

A STUDY ON ASSESSING KNOWLEDGE AND PRACTICES ADOPTED BY YOUTH WITH REGARDS TO FOODSAFETY AND HYGIENE

¹Dr. Mona Mehta, ²Ashaka Shah, ³Fatema Dahodwala, ⁴Avani Panchal, ⁵Hridishruti Saikia, ⁶Eliza Upadhayaya

¹Assistant Professor, ²Sr. Msc student, ³Sr. Msc student, ⁴Sr. Msc student, ⁵Sr. Msc student, ⁶Sr. Msc student.

Department of Family and Community Resource Management,
Faculty of Family and Community Sciences, The Maharaja Sayajirao University of Baroda,
Vadodara, Gujarat, India.

Abstract: Food poisoning is a serious health problem. It can cause severe illness and even death. Food poisoning can seriously damage the reputation of a business, damage the reputation of a food industry and damage the jobs of many workers. A person has responsibility to handle food safely, whether they are a kitchen hand, a food process worker, a shop assistant or a waiter. Youth can be referred to as the time of life when one is young. This involves childhood, and the time of life which is neither childhood nor adulthood, but rather somewhere in between. Youth is an experience that may shape an individual's level of dependency, which can be marked in various ways according to different cultural perspectives. The present study aims to assess the extent of knowledge and practices possessed by the youth regarding food safety and hygiene. The present study was conducted in The Maharaja Sayajirao University of Baroda, Vadodara. For the study 110 students were selected. Convenient sampling technique was adopted for selecting the sample. The findings of the study revealed that most of the youth had good knowledge and followed good practices on food safety.

IndexTerms: Food Safety; Knowledge of food safety; Food safety practices.

I. INTRODUCTION

Food is an important basic necessity and it is a substance that supplies nutrient and energy for growth and development of humans. Food is also rich in nutrients required by microorganisms and may be exposed to contamination with major sources from water, air, dust, equipment, sewage, insects, rodents, and food handlers. Because of changes in food production, handling, and preparation techniques as well as eating habits, the fact remains that they all have direct influence on health. Hence, it is pertinent to keep food free from contamination. (Mendagudali, et, al. 2015)

Each year, millions of people worldwide suffer from food-borne diseases and illnesses resulting from the consumption of contaminated food, which has become one of the most widespread public health problems in the contemporary world. (Sanlier, 2008)

According to a report by World Health Organization (2003), the magnitude of Foodborne Diseases caused by contaminated food and water significantly contributed to a myriad of health problems. Foodborne Diseases were said to be on the increase despite adoption of vast measures to curb food-related illnesses. The Centre for Disease Control and Prevention (CDC, 2005) attributed this upward trend to increased multiplication rate of disease-causing microorganisms and exposure to 0 levels of toxins from industrial effluents. CDC (2005) further added that poor hygiene practices, inadequate cooking, improper holding temperatures, use of contaminated equipment and poor personal hygiene contributed significantly to the spread of Foodborne Diseases. Though symptoms of Foodborne

Diseases varied from one individual to another or from place to place, common symptoms ranged from mild gastroenteritis to life-threatening neurologic, hepatic, and renal syndromes (Wandolo, 2016)

According to Food and Agriculture Organization (FAO), food safety is definite as the degree of confidence that food will not cause sickness or harm to the consumer when it is prepared, served and eaten according to its intended use (WHO, 2003). However, food illnesses are defined as diseases, usually either infectious or toxic in nature, caused by agents that enter the body through the ingestion of food (WHO, 2007). Every person has a risk of food illnesses but may vary in term of risk level either low or high. Those who have low knowledge on food safety have high tendency to contracting with any food illnesses. (Norazmir, 2012)

The number of reported outbreaks of food-borne illnesses has been high, both in developed as well as developing countries. However, the problem is exacerbated in developing countries due to economic reasons, poverty, the lack of adequate health care facilities, and the dearth of data regarding food-borne diseases. Food contamination in developing countries is caused by many factors including traditional food processing methods, inappropriate holding temperatures, and poor personal hygiene of food handlers. Further, the prevalence of food-borne illnesses in developing countries is intertwined with other economic and developmental issues, namely, legislation, infrastructure and enforcement mechanisms (Monney, et, al. 2013).

The youth have always been a group particularly vulnerable to food hazards. They are more prone than other ages to consume food with the risk of safety problems at and outside homes. Education on food safety is helpful for the youth because they will need it to develop proper attitude, sound knowledge and skills to understand contemporary food issues. Hence, understanding food safety knowledge and practices of youth is key to identifying ways to give better education and to minimize the risk of foodborne diseases. (Cheng, et, at. 2017)

Food poisoning is a serious health problem. It can cause severe illness and even death. Food poisoning can seriously damage the reputation of a business, damage the reputation of the food industry, and damage the jobs of many workers. A person has responsibility to handle food safely, whether they are a kitchen hand, a food process worker, a shop assistant or a waiter.

Knowledge and practices regarding sanitation and hygiene are compulsory to people for safe food handling practice. In a university campus, around hundreds of students go to residential college or campus cafeterias to get their daily meal. Therefore, this study was undertaken to know the prevailing knowledge and practices of food safety and hygiene among youth of Vadodara city, to minimize foodborne infections and outbreaks in the community.

Food safety is a scientific discipline describing handling, preparation, and storage of food in ways that prevent foodborne illness. This includes a number of routines that should be followed to avoid potentially severe health hazards. In this way food safety often overlaps with food defence to prevent harm to consumers. The tracks within this line of thought are safety between industry and the market and then between the market and the consumer. In considering industry to market practices, food safety considerations include the origins of food including the practices relating to food labelling, food hygiene, food additives and pesticide residues, as well as policies on biotechnology and food and guidelines for the management of governmental import and export inspection and certification systems for foods. In considering market to consumer practices, the usual thought is that food have to be safe in the market and the concern is safe delivery and preparation of the food for the consumer.

I.1 Objectives

1. To study the extent of knowledge possessed by respondents regarding food safety and hygiene.
2. To study the food safety and hygiene practices of the respondents.

I.2 Delimitation

1. The study was limited to Vadodara city.

II. Review of Literature

Food safety and hygiene is becoming major issue amongst youth. The knowledge and practices regarding food safety and hygiene is spreading vastly all over the world and are used for several purposes.

Rahman (2012), conducted a research on „Food safety knowledge, attitude and hygiene practices among the street food vendors in northern Kuching city, Sarawak“. It was cross sectional study conducted among the street vendors in Kuching City.

Mathematical function regression analysis revealed that age and ethnicity appeared to be important factors for food safety knowledge, whereas food safety knowledge and training appeared to be influencing factors for attitude. On the other hand, food safety knowledge, attitude, training and age of the food vendors influence the food safety practice, but duration of food vending had an inverse relationship with food safety practice.

Dehghan, et. al. (2017) conducted a research on „Knowledge and attitude towards health and food safety among students of Tabriz University of Medical Sciences, Tabriz, Iran“. The aim of the study was to measure knowledge and attitude of students toward health and food safety. The results of the study revealed that more than 50% of students had high attitude and knowledge towards health and food safety and washing hands before cooking. Further, more than 60% of students had low attitude on other related items such as unimportance of food additives in food safety. Besides, more than 50% of students had low knowledge about best temperature to store cooked food which is between 5 to 65 °C and the most appropriate plastic containers to keep food healthy. About 87.3% of students had good knowledge about diseases that could be transmitted through food. That there was a significant relationship between students' attitude and taking courses related to health and food safety ($P = 0.010$).

Almansour, et. al. (2016) conducted a research on „Knowledge, attitude, and practice (KAP) of food hygiene among schools students' in Majmaah city, Saudi Arabia“. The aim of this study was to determine the level of knowledge, attitude, and practice of food hygiene among primary, intermediate and high school students and explore association, if any, with socio-demographic differences. The findings of the study was revealed that the mean age of 377 male students in the study was 14.53 ± 2.647 years. Knowledge levels was less in primary school students compared to high school students ($p=0.026$). Attitude level was high in primary school students compared to intermediate school students ($p < 0.001$). No significant difference was observed between groups with regard to practice levels ($p=0.152$).

The review of literature revealed that few studies were found on knowledge and practices of food safety and hygiene on youth. Hence, the present study was undertaken with the following objectives.

III. METHODOLOGY

III.1 Research Design

“ A research design is an arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure” (Kothari,2012). Since the present investigation dealt with assessing knowledge and practices adopted by youth with regards to food safety and hygiene, descriptive research design was considered most suitable for the study.

III.2 Variables under study

There are two sets of variable under this study:

Independent variables

A. Personal variable

- i. Age
- ii. Education
- iii. Gender

B. Family variable

- i. Type of family
- ii. Monthly family income
- iii. Education of father
- iv. Education of mother
- v. Employment status of father
- vi. Employment status of mother

Dependent variables**A. Extent of knowledge regarding food safety and hygiene****B. Extent of food safety and hygiene practices****III.3 Operational Definitions****A. Knowledge regarding food safety**

It refers to the awareness that the youth has with regards to washing, cleaning, handling, storing and consuming food.

B. Food safety Practice

Food safety practices are defined as the actions taken by the youth with Cleaning, washing, handling, consuming, storing, and maintaining personal hygiene.

C. Food safety

Food safety is defined as the ways in which a youth handles, and prepares, and stores food items in ways that prevent food- borne illness.

D. Food hygiene

Food hygiene are the conditions and measures necessary to ensure the safety of food from the process of production to consumption.

III.4 Locale of the study

The present study was conducted on the students studying in The Maharaja Sayajirao University of Baroda, Vadodara, Gujarat.

III.5 Sample selection and size

The sample selected for the study was from the youth of various colleges of Vadodara city. For the present study 110 students were selected. Convenience sampling technique was adopted for selecting the sample.

III.6 Selection, Description and Construction of tools

Keeping in mind the objectives of the study the interview schedule was developed to facilitate data collection for the present study.

Description and Construction of tool**Section I (Background information)**

This section contained questions regarding background information of the respondents like name, age, education, family income, occupation of father, occupation of mother, education of father, education of mother, family type.

Section II (Extent of food safety and hygiene knowledge)

This section contained questions regarding the knowledge of respondents including habits followed during handling and storage of food.

Section III (Extent of food safety and hygiene practices)

This section contained questions regarding the practices followed by the respondents during handling and storage of food.

IV. Major Findings of the study

IV.1 Background information

Table No 1: Frequency and percentage distribution of respondents according to their age.

Age (In years)	f (n=110)	%
18-23	101	91.81
24-29	9	8.18
Total	110	100

It was found that, maximum portion of the respondents (91.81%) were in the age group of 18-23 years and the remaining portion (8.18%) of the respondents were between the age group of 24-29 years.

Table No 2: Frequency and percentage distribution of respondents according to their type of family.

Type Of Family	f (n=110)	%
Nuclear	80	72.72
Joint	30	27.27

It was found that, 72.72% of the respondents were from nuclear families and 27.27% of the respondents were from joint families.

Table No 3: Frequency and percentage distribution of respondents according to their family income.

Income (In)	f(n=110)	%
≤ 54,664	60	54.54
>54,664	50	45.45
Mean	54,664	

It was found that, 54.54% of the respondents had family monthly income below Rs.54,664 and 45.45% of the respondents had family monthly income above Rs. 54,664.

Table No 4: Frequency and percentage distribution of respondents according to their fathers education level.

Education	f (n=110)	%
Upto 10 th	7	6.36
Upto 12 th	11	10.00
Diploma	10	9.09
U.G	52	47.3
P.G	28	25.45
Ph.D	2	1.81

It was found that, (47.3%) of the respondents fathers education was up to under graduation, (25.45%) of the respondents fathers education was up to post graduation and only a very few (1.81%) of the respondents fathers had Ph.D degree.

Table No 5: Frequency and percentage distribution of respondents according to their mothers education level.

Education	f (n=110)	%
Below 10 th	3	2.72
Upto 10 th	9	8.20
Upto 12 th	29	26.36
Diploma	5	4.54
U.G	44	40.00
P.G	18	16.36
Ph.D	2	1.81

It was found that, (40%) of the respondents mothers education was up to under graduate level, (26.36%) of the respondents mothers education was up to 12th standard and only a very negligible (1.81%) of the respondents mothers had Ph.D degree.

IV.2 Frequency and percentage distribution of the respondents according to their Knowledge regarding Food Safety and Hygiene.

Knowledge regarding Food Safety and Hygiene	Agree		Disagree		Weighted mean scores
	f	%	f	%	
Washing hand before all meals.	97	88.19	13	11.81	1.88
Washing hands while coughing and sneezing.	50	45.45	60	54.55	1.45
Eating or drinking at corner of house of a room.	51	46.36	59	53.63	1.46
Wearing nail polish while handling food.	21	19.09	89	80.90	1.19
Look for expiry date while purchasing packaged foods.	102	92.72	8	7.27	1.92
Store foods at the same place where you store other belongings.	30	27.27	80	72.72	1.27
Washing hands with soap before handling food.	37	33.63	73	66.36	1.33
Using sanitizer regularly	56	50.90	54	49.09	1.50
Storing raw meat, fish and vegetables at the same place.	12	10.90	98	89.09	1.10
Identifying unsafe foods by look and smell.	104	94.54	6	5.45	1.94
Eating foods from the street vendors which are unsafe.	92	83.63	18	16.36	1.83
Cleaning food storage area before storing new foods	106	96.36	4	3.63	1.96
Keeping frozen food more than six months which increases risk of food poisoning.	91	82.72	19	17.27	1.82
Soaking vegetables in cold water completely remove any pesticides.	18	16.36	92	83.63	1.16
Eating raw or half-cooked egg or meat which causes food poisoning.	83	75.45	27	24.54	1.75

Keeping food at room temperature causes harmful bacteria to multiply .	89	80.90	21	19.09	1.80
Consuming food from food handlers who do not wear gloves while handling food.	93	84.54	17	15.45	1.84
Eating open food from street vendors which causes food poisoning.	69	62.72	41	37.27	1.62
Raw vegetables which are cut should not be kept for longer time for further use.	107	97.27	3	2.72	1.97
Uncovered foods attract flies which spread diseases.	110	100	0	0	2
Total weighted mean					1.64

The findings on the weighted mean scores regarding knowledge of food safety and hygiene revealed that the respondents had good knowledge with regards to the uncovered food causing diseases, Raw food being kept for long time outside. Cleaning the stored food areas. Identifying unsafe food by their look and smell as well as checking the expiry date while purchasing packaged foods.

VI.3 Frequency and percentage distribution of the respondents according to their practices regarding food safety and hygiene.

Food Safety and Hygiene Practices	Agree		Disagree		Weighted Mean Scores
	(f)	%	(f)	%	
Washing hands before and after cooking.	103	93.63	7	6.36	1.93
Washing hands before and after eating.	106	96.36	4	3.63	1.96
Tasting food with unprotected hands.	38	34.54	72	65.45	1.34
Consuming food which is kept at room temperature for long.	20	18.18	90	81.81	1.18
Washing fruits and vegetables before eating.	103	93.63	7	6.36	1.93
Reading labels by expiry date of packaged food before purchasing.	101	91.81	9	8.18	1.91
Reading conditions of use and storage of packaged food.	96	87.27	14	12.71	1.87
Washing and rinsing cutting boards, knives and plates before using them for preparation of other food item.	101	91.81	9	8.18	1.91
Wearing accessories like rings, bracelets when cooking.	37	33.63	73	66.36	1.33
Wearing an apron when cooking.	37	33.63	73	66.36	1.33
Washing hands before handling raw foods.	83	75.45	27	24.54	1.75
Covering cut with bandage and using gloves while cooking food.	99	90	11	10	1.9
Keeping food unrefrigerated for more than two hours.	36	32.72	74	67.27	1.32
Protecting raw foods from insects.	103	93.63	7	6.36	1.93

Protecting cooked foods from insects.	105	95.45	5	4.54	1.95
Discarding packaged food that has passed the expiry date.	98	89.09	12	10.90	1.89
Using dishes with cracks and chips.	15	13.63	95	86.36	1.13
Wiping fruits and vegetables before eating instead of washing them thoroughly.	27	24.54	83	75.45	1.24
Using the same spoon for cooking and eating.	19	17.27	91	82.72	1.17
Tasting food with fingers while cooking.	32	29.09	78	70.90	1.29
Drinking raw (unpasteurized) milk.	33	30	77	70	1.3
Eating food such as: rice, pasta etc from a large dish common to several people.	77	70	33	30	1.7
Cleaning food contact surfaces before eating.	103	93.63	7	6.36	1.93
Frequently cleaning water storage areas.	100	90.90	10	9.09	1.90
Refilling fresh water for drinking on daily basis.	105	95.45	5	4.45	1.95
Washing and cleaning drinking water containers on a daily basis.	95	86.36	15	13.63	1.86
Total weighted mean					1.65

The findings revealed that majority of the respondents followed good practices where food safety and hygiene were of concern. These practices included washing hands before and after eating (96.36%), protecting cooked foods from insects (95.45%), refilling fresh water for drinking on daily basis (95.45%), protecting raw foods from insects (93.63%), cleaning food contact surfaces before eating (93.63%), washing hands before and after cooking (93.63%), washing fruits and vegetables before eating (93.63%), reading labels by expiry date on packaged food before purchasing (91.81%), washing and rinsing cutting boards, knives and plates before using them for preparation of other food items (91.81%) and frequently cleaning water storage area (90.90%).

V. Conclusion

The findings of the study revealed that most of the youth had good knowledge and followed good practices on food safety majority of the respondents followed practices like raw vegetables should not be kept for long time outside, clean food storage area before storing new food also knew that identifying unsafe food by their look and smell and checking expiry date while purchasing packaged food, washing hands before and after eating, protecting cooked foods from insects, refilling fresh water for drinking on daily basis, protecting raw food from insects, cleaning food contact surfaces before eating, washing hands before and after cooking, washing fruits and vegetables before eating, reading labels by expiry date on packaged food before purchasing, washing and rinsing cutting boards, knives and plates before using them for preparation of other food items and also frequently cleaning water storage areas.

Food safety and hygiene issues are becoming very popular among the youth nowadays. They have formed the habit of practicing the food safety and hygiene practices on daily basis. This has in turn improved the quality of their physical and mental health to a great extent.

VI. Reference

- Retrieved from https://www.researchgate.net/publication/223027616_The_knowledge_and_practice_of_food_safety_by_young_and_adult_consumers#pf5 on 25th July, 2019.

- Retrieved from https://www.researchgate.net/publication/273413744_Knowledge_and_Practices_on_Food_Safety_among_Secondary_School_Students_in_Johor_Bahru_Johor_Malaysia on 25th July, 2019.
- Retrieved from <https://www.ejmanager.com/mnstemps/67/67-1445952419.pdf?t=1562640146> on 26th July, 2019.
- Retrieved from <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0187208> on 25th July, 2019.
- Retrieved from https://pdfs.semanticscholar.org/8a57/81396b88533fb61cc72bbe448bb93727_693e.pdf on 27th July, 2019.
- Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5302301/> on 27th July, 2019.
- Retrieved from https://www.researchgate.net/publication/317867470_Knowledge_and_attitude_towards_health_and_food_safety_among_students_of_Tabriz_University_of_Medical_Sciences_Tabriz_Iran on 27th July, 2019.

