

Assess the Knowledge Regarding Food and Vegetable Sanitation among Housewives in Selected Areas of Pune City

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Abstract

In order to preserve our health and remain healthy, it is of utmost importance to maintain the quality of food we intake and avoid contamination. To achieve this, proper sanitation of the food and vegetables we ingest is required. The poor knowledge of food sanitation causes several food-borne disease and various health issues and in turn puts extra strain on our Health Sector. Hence, it is important to prevent the food from getting contaminated with microbes or toxic chemicals, and follow healthy food sanitation practices. To achieve this, food safety at the household level and knowledge regarding handling food is essential. The aim of this study was to gain and scrutinize the knowledge related to food and vegetable sanitation among housewives who cook the food at home. **Objective:** 1) To assess knowledge regarding food sanitation among housewives in selected areas of Pune city. 2) To assess knowledge regarding vegetable sanitation among housewives in the selected areas of Pune city. **Result:** The analysis shows that 7.94% of housewives have excellent knowledge regarding cleaning of vegetables and fruits, 23% of housewives have very good knowledge, 23% of housewives have good knowledge while 44.4% of housewives have average knowledge. Also 15.87% of housewives have excellent knowledge regarding separation (keep-apart) of food & vegetables, 7.6% of housewives have very good knowledge, 28.57% housewives have good knowledge while, 47.6% of housewives have average knowledge. Also 7.94% of housewives have excellent knowledge regarding cooking at safe temperatures, 15.87% of housewives have very good knowledge, 25.39% housewives have good knowledge while, 50% of housewives have average knowledge. And 6.35% of housewives have excellent knowledge regarding chilling i.e refrigerating the food items and vegetables, 15.87% of housewives have very good knowledge, 31.7% housewives have good knowledge while, 46.0% of housewives have average knowledge. **Conclusion:** The housewives have satisfactory knowledge regarding separation and cleaning of food and vegetables, also they have less knowledge regarding cooking at safe temperature and the refrigerating of the food and vegetables. Hence, they need to be motivated to follow good food and vegetable practices in order to prevent contamination of food as well as to reduce the rate of food-borne illnesses.

Key words: Knowledge, Food, Vegetable, Sanitation and Housewives.

Introduction and Background

It is time to boost our immunity.

Good food hygiene describes how to avoid the

spread of bacteria when cooking, washing, preparing, and storing food items on a daily basis. As we all know, if the food is not cooked, stored and handled correctly, it can cause food poisoning and other health issues. Most of the people assume that food consumed from roadside stalls or from food hawkers causes sickness and stomach upset, but it may not always be the result of outside food; it could also be the result of poor kitchen hygiene. Mainly, the germs get transferred to other food items or to the kitchen surfaces while preparing and cooking from raw

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foods like chicken, eggs, meat, poultry, sea-food, raw fruits and vegetables¹. There are chances that such food gets spoilt immediately and the person who consumes such kind of food or vegetables, can fall ill. Especially, people with low immunity like small children, pregnant women and elderly adults and others who are suffering from HIV/AIDS, kidney issues, cancer, diabetes, and other chronically ill diseases are at more risk². Also in a country like India, the housewives are mostly responsible to handle the kitchen and food needs of the family in order to meet the nutritional requirements. Hence, taking this into consideration, the researchers proposed the need to conduct the current research to assess the knowledge regarding food and vegetable sanitation among housewives. This research helps to gauge the knowledge of the housewives regarding food and vegetable sanitation and also to develop strategies to fill the knowledge gap by different methodologies.

Objective:

1. To assess knowledge regarding food sanitation among housewives in selected area of Pune city.
2. To assess knowledge regarding vegetable sanitation among housewives in selected area of Pune city.

Methodology

Research Design: The researchers have used A Non-Experimental Descriptive Research. The study was conducted on the housewives of selected areas of Pune city.

Sampling techniques: Convenient sampling technique was used.

Subject Size: 126 homemakers who are staying in different areas of Pune city and willing to participate. These participants were informed clearly about the study and its purpose.

Tools of data collection: In the present study, the below scales were used to collect the data. Structured

questionnaire to assess the knowledge regarding food and vegetable sanitation among the housewives staying in different areas of Pune city. It has two sections; **Section I:** Consisted of items related to demographic variables of the subjects of the study. **Section II:** Consisted of 20 questions regarding food and vegetable sanitation. It was divided in 4 parts; Part A- Questions on knowledge related to cleaning of food & vegetables. Part B- Questions on knowledge related to separation (keep-apart) of food & vegetables. Part C- Questions on knowledge related to cooking at safe temperature, which kills germs. Part –D Questions on knowledge related to chilling i.e refrigerating the food items and vegetables.

Validity and Reliability of tools: The experts validated tools and the reliability was done by Cronbach's Alpha Coefficient Test. Cronbach's Alphas were $r=0.86$ & 0.9 for assessing the knowledge regarding food and vegetable sanitation among housewives in selected areas of Pune city.

Findings: The analysis and interpretation of the data collected to determine the knowledge regarding food and vegetable sanitation in housewives from selected areas was done keeping the objectives of the study in consideration. 1. To assess knowledge regarding food sanitation among housewives in selected areas of Pune city. 2. To assess knowledge regarding vegetable sanitation among housewives in selected areas of Pune city.

The results were divided in two Sections: Section – I: Description of Distribution of Demographic Variables. Section – II Part A: Description of practices related to cleaning. Section – II Part B: Description of practices related to Separation (Keep Apart) of food items. Section –II Part C: Description of practices related to cooking at safe temperatures which kills germs. Section –II Part D: Description of practices related to Chilling i.e Refrigerating the food items.

SECTION I

Description of demographic details

Table 1: Represents the data related to description of demographic variables.

Demographic variable		Freq	%
Age	21-30	20	15.9
	31-40	60	47.6
	41 and above	46	36.5
Type of Family	Nuclear family	80	63.5
	Extended/Joint Family	46	36.5
Education	Graduate	81	64.3
	Post Graduate	10	7.9
	Higher Secondary	20	15.9
	Illiterate	15	11.9
Years of Marriage	0-3 Years	26	20.6
	4-6 Years	40	31.7
	6 Years	60	47.6
No of family members	0- 2 Member	60	47.6
	3-5 Member	20	15.9
	More than 5 Members	46	36.5
Type of food habits	Vegetarian	70	55.6
	Non – Vegetarian	56	44.4

SECTION II

Part A: Knowledge related to Cleaning of food & vegetables

Table 2: Represents the data related to knowledge of cleaning the food and vegetables

N=126

Cleaning	Average		Good		Very Good		Excellent	
	Freq	%	Freq	%	Freq	%	Freq	%
	56	44.4	30	23	30	23	10	7.94

Part B: Knowledge related to separation (keep-apart) of food & vegetables

Table 3: Represents the data related to knowledge of separating of food and vegetables.

N=126

Separation (Keep Apart)	Average		Good		Very Good		Excellent	
	Freq	%	Freq	%	Freq	%	Freq	%
	60	47.6	36	28.5714	10	7.93651	20	15.87

Part C: Practices related to cooking at safe temperature, which kills germs.

Table 4: Represents the data related to knowledge regarding cooking at safe temperature, which kills germs.

N=126

Cooking to safe temperatures kills germs	Average		Good		Very Good		Excellent	
	Freq	%	Freq	%	Freq	%	Freq	%
	64	50.8	32	25.3968	20	15.873	10	7.94

Part D: Practices related to Chilling i.e Refrigerating the food items and vegetables.

Table 5: Represents the data related to knowledge regarding Chilling i.e Refrigerating the food items and vegetables.

N=126

Chilling (Refrigerating) t	Average		Good		Very Good		Excellent	
	Freq	%	Freq	%	Freq	%	Freq	%
	58	46.0	40	31.746	20	15.873	8	6.35

Discussion

This study was aimed to assess the knowledge regarding food and vegetable sanitation among housewives in selected areas of Pune city. Hence, the data was gathered from the participants and analysis was done to find the results.

Findings related to the knowledge regarding Cleaning of food & vegetables.

Table 2: Data describes the Part A which deals with the knowledge related to cleaning of food & vegetables among housewives, and the parameters measured related to cleaning were: Wash hands in warm soapy water for at least 20 seconds before and after touching food;

washing of cutting boards, dishes, forks, spoons, knives, and counter tops with hot soapy water; cleaning of the lids on canned goods before opening; cleaning of all the fruits and vegetable purchased from the market rinsed in running water followed by rubbing with hands; if damage or bruising occurs before eating or handling, it is to be cut away the damaged areas before preparing or eating. The analysis says that only 7.94% of housewives have excellent knowledge regarding cleaning of vegetables and fruits, while 23% of housewives have very good knowledge, 23% of housewives have good knowledge and 44.4% of housewives have average knowledge.

Findings related to the knowledge regarding separation (keep-apart) of food & vegetables.

Table 3: Data describes the Part B which deals with the knowledge related to separation (keep-apart) of food & vegetables to prevent contamination among housewives, and the parameters measured related to separation (keep-apart) were: Keeping of raw meat, poultry, seafood, and eggs away from other foods while shopping and while keeping in fridge; boiling of the marinades of raw foods if need to use second time; using of a special cutting board or plate for raw foods only; cooking of non-vegetarian foods in separate utensils. The analysis says that 15.87% of housewives have excellent knowledge regarding separation (keep-apart) of food & vegetables, 7.6% of housewives have very good knowledge, 28.57% housewives have good knowledge while and majority that is, 47.6% of housewives have average knowledge.

Findings related to the knowledge regarding cooking at safe temperature, which kills germs.

Table 4: Data describes the Part C which deals with the knowledge related to cooking at safe temperature to kills germs among housewives, and the parameters measured related to cooking at safe temperature were: Cooking fish and sea-foods, chicken, finely chopped (ground) chicken, vegetables at appropriate temperatures to maintain its nutritive value as well as kill the germs. The analysis says that 7.94% of housewives have excellent knowledge regarding cooking at safe temperatures, 15.87% of housewives have very good knowledge, 25.39% housewives have good knowledge while 50% of housewives have average knowledge.

Findings related to the knowledge regarding Chilling i.e Refrigerating the food items and vegetables.

Table 5: Data describes the Part D which deals with the knowledge related to chilling i.e refrigerating the food items and vegetables which helps prevent food from spoiling or getting contaminated with germs, as low temperature prevents growth of microbes, and the parameters measured related to chilling i.e refrigerating the food items and vegetables were: Storing foods in the fridge or freezer within 2 hours after cooking; after purchasing from the store; within 1 hour if it is 90 degrees or hotter outside; and marinating foods in the fridge. The analysis says that 6.35% of housewives have excellent knowledge regarding chilling i.e refrigerating the food items and vegetables, 15.87% of housewives have very good knowledge, 31.7% housewives have good knowledge while, 46.0% of housewives have average knowledge.

Similar to current study findings, there was a study done on Food Hygiene, Knowledge, Attitudes and Practices of Food Handlers in Food Businesses in Accra, Ghana, where the researcher had said that the responses regarding food storage of the food handlers from the different hotels varied in their response, where only 42.9% knew that the correct temperature for refrigeration was 1°C - 5°C also even though the respondents food hygiene attitudes were found to be satisfactory, the microbial analysis results have proved that, strict food hygiene practices were lacking in them. Thus, food handlers must strictly follow food hygiene practices and the managers should motivate them for the same, to prevent from serving cross-contaminations of foods to the consumers³.

In an another study, result which was done on food safety policies and practices in public spaces done on vendors of fresh fish sellers in Mzuzu, Malawi, where the researcher found that hand washing with soap and water by vendors while at work and keeping food at a proper temperature appears to be the most effective ways of reducing *E. coli* and *Salmonella* spp. Also, the vendor's knowledge regarding food-borne diseases is low, and that a change in the behavior and facilitation of practices is needed through proper infrastructure along with more training⁴.

Conclusion

The study results have shown that the housewives have adequate knowledge regarding cleaning as well as separation of food and vegetables as it is their daily routine although they need to be motivated to improve their habits related to refrigeration and cooking at safe temperatures, which will increase their knowledge as well will help in reducing food contamination which will further prevent food-borne illnesses.

Conflict of Interest: Nil

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Ethical Clearance: Ethical approval of the study taken from Symbiosis College of Nursing's ethical committee also, Informed consent was taken from the housewives living at Pune city. Information was given to the housewives regarding the data collection procedure. The data collected was kept confidential and used only for research purposes.

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