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Knowledge of homemakers of Dhemaji district of Assam regarding food hygiene

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Abstract

The health and well-being of an individual, families and nation are obtained by the good quality hygienic diet. It is important that whatever we eat it reflects our health status of our body. To increase our lifetime and improve our health, always we must eat clean and hygienic diet. Food hygiene also prevents stomach infections and body illnesses. Disease spread through food still remains a common and persistent problem resulting in morbidity and mortality rate. Food can become contaminated at any point during harvesting, processing, storage, distribution, transportation and preparation. Our present research aimed to study the knowledge of homemakers regarding food hygiene. The present study was conducted in Dhemaji district of Assam. For selection of the sample, a random sampling technique was used. For selection of respondents, three numbers of homemakers belonged to well to do family, possessing at least a refrigerator were selected from each village by using simple random sampling method. Thus, all total 60 numbers of homemaker from the selected villages were the respondents for the present study. Six numbers of homemakers possessing at least a refrigerator were selected from each municipality ward by using simple random sampling method. Thus, all total 60 numbers of homemakers representing all the wards were the respondents for the present study. Thus, altogether, 120 numbers of homemakers from both rural and urban area of Dhemaji district were selected as respondents for assessing food hygiene knowledge. Our study concluded that nearly 62 percent of the respondents had medium level of knowledge on food hygiene. A higher percentage of respondents that is nearly 23 percent respondents had high knowledge on food hygiene. In rural area, more than 47 percent respondent had medium level of knowledge on food hygiene in all the stages. Not a single respondent had high knowledge on food hygiene in any stage except storage and pre-preparation. In urban area, more than 47 percent respondent had medium level of knowledge on food hygiene in all the stages. Nearly 30 percent and above urban respondents had high knowledge on food hygiene only in two stages such as storage and pre-preparation. There was highly positive significant relationship between knowledge of respondents and their independent variable such as educational qualification and mass media exposure. There was negatively significant relationship between knowledge of the respondents with independent variable such as age and family size.

Keywords: Knowledge, food hygiene

Introduction

Food hygiene covers the proper handling of every variety of foodstuff and drink and all the utensils and apparatus used in their preparation, servings and consumption. Food hygiene is also the conditions and measures necessary to ensure the safety of food from production to consumption. Lack of adequate food hygiene can lead to food poisoning, food borne diseases and death of the consumer.

Good food hygiene is essential to ensure that the food we eat is safe. Harmful germs that cause food poisoning can spread very easily. Food hygiene also prevents stomach infections and body illnesses. Disease spread through food, still remains a common and persistent problem resulting in morbidity and mortality rate. Food poisoning can lead to serious illness, even death, especially children, young, old and ill people, who are particularly at risk from food poisoning.

Poor food handling and lack of proper hygiene practices in the domestic kitchen are thought to cause a significant number of food borne illnesses. Food borne diseases are responsible for the majority of mortality and morbidity worldwide with up to 30% of population in industrialized countries suffering from food borne illness annually. The consumption of food and water, contaminated with potential food borne pathogens such as bacteria, viruses, parasites and toxins accounts for more than 250 different food borne illnesses. (Hoffmann. S. *et al.*, 2017) ^[2] Generally, people all over the world get sick from they eat.

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This sick is called food borne disease and can be caused by dangerous microorganisms. Eating fruits and vegetables contaminated with dangerous microorganism is a source of food borne disease. Preventing microbial contamination is the best way to prevent disease and improve the health status of our family and community.

In our Indian society women play an important role in preparing food items for her family. In every time women cook, serves food for her family. Therefore, their knowledge on food hygiene is important. She must have adequate knowledge on proper food handling practices, so that she could apply her knowledge while making foods. If the homemakers or women do not have adequate knowledge on food hygiene in different stages such as purchasing, cleaning and storing, storage, pre-preparation, preparation, serving, washing used utensils and soiled dishes, she will not be able to provide hygienic or diseases free diet to her family.

Objective: This research aimed to study the existing knowledge of homemakers regarding food hygiene.

Materials and Methods

The study was conducted in the Dhemaji district of the State of Assam. For selecting the representative samples for the study, a simple random sampling method was used. There are two sub-divisions in Dhemaji district namely, Dhemaji and Jonai. Out of two sub-divisions, Dhemaji sub-division was selected randomly. The Dhemaji sub-division comprises of four rural development blocks, namely Dhemaji Development Block, Machkhowa Development Block, Bordoloni Development Block and Sissiborgaon Development Block. Dhemaji sub-division comprises of only one municipality area i.e. Dhemaji municipality area. All four blocks and Dhemaji municipality area of Dhemaji sub-division were considered for the present study. One gaon panchayat from each block was selected by using simple random sampling method. All ten municipality wards of Dhemaji municipality area were considered for the present study. From the selected gaon panchayat, five villages from each gaon panchayat were selected by using simple random sampling method. Thus, all total 20 numbers of villages were selected for the present study. For selection of respondents, three numbers of homemakers belonged to well to do family, possessing at least a refrigerator were selected from each village by using simple random sampling method. Thus, all total 60 numbers of homemaker from the selected villages were the respondents for the present study. Six numbers of homemakers possessing

at least a refrigerator were selected from each municipality ward by using simple random sampling method. Thus, all total 60 numbers of homemakers representing all the wards were the respondents for the present study. Thus, altogether, 120 numbers of homemakers from both rural and urban area of Dhemaji district were selected as respondents for assessing food hygiene knowledge.

The following statistical measures used for studying the background information of respondents and for interpreting the data-frequency, percentage, Standard Deviation, Co-relation co-efficient and t test.

Result and Discussion

Overall food hygiene knowledge level of the respondents

The distribution of respondents according to their overall food hygiene knowledge level is shown in the table 1

Table 1: Distribution of respondents according to their overall knowledge level on food hygiene

Knowledge level	Rural (N=60)		Urban (N=60)		Total (N=120)	
	F	%	F	%	F	%
Low	11	18.33	8	13.33	19	15.83
Medium	37	61.67	37	61.67	74	61.67
High	12	20.00	15	25.00	27	22.50

It is revealed from the Table 1 that higher percentage of respondents from both the rural and urban area had medium level of knowledge on food hygiene. It might be due to modernization, development of technology etc., no difference of percentage was observed in rural as well as in respondents of urban area.

Table 1 also shows that 25 percent respondents of urban area had high knowledge on food hygiene which was more than rural area (20 percent). It might be due to the fact that less exposure of the respondents to mass media and also having less percentage of respondents belonging to high educational level from rural area could not acquire much knowledge on food hygiene compared to urban respondents. The percentage of respondents belonging to high level of knowledge on food hygiene was less (compared to medium level) in both rural and urban areas, might be due to respondents did not have exposure to training on food hygiene. This findings has conformity with the findings of Zain *et al.* (2002) [5] that food handlers had low level of education and were not trained which may affect food hygiene knowledge.

Table 2: Distribution of rural respondents according to their knowledge level on food hygiene in different stages N=60

Knowledge level	Purchasing		Cleaning and sorting		Storage		Pre-preparation		Preparation		Serving		Washing used utensils and soiled dishes	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%
Low	7	11.67	17	28.33	11	18.33	17	28.33	19	31.67	24	40.00	20	33.33
Medium	53	88.33	43	71.66	40	66.66	28	46.67	41	68.33	36	60.00	40	66.67
High	0	0	0	0	9	15.00	15	25.00	0	0	0	0	0	0

Table 3: Distribution of urban respondents according to their knowledge level on food hygiene in different stages N=60

Knowledge level	Purchasing		Cleaning and sorting		Storage		Pre-preparation		Preparation		Serving		Washing used utensils and soiled dishes	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%
Low	0	0	10	16.66	15	25.00	10	16.67	12	20.00	10	16.66	16	26.67
Medium	60	100	50	83.33	28	46.66	29	48.33	48	80.00	50	83.33	44	73.33
High	0	0	0	0	17	28.33	21	35.00	0	0	0	0	0	0

Knowledge level of rural respondents on food hygiene in different stages

The distribution of rural respondents according to their knowledge level on food hygiene in different stages namely purchasing of food items, cleaning and sorting, storage, pre-preparation, preparation, serving, washing used utensils and soiled dishes is shown in the Table 2.

It is revealed from the Table 2 that more than 47 percent rural respondents had medium level of knowledge on food hygiene in all the stages that is purchasing of food items, cleaning and sorting, storage, pre-preparation, preparation, serving, washing used utensils and soiled dishes.

It is observed in the Table 2 that not a single respondent had high level of food hygiene knowledge in all the stages except storage and pre-preparation. It might be due to the fact that respondents might have given more importance in storing the food items properly and collected more information to keep their kitchen clean, odor less and safe from insects, cockroaches etc. The respondents might have given more importance and gathered more information on pre-preparation of food so that they could finish pre-preparation activities ahead, which would help the respondents to finish the preparation easily. Now a day, food channels are more popular among both rural and urban women. Respondents might watch the programmes carefully from the pre-preparation to end. They might think that pre-preparation is also an important stage to be taken care to get the taste of the food item as well as its nutrient content.

Knowledge level of urban respondents on food hygiene in different stages

The distribution of respondents of urban area according to their knowledge level on food hygiene in different stages namely purchasing of food items, cleaning and sorting, storage, pre-preparation, preparation, serving, washing used utensils and soiled dishes is shown in the Table 3

It is revealed from the Table 3 that more than 47 percent respondents had medium level of knowledge in all stages that is purchasing of food items, cleaning and sorting, storage, pre-preparation, preparation, serving, washing used utensils and soiled dishes.

It is interesting to note in the Table 3 that nearly 30 percent and above (35 percent) urban respondents had high knowledge only on two stages such as storage and pre-preparation respectively. The percentage of respondents in high category was more in urban area than the rural area (Table 2). It might be due to more percentage of respondents having high educational qualification and more exposure to mass media in urban area. The urban respondents might have collected more information on storage facilities to keep their kitchen safe, clean and odor less. Due to different food channels, respondents might watch the food preparation programme from pre-preparation to the end and they might think that pre-preparation is an important and pre-requisite aspect to be known for preparation of food items. The urban respondents might think that knowledge on pre-preparation would help them to minimize their time during preparation.

Relationship of food hygiene knowledge of the respondents with selected independent variables

The relationships of food hygiene knowledge of the respondents with the selected independent variables are presented in the Table 4

Table 4: Relationship of food hygiene knowledge of respondents with selected independent variables

Variables	Correlation Co-efficient ('r')	't' value
Age	-0.312**	3.75
Family type	-0.143	1.60
Family size	-0.259**	3.12
Educational qualification	0.574**	8.20
Organizational membership	-0.038	0.42
Mass media exposure	0.040**	0.44
Training programme attended	0.068	0.76

** Significant at the 0.01 level

It is revealed from the Table 4 that there was highly positive significant relationship of food hygiene knowledge with independent variables such as educational qualification and mass media exposure. It means that the level of food hygiene knowledge of the respondents increased with the increase in the educational qualification, frequency of more exposure to mass media contact. It might be due to the fact that people having high educational qualification might get enough scope to collect information on food hygiene easily. This finding had conformity with the study conducted by Turnbull-Fortune *et al.* (2014) [3] where they revealed that educational levels influenced food safety knowledge of consumers. Moreover, more exposure to mass media might help the respondents to increase their knowledge on food hygiene.

The Table 4 also shows that the age of the respondents, family size had negative significant correlation with the food hygiene knowledge. It implies that the food hygiene knowledge of the respondents decreased along with increase in their respondent's age and family size. Due to increase of age of the respondents, their knowledge level might decrease day by day and memory capacity might also low due to age for which respondents could not be able to gather more information on food hygiene. Due to more numbers in the family, respondents might be busy with their family members and they might not get enough time to collect information on food hygiene. Therefore, the null hypothesis that there is no significant relationship of food hygiene knowledge of respondents with selected independent variables such as age of the respondents, family size, educational qualification and mass media exposure was rejected.

Conclusion

The findings shows that homemakers of Dhemaji sub division including both rural and urban area had medium level of food hygiene knowledge in all the stages as a whole and also had medium level of food hygiene knowledge separately in each stage such as purchasing of food items, cleaning and sorting, storage, pre-preparation, preparation, serving, washing used utensils and soiled dishes. Little percentage of respondents under study had high knowledge on food hygiene only in two stages such as storage and pre-preparation of food hygiene. Hence, emphasis should be given to increase respondents' knowledge on food hygiene in all the stages to reduce the occurrence of food borne disease, which is a common and persistent problem. Therefore, an intervention programme on food hygiene with the help of different method like discussion, demonstration etc. and media such as radio, T.V., training, advertisement etc. is needed for the homemakers in order to equip them with right information for adopting correct practices on food hygiene to help the society as a whole to get rid of different food borne diseases.

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