001 & above	21	6%
Total	370	100%

Table No 4: In relation to caterers income per month 90(24%) earns Rs <5000/- , 135(36%) earns between Rs 5001 - 7000/- , 124(34%) earns between Rs 7001 - 10000 and 21(6%) earns Rs 10001 /- and above.

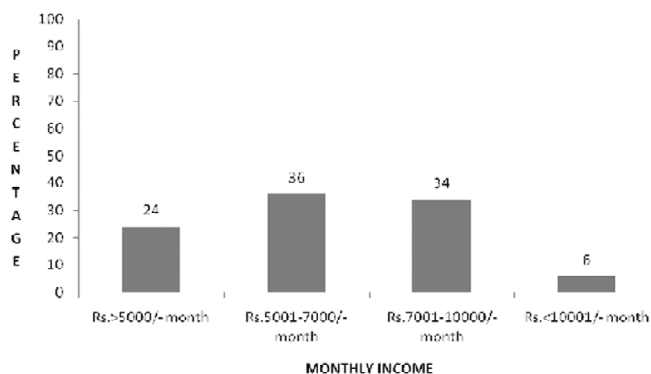


Fig No 4: Percentage distribution of caterers based on monthly income

Table No 5 Frequency and percentage distributions of caterers based on religion

(N=370)

Religion	Frequency (F)	Percentage (%)
a. Hindu	166	45%
b. Christian	88	24%
c. Muslim	110	30%
d. Others	6	1%
Total	370	100%

Table No 5: With context to religion 166 (45%) are Hindus , 88(24%) are Christians , 110(30%) are Muslims and 6 (1%)are others.

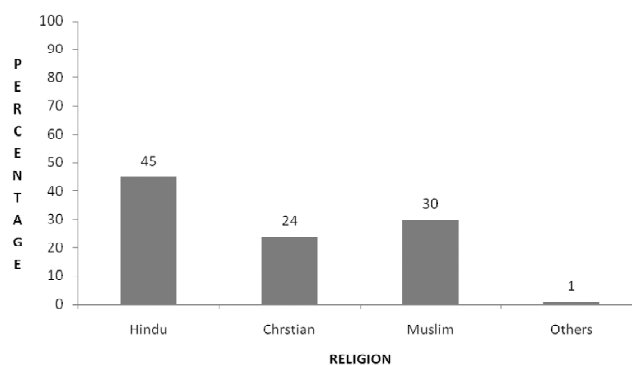


Fig No 5 : Percentage distribution of caterers based on religion.

Table No 6 Frequency and percentage distributions of caterers based on area of living

(N= 370)



Area of living	Frequency (F)	Percentage (%)
a. Urban	185	50%
b. Rural	75	20%
c. Semi-urban	110	30%
Total	370	100%

Table No 6: With context to area of living 185(50%) belongs to urban, 75(20%) belongs to rural and 110 (30%) belongs to semi-urban.

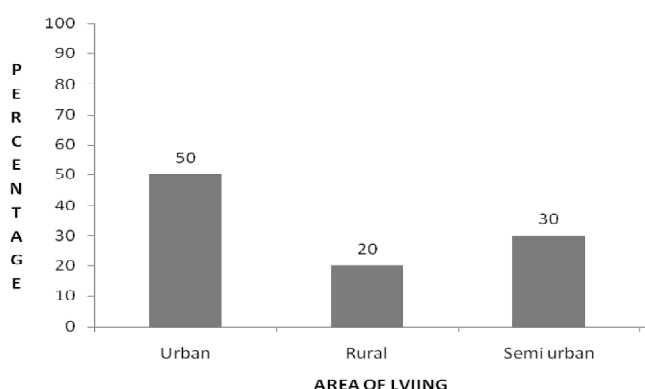


Fig No 6: Percentage distribution of caterers based on area of living

Table No 7 Frequency and percentage distribution of caterers based on type of family. (N = 370)

Type of family	Frequency (F)	Percentage (%)
a. Nuclear family	235	64%
b. Joint family	115	31%
c. Extended family	20	5%
Total	370	100%

Table No 7: In context to type of family 235 (64%) families live in nuclear family, 115 (31%) families live in joint family and 20 (5%) families live in extended family.

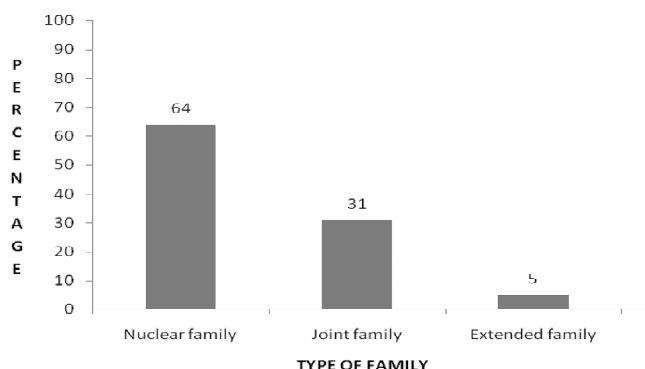


Fig No 7: Percentage distribution of caterers based on type of family.

SECTION - II

Table No - 8: Frequency and percentage distribution of level of practices regarding food hygiene among caterers in hotels at selected areas of Andhra Pradesh (N=370)

Level of practice	Frequency (F)	Percentage (%)
Safe practices	85	23%
Moderately safe practice	185	50%
Unsafe practices	100	27%
Total	370	100%

Table No 8: With regard to level of practice regarding food hygiene practices among caterers at hotels. 85(23%) had safe practices, 185(50%) had moderately safe practices and 100 (27%) had unsafe practices.

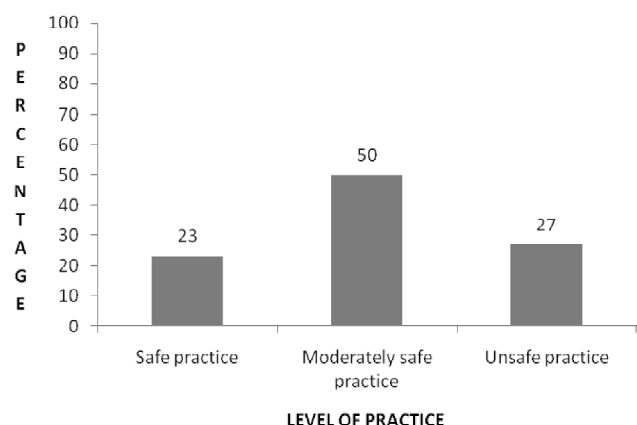


Fig No : 8 Percentage distribution of caterers based on level of practices

SECTION - III

Table No - 9: Mean and standard deviation of food hygiene practices among caterers at selected areas of Andhra Pradesh

Category	Mean	SD
Practices	19.05	7.809

Table No 9: It depicts that mean and standard deviation of food hygiene practices, the mean score



is 19.05 and standard deviation is 7.809. This indicates that there was a moderately safe practice on food hygiene among caterers.

Table No - 10: Association between levels of practice on food hygiene among caterers with their selected socio demographic variables. (N=370)

S.No	Socio Demographic Variables	Safe practice		Moderately safe practice		Unsafe practice		Chi-Square(X ²)
		F	%	F	%	F	%	
1. Age								CV=22.283
a. 18-25 years		15	4	55	15	20	5	TV=12.59
b. 26-35 years		25	6.75	80	21.62	35	9.63	Df=6
c. 36-45 years		31	8.37	35	9.45	34	9.18	P<0.05
d. 46-55 years		14	3.78	15	4.25	11	2.97	S**
2. Gender								CV=2.883
a. Male		65	17.56	145	38.84	80	21.6	TV=5.99, Df=2
b. Female		20	5.40	40	10.8	20	5.8	P<0.05, NS
3. Educational status								CV=35.935
a. Illiterate		30	8.10	35	9.15	25	6.75	TV=12.59
b. Primary education		10	2.70	78	21.55	25	6.75	Df=6
c. Secondary education		35	9.74	66	17.83	46	12.43	P<0.05, S
d. Graduate		10	2.70	6	1.24	4	1.08	
4. Monthly income								CV=48.494
a. Rs.<5000/-		25	6.75	35	9.15	30	8.10	TV=12.59
b. Rs.5001-7000/-		10	2.70	80	21.14	45	12.16	Df=6
c. Rs.7001-10000/-		45	12.16	64	17.29	15	4.55	P<0.05, S
d. Rs.10001/-and above		5	1.35	6	1.95	10	2.70	
5. Religion								CV=17.032
a. Hindu		30	8.1	98	26.63	38	10.27	TV=12.59
b. Christian		18	4.86	45	12.39	25	6.75	Df=6
c. Muslim		36	9.72	38	10.56	36	9.72	P<0.05, S
d. Others		1	0.2	4	0.6	1	0.2	
6. Area of living								Cv=60.35
a. Urban		26	7.02	124	33.53	35	9.45	Tv=9.49, Df=4
b. Rural		21	5.67	36	9.47	18	4.86	P<0.05, S
c. Semi urban		38	10.27	25	6.75	47	12.98	
7. Type of family								CV=18.196
a. Nuclear family		45	12.16	135	36.98	55	14.86	TV=9.49, Df=4
b. Joint family		37	9.92	39	10.54	39	10.54	P<0.05, S
c. Extended family		3	0.81	11	2.57	6	1.62	

**Note:**

CV = Calculated value

TV = Table value

df = degree of freedom

$df = (r - 1) (c - 1)$

S = Significant

NS = Non significant

Table No: 10 shows that with regard to association of level of practices on food hygiene among caterers with their selected socio demographic variables.

- Related to age of caterers, The calculated value is 22.283 and the table value is 12.591. The calculated value is more than table value. Hence there is significant at $P < 0.05$.
- Related to gender of caterers, The calculated value is 2.883 and the table value is 5.99. The calculated value is less than table value. Hence there is no statistical significance at $P < 0.05$.
- With concern to caterer's educational status, the calculated value is 35.935 and table value is 12.591. The calculated value is more than the table value. So there is significant at $P < 0.05$.
- With regard to monthly income of caterers, calculated value is 48.494 and table value is 12.591. The calculated value is greater than the table value. So there is significant at $P < 0.05$.
- Related to religion of caterers, calculated value is 17.032 and table value is 12.591. The calculated value is greater than the table value. So there is significant at $P < 0.05$.
- Related to area of living, the calculated value is 60.35 and table value is 9.49. The calculated value is greater than the table value. Hence there is significant at $P < 0.05$.

- Related to type of family, calculated value is 18.196 and table value is 9.49. The calculated value is greater than the table value. Hence there is significant at $P < 0.05$.

RECOMMENDATIONS:

Study can be replicated in a large sample so that findings can be generalized.

- A similar study can be done in different settings and data collection period can be extended for a longer duration.
- A study can be conducted by adding some interventions to improve food hygiene practice among caterers.

Conclusion: The study concluded that most of the caterers have moderately safe practices on food hygiene.

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