

## A Descriptive Study to Assess the Level of Knowledge Regarding Food Hygiene Among the Mothers of Nursing Students of Manikaka Topawala Institute of Nursing, Charusat, Changa

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### How to cite this article:

Divya Jain Pachori, Khushbu Malek, Anjali Ganvit, et al. A Descriptive Study to Assess the Level of Knowledge Regarding Food Hygiene Among the Mothers of Nursing Students of Manikaka Topawala Institute of Nursing, Charusat, Changa. Journal of Emergency and Trauma Nursing. 2020;1(1):57-64.

### Abstract

Good food hygiene is an important practice that we need to observe to ensure our food is safe for consumption, without this healthy practice, harmful germs that cause food poisoning can spread very easily during food preparation process, it is their for our full responsibility to keep the food that we and our loved ones it very clean and safe during and after preparation on a daily basis. The increasing number of food poisoning outbreak sand food-related scares has led to calls for better hygiene and quality practices. Food poisoning outbreaks are due to the inadequate time and temperature control of food. Poor sanitary practices in food storage, handling, and preparation can create an environment which bacteria such as campylobacters, salmonella, and other infectious agents are more easily transmitted. The spread of diseases through food is still a common problem which results 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. This article explores the evidence base of knowledge regarding the food hygiene among the mothers of nursing students. The result of the study shows that the majority of nursing student's mothers 69 (69%) had adequate knowledge, 21 (21%) had

excellent knowledge and 10 (10%) had inadequate knowledge regarding food hygiene. The result of structured knowledge questionnaire will classify nursing student's mother in good, average, poor knowledge categories. Mothers of nursing students having adequate knowledge would continue with health promotive behaviour whereas the mothers of nursing students having inadequate knowledge have to improve their health related knowledge.

**Keywords:** Assess; Level of Knowledge; Food Hygiene; Mothers; Nursing Students.

### Introduction

"An ounce of prevention is worth a pound of cure"  
-Anonymous

Food hygiene is a broad term used to describe the prevention and preparation of food in a manner that ensures the food is safe for human consumption.<sup>1</sup> The process to kitchen safety includes proper storage of food items prior to use, maintaining a clean environment when preparing the food and making sure that all serving dishes are clean and free of bacteria that could lead to some type of contamination.<sup>2</sup> Contaminated

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**Received on** 27.01.2020, **Accepted on** 02.03.2020

food is responsible for much diarrheal disease in young children, yet the education of mothers and caregivers about the preparation of food under hygienic conditions tends to be neglected. Prevent contaminating food with pathogens spreading from people.<sup>3</sup> Mothers play a major role in ensuring food safety throughout the chain of producing, processing, storage and preparation. Mishandling and disregard for hygiene measures on their part may result in food contamination and its attendant consequences.<sup>4</sup>

The increasing number of food poisoning outbreak and food-related scares has led to calls for better hygiene and quality practices. Food poisoning outbreaks are due to the inadequate time and temperature control of food.<sup>4</sup> Poor sanitary practices in food storage, handling, and preparation can create an environment which bacteria such as campylobacters, salmonella, and other infectious agents are more easily transmitted.<sup>5</sup> Contaminated food is responsible for much diarrheal disease in young children, yet the education of mothers and caregivers about the preparation of food under hygienic conditions tends to be neglected.<sup>6</sup> The World Health Organization Golden Rules for Safe Food Preparation need to be observed. Food should be thoroughly cooked and fed to infants once it is cool enough; food should not be stored where there are no facilities for storage below 10 degrees Celsius

or for keeping food at or above 60 degrees Celsius.<sup>7</sup> Mothers should be advised about food safety within the framework of educational programs.<sup>8</sup>

## Materials and Methods

The research approach adopted for this study was quantitative research approach. The research design is Descriptive. The sampling technique used in present study is Non Probability Purposive Sampling technique. The sample size of the present study comprises of 100 mothers of students from Manikaka Topawala Institute of Nursing, Charusat, Changa. The final tool consist of three sections.

*Section 1:* Information on socio-demographic variables of respondents contains 7 questions.

*Section 2:* Information on knowledge regarding food hygiene, which contains 20 questions.

A score of '1' was given to all correct answers while a score '0' was given to all incorrect answers.

## Result

*Section 1:* Findings Related to socio demographic variables (Table 1 and Figs 1-7).

**Table 1:** Socio demographic variables

Socio Demographic variables	Category	Frequency	Percentage	Number (X)
<b>Age</b>	40-45 years	64	64	100
	46-50 years	33	33	
	51-55 years	1	1	
	56 year and abover	2	2	
<b>Religion</b>	Hindu	91	91	100
	Muslim	3	3	
	Christian	6	6	
	Others	0	0	
<b>Education</b>	Primary	5	5	100
	Secondary	24	24	
	Higher Secondery	24	24	
	Graduation	47	47	
<b>Occupation</b>	Housewife	80	80	100
	Job	18	18	
	Business	1	1	
	Skill Worker	1	1	
<b>Source of Information</b>	Media	37	37	100
	Friends	7	7	
	Family members	48	48	
	Others	8	8	
<b>Area</b>	Rural	52	52	100
	Urban	48	48	

Socio Demographic variables	Category	Frequency	Percentage	Number (X)
Income	Less than 20000	13	13	100
	20000-30000	21	21	
	30000-40000	18	18	
	More than 40000	48	48	

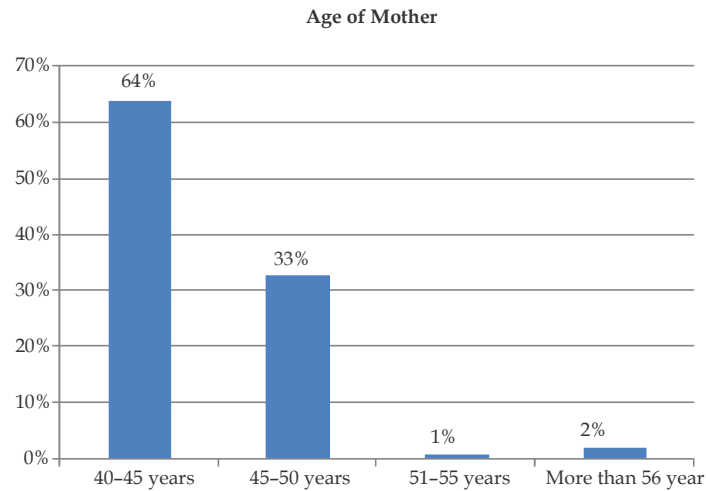


Fig. 1: Column graph showing the distribution of mothers according to age in years.

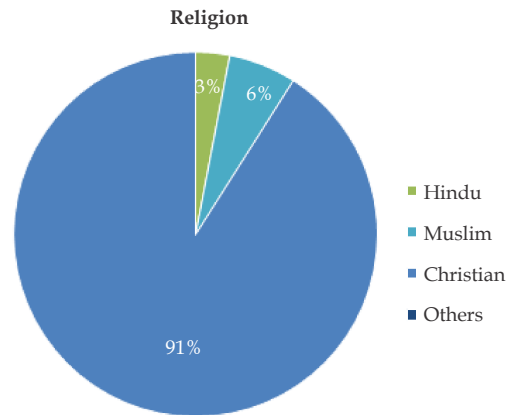


Fig. 2: Pie graph showing the distribution of mothers according to religion.

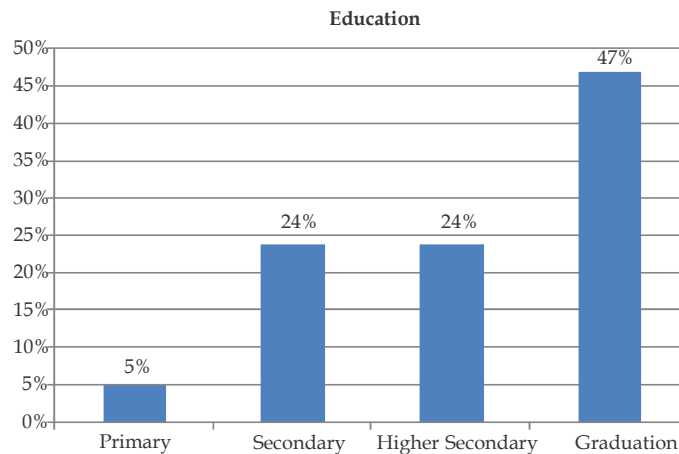


Fig. 3: Graph showing the distribution of mothers according to educational status.



Fig. 4: Pie graph showing the distribution of mothers according to occupation.

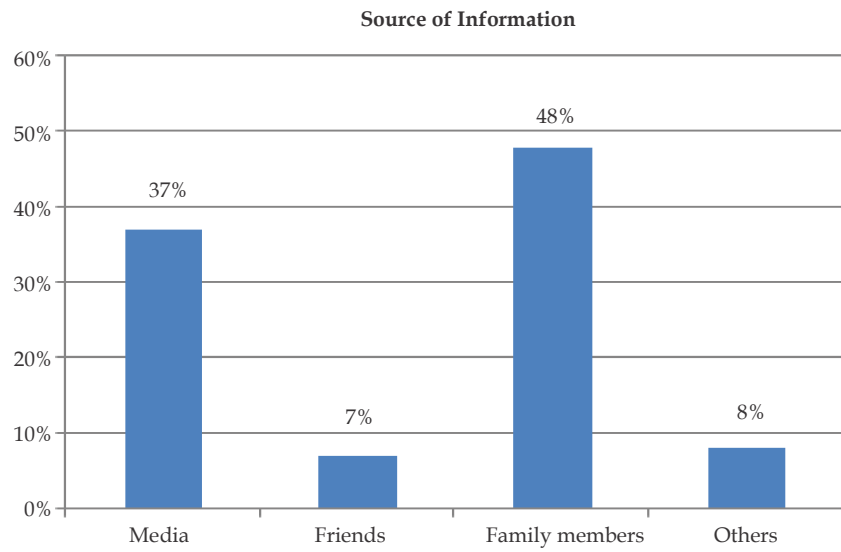


Fig. 5: Column graph showing the mothers of nursing students sources for health information.

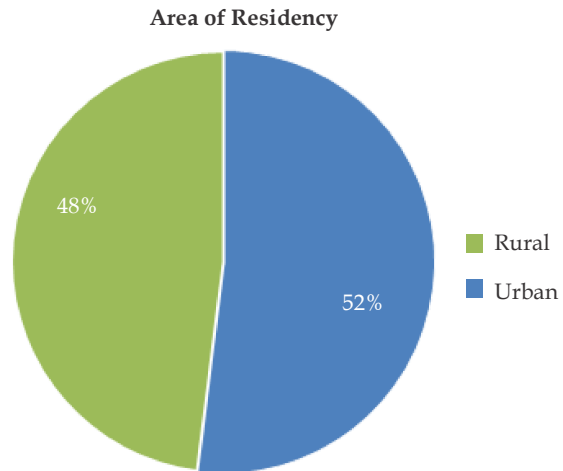


Fig. 6: Pie graph showing the distribution of area of mother residency.

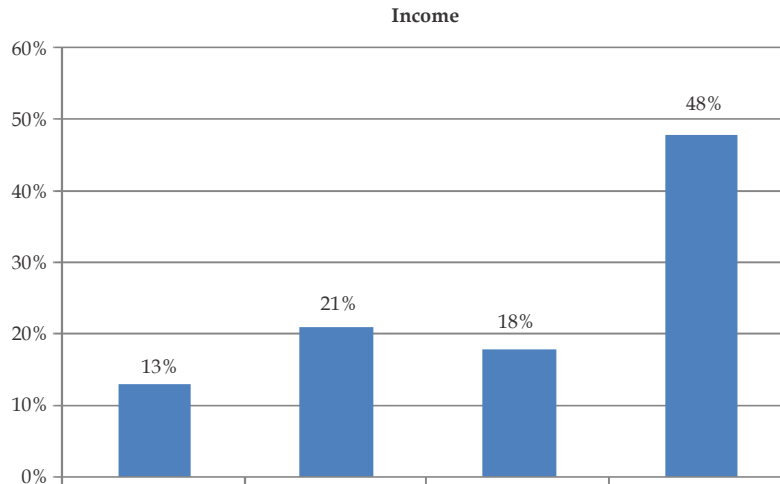


Fig. 7: Column graph showing the distribution of mothers according to monthly family income in rupees.

Section 2: Findings related to knowledge of mothers of nursing students regarding food hygiene.

Table 2 and Fig. 8 Depicts that majority of nursing students mothers 69 (69%) had adequate

knowledge, 21 (21%) had excellent knowledge and 10 (10%) had inadequate knowledge regarding food hygiene.

Table 2: Frequency and percentage distribution of knowledge score of mothers of nursing students regarding food hygiene.

Level of knowledge	Score range	Frequency	Percentage
Inadequate	1-7	10	10
Adequate	8-14	69	69
Excellent	15-29	21	21

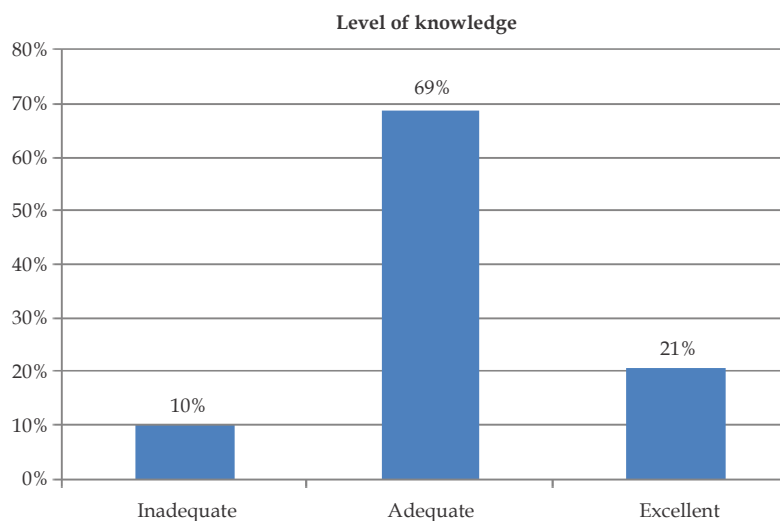


Fig. 8: Column graph showing the level of knowledge of mothers.

Section 3: Findings related to association between mothers knowledge with their selected demographic variables.

Finding revealed that the knowledge of mothers is associated with religion and area of residency at  $p < 0.05$  and CI 95%. So H1 is accepted (Table 3).

**Table 3:** Association between mothers knowledge with their selected demographic variables.

Socio Demographic variables	Category	Frequency	Percentage	Degree of Freedom	Table Value	Chi-square Value	Level of significance
<b>Age</b>	40-45 years	64	64				
	46-50 years	33	33				
	51-55 years	1	1	2	5.99	2.393	NS
	56 year and abover	2	2				
<b>Religion</b>	Hindu	91	91				
	Muslim	3	3	2	5.99	14.76	S
	Christian	6	6				
	Others	0	0				
<b>Education</b>	Primary	5	5				
	Secondary	24	24	2	5.99	0.399	NS
	Higher Seconderly	24	24				
	Graduation	47	47				
Occupation	Housewife	80	80%				
	Job	18	18%	2	5.99	3.313	
	Business	1	1%				
	Skill Worker	1	1%				
Source of Information	Media	37	37%				
	Friends	7	7%	2	5.99	2.086	
	Family members	48	48%				
	Others	8	8%				
Area	Rural	52	52%	2	5.99	6.793	
	Urban	48	48%				
Income	Less than 20000	13	13%				
	20000-30000	21	21%	2	5.99	1.236	
	30000-40000	18	18%				
	More than 40000	48	48%				

## Discussion

The present study focus on assessment of knowledge regarding food hygiene among the mothers of nursing students of Manikaka Topawala Institute of Nursing, Charusat, Changa. The finding of study are discussed under the following heading:

- Findings related to socio-demographic variables.
- Findings related to knowledge score of mothers of nursing student's regarding food hygiene.
- Findings related to on association knowledge score, with selected socio-demographic variables.
- Completed secondary, higher secondary and diploma/graduation are 24 (24%), 24 (24%), 47 (47%) respectively.

In terms of education, more than one-third (39.3%) of the food handlers had primary school

education. In this study out of 417 food handlers, majority 342 (82%) had good food safety knowledge (mean score  $\geq 6$ ), in the similar study conducted by Terefe Derso c corresponding author Amare Tariku Fekadu Ambaw Marew Alemenhew Gashaw Andargie Biks and Ansha Nega, revealed that 252 (67.6%) mothers were getting the information from mass media about food hygiene.

In the terms of monthly income, the household monthly income of most (216 of 350, 62%) of households was less than US \$100 (8,000 Taka), out of 350. This finding corresponds with the study conducted by Fosiul A. Nizame, Leanne Unicomb, Tina Sanghvi, Sumitro Roy, Md. Nuruzzaman, Probir K. Ghosh, Peter J. Winch, and Stephen P. Luby, where it was noted that out of total 350 respondent only 167 were found respondent had more than a primary education were as remaining above primary education.

Findings related to knowledge score of mothers of nursing student's regarding food hygiene.

In the present study, findings related to knowledge scores showed that majority of nursing students mothers 69 (69%) had adequate knowledge, 21 (21%) had excellent knowledge and 10 (10%) had inadequate knowledge regarding food hygiene. Mohamed fawzi, mona E.shama did study on knowledge of food safety in Alex andria university in 2009. The result showed that the highest percentage of cases was 46.8% while the lowest was 23%.<sup>16</sup>

Findings related to on association knowledge score, with selected socio-demographic variables.

Analysis was done for identifying association between knowledge and selected demographic variables by computing Chi-square test.

The study findings showed that there is significant association between religion, area of residence with knowledge score of food hygiene.

In contrast to present study, their was study conducted by Thilde Rheinländer, Mette Olsen, John Abubakar Bakang, Harriet Takyi, Flemming Konradsen, and Helle Samuelsen the data revealed that their was a positive association of Food safety instruction at home from the subjects' mothers was significantly associated with proper hand washing ( $P < 0.001$ , ); that is, subjects whose mothers stressed food safety at home had higher scores of hand-washing while subjects who received no instruction from their mothers had a poor average score.<sup>17</sup>

## Conclusion

Based on the analysis of the findings of the study, the following inferences were drawn.

Majority of the study samples have adequate knowledge regarding food hygiene.

### *Nursing Implications*

The findings of the study have implication for nursing practice, nursing education, nursing administration and nursing research.

### *Nursing Practice*

Information regarding food hygiene among mothers will be useful for prevention of food borne diseases.

As the nurse play a very vital role in health promotion the nurse can educate the mothers regarding food hygiene and their by prevent the diseases related to food contamination.

Educative teaching by nurse may motivate mothers to practice good techniques of food preparation.

The information collected through this study will be not only useful on mothers but also can be useful for family members, caterers and other food management staff.

### *Nursing Education*

This study highlights the knowledge level of mothers regarding food hygiene which will help nursing students to understand need of food hygiene in better way.

Reinforcement of known ideas and impartation of new ones, will allow the mothers to take good care of children regarding good practices of food hygiene. The tool and findings of the study will provides guide line to develop teaching and education programs for both mothers as well nursing students.

It is through nursing education only, that the nurses impart knowledge and provide information to nurses who in turn will share this information not only mothers and community but also providing education in hospital setting like to patients, relatives, hospital staff of food management regarding food hygiene.

To arrange one day seminar related to food hygiene for mothers as well as for students, their by increasing their knowledge towards food hygiene.

### *Nursing Administration*

Nurse administration can plan and organize programme and make use of information guideline regarding food hygiene.

The nurse administrator should take interest in disseminating the information through instructional materials such as pamphlets, poster, flip book, demonstrating hand washing that impart health information to mothers

### *Nursing Research*

The findings and results of this research will motive all nursing students researchers to take up similar study in different setting or take more experimental approach and this can serve as a guideline for further research.

The outcome of the study can be evaluated and the reports can be submitted to statutory bodies like Indian nursing council, TNAI etc. who can utilize this evidenced- based data for developing effective

teaching and educational materials for benefits of nursing students as well as nursing students mothers.

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