

A Study on Awareness and Attitudes of Food Handling Practices of Mothers in Thoothukudi District

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ABSTRACT

This study examines the awareness and attitudes of food handling practices of mothers in Thoothukudi district. It aims to study the demographic profiles of the respondents, to analyze the awareness of food handling practices of mothers, to evaluate the attitude of mothers, to identify the involvement of mothers in the hygienic practices and to examine the impact on food borne diseases. The data collected from 175 respondents in Tirunelveli District. Version 17.0 of Statistical Package for Social Science (SPSS) was used to analyze the data. The collected data was analyzed by using appropriate statistical tools like percentage analysis, chi-square test, t-test, ANOVA and rank test for arriving conclusions. The finding of the study is mothers uses well water which is not a hygienic and safe practice. Awareness should be created among mothers in rural area about the consumption of safe cooking and drinking water and government should take steps to supply safe water to rural areas.

1. Introduction

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. In response to the increasing number of food and water-borne diseases, governments all over the world have been taking efforts to improve food safety knowledge and practices among people. Safe food-handling practices and high awareness of hygienic practices reduce major incidents of diarrhoeal death and various other food borne diseases. The Centre for Disease Control and Prevention Food - Net surveillance data show that infants, children and women are affected more by food borne diseases. This arises from the consumption of contaminated food. In the context of modern food production techniques and methods in a globalized world, the food handling methods adopted by women during religious and social ritual practices are not adequate to ensure the safety of the food. The most common factors contributing to food borne diseases are unsafe keeping of food, contaminated equipment, food from unsafe sources, poor personal hygiene and inadequate cooking.

2. Objectives of the study

1. To study the demographic profiles of the respondents.
2. To analyze the awareness of food handling practices of mothers.
3. To evaluate the attitude of mothers and involvement of mothers in the hygienic practices.
4. To examine the impact on food borne diseases.

3. Review of literature

Cohen et al. (2001) stated that only knowledgeable, motivated, and skilled employees who are trained to follow the proper procedures together with management that effectively monitors employees' performances can ensure food safety

Martha Barclay et al. (2001) in their study indicated the barriers for implementing food safety. They suggested a food safety educational program for all consumers, especially the mothers and food handlers. Food safety information should also be reinforced during students' progression within the educational system

Bruhn (2002) in his study suggested that consumer education should include a comprehensive description of food borne illnesses, and prevention strategies; product labels should contain food-handling information and warnings for special populations, and food processing by newer safety-enhancing technologies should be more widely available

4. Methodology

This research is basically focused on awareness and attitudes of food handling practices of mothers in Thoothukudi district of TamilNadu, India. It encompasses both primary and secondary data. The primary data were collected through a well structured interview schedule. The secondary data relating to food handling practices of mothers were obtained from text books, journals and websites. The primary data were collected from about 175 respondents' selected using random sampling method. Version 17.0 of Statistical Package for Social Science (SPSS) was used to analyze the data. This paper is devoted to present the analyzed data relating to study the demographic profiles of the respondents; to analyze the awareness of food handling practices of mothers; to evaluate the attitude of

mothers and the involvement of mothers in the hygienic practices and to examine the impact on food borne diseases. The collected data was analyzed by using appropriate statistical tools like percentage analysis, chi-square test, t-test, ANOVA and rank test for arriving conclusions.

5. Results and discussions

The analysis was made and the results are given in the following table.

Table 1: Demographic profile of the respondents

Items	Counts	%
Age: Below 25	41	23.42
26 – 35	45	25.72
36 – 45	37	21.15
Above 45	52	29.71
Education: Illiterates	21	12.0
Up to HSS	88	50.28
Graduates	11	6.28
Post Graduates	17	9.72
Diploma	38	21.72
Occupation:		
Government Employee	12	6.8
Private Employee	52	29.7
Business	19	10.85
Housewife	92	52.6
Income: Below Rs.10,000	23	13.12
Rs. 10,001 – Rs. 20,000	74	42.28
Rs.20,001 – Rs. 30,000	56	32.02
Rs. 30,001 – Rs. 40,000	13	7.44
Above 40,000	9	5.14
Family Size:		
Below two	46	26.28
Two to Four	36	20.57
Above Four	93	53.15
Family Type:		
Joint	83	47.43
Nuclear	92	52.57
House Type:		
Hut	85	48.57
Tiles	28	16.0
Terrace	62	35.43

The demographic characterized of the sample are analyzed and found that among the total respondents of 175, 29.71 percent of the respondents are under the age group of above 45 years. While 50.28 percent of the respondents are completed the up to higher secondary school. More than 52.6 percent of the mothers are house wives. About 42.28 percent of the respondents are monthly income falls under the category of Rs. 10,001 – Rs. 20,000. Most of the respondents fall under the size of the family above four as large as 53.15 percent. Majority of the respondents (52.57 percent) are live in nuclear family system. About 48.57 percent of the respondents are lived in hut house.

Table 2: Fuel used in the respondents

Fuel Used	No. of Respondents	Percentage
Gas	68	38.85
Kerosene	97	55.43
Electronic	6	3.43
Wood	4	2.29
Total	175	100

Table 2 reveals that the type of fuel used by the mothers. Majority of the mothers (55.43%) have been using kerosene as fuel for cooking. It is followed by gas as fuel (38.85%) for

cooking. Electronic stove is used for cooking by 3.43% of the mothers. Only a small per cent the mothers use wood as fuel in cooking (2.29%).

Table 3: Education of mothers and their locality

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	140.461 ^a	2	0.000*
Likelihood Ratio	143.247	2	0.000
Linear-by-Linear Association	139.982	1	0.000
N of Valid Cases	175		

^aSignificant at five percent level

As per this analysis, the 'P' value is less than 0.05 at five percent level of significance, null hypothesis is rejected. It is concluded that there is a significant association between education of mothers and their locality. Since the level of education among the mothers is associated with their locality, the null hypothesis have been framed and tested with the help of chi-square test.

Table 4: Food safety knowledge and practices of mothers

P	Income Level	N	\bar{X}	σ	P value
Food Handling Practices	Below Rs.5000	2 3	14.30	3.390	0.000*
	Rs.5001- Rs.10000	7 4	15.42	3.787	
	Rs. 10001 – Rs. 15000	5 6	16.15	2.722	
	Rs. 15000 – Rs. 20000	2 3	14.30	1.710	
	Above Rs.20000	9	8.21	1.208	
Hygienic practices in food preparation	Below Rs.5000	2 3	20.05	4.295	0.000*
	Rs.5001- Rs.10000	7 4	21.29	3.888	
	Rs. 10001 – Rs. 15000	5 6	21.69	3.062	
	Rs. 15000 – Rs. 20000	2 3	19.21	2.182	
	Above Rs.20000	9	8.19	1.083	
Food safety awareness	Below Rs.5000	2 3	9.79	1.493	0.000*
	Rs.5001- Rs.10000	7 4	9.48	1.297	
	Rs. 10001 – Rs. 15000	5 6	9.72	1.027	
	Rs. 15000 – Rs. 20000	2 3	9.79	1.027	
	Above Rs.20000	9	9.12	1.126	
Food borne diseases and food safety	Below Rs.5000	2 3	18.97	3.836	0.000*
	Rs.5001- Rs.10000	7 4	19.35	3.846	
	Rs. 10001 – Rs. 15000	5 6	21.06	3.715	
	Rs. 15000 – Rs. 20000	2 3	20.12	2.189	
	Above Rs.20000	9	17.36	2.923	

^aSignificant at 5% level

Table 4 shows four variables of food safety knowledge, practices and safety and their relationship with the level of income of mothers. The P value is less than 0.05 at 5% significant level for all the four variables. From the rejection of null hypotheses, it is concluded that food safety knowledge and practices differ with changes in the level of income.

Table 5: Food handling practices and food borne diseases

Reasons	Mean of Rank
Purchasing the food materials	2.51
Practicing bad personal hygiene	2.30
Cooking food at improper temperature	2.55
Unsafe drinking water	2.65

Table 5 shows the mean rank of different food handling practices which leads to food borne diseases. Practicing bad personal hygiene (mean rank 2.30) takes top place which is the main cause for food borne diseases. The next cause for the food borne diseases is purchasing food materials from outside/shop (mean rank 2.51). The next two reasons leading to food borne diseases are cooking food at improper temperature (mean rank 2.55) and unsafe drinking water (mean rank 2.65). They take the third and the fourth ranks respectively. This analysis shows practicing bad personal hygiene has high risk leading to food borne diseases, followed by purchasing of food materials at shop.

Table 6: Food handling practices and knowledge of mothers

Group Statistics					
	Locality	\bar{X}	σ	t value	P value
Food Handling Practices	Urban	14.98	3.432	2.799	0.005*
	Rural	14.61	3.568		
Hygienic Practices in Food Preparation	Urban	20.92	3.838	4.466	0.000*
	Rural	20.21	4.360		
Food Safety Awareness	Urban	9.73	1.300	0.940	0.347*
	Rural	9.68	1.501		
Food Borne Diseases and Food Safety	Urban	19.22	4.027	0.853	0.394*
	Rural	19.34	3.726		

*Significant at 5% level

As per the result, since the mean score of the four practices are higher than the rural respondents, the urban respondents are understood to have a higher level of awareness of food handling practices, hygienic practices in food preparation, food safety awareness and food borne diseases and food safety. As per the analysis in this table, the first two variables' hypotheses are rejected as the significant value is less than 0.05. This shows that there is a significant difference among food handling practices and hygienic practices in food preparation in urban and rural area. In contrast, for the last two variables, the null hypotheses is accepted as the P value is higher than 0.05 at 5% significant level. Therefore, food safety awareness and food borne diseases food safety are not different between urban and rural areas.

6. Suggestions

1. As per this study, the middle and high income groups of urban mothers have low participation in food handling discussion. Special concentration should be provided to these categories to create awareness about food safety knowledge and practices.
2. In rural area, mothers use well water which is not a hygienic and safe practice. Only a few mothers in rural and urban areas use mineral water. Awareness should be created among mothers in rural area about the consumption of safe cooking and drinking water and government should take steps to supply safe water to rural areas. Mothers in urban area have high awareness about food borne illness caused by poor infrastructure facilities compared to mothers in rural area. Government should take steps to provide the

adequate safe and hygienic kitchen infrastructure facilities for the safe keeping of food.

3. As per this study, rural mothers have less awareness about the safe keeping of food than urban mothers. Efforts should be taken through television and other media to create awareness about safe keeping of food and safe handling practices to rural mothers. Both urban and rural mothers feel that the food is not safe when it is with the shopkeeper. The safety of the food is based on the place where it is kept. The shopkeeper should be advised to maintain hygiene in keeping the food.
4. 39% of the mothers do not lodge any complaint against food adulteration. They accept and live with adulterated commodities and traders. This trend is not good for a healthy society. All mothers should be motivated to lodge complaints against the adulterated food materials supplied by the unscrupulous traders. Majority of the mothers lodge complaints against the shop keepers. The government and consumer organizations should create awareness in lodging complaints in the consumer court to get proper remedy.

7. Conclusion

As per this study, the knowledge and practice of food safety are based on the rural and urban background of mothers. The passive indifference is high among the mothers to lodge complaints about adulterated food. They prefer to lodge complaints only to the shop keepers and not to the government regulatory measures which are the strong force to control food adulteration in India. The most important issue

relating to unsafe food and unsafe food handling practices is lack of refrigerator facilities, incorrect temperature maintenance in refrigeration, improper knowledge about harmful and helpful bacteria, occupation and low purchasing power, no proper kitchen counter, kitchen equipments, kitchen facilities, and kitchen infrastructure facilities. Great majority of the mothers do not have adequate knowledge in changing of dishcloths and avoiding dishcloth bacteria. There is some need for food safety

awareness programmes regarding safe food handling practices, food safety activities and food borne diseases. The key food handling practices are right operation of refrigerator, prevention of cross contamination and checking of dishcloths based on the food handling knowledge. The independent variables of food borne diseases and food safety depend on food handling practices, hygienic practices in food preparation and food safety awareness.

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