International Journal of Trend in Scientific Research and Development (IJTSRD)
Volume 9 Issue 2, Mar-Apr 2025 Available Online: www.ijtsrd.com e-ISSN: 2456 – 6470

Food Hygiene Counseling Impact on Knowledge, Attitude and Practices of the Mothers Towards Their Preschool Children

Dr. Deshmukh Kanchan Samish

Associate Professor, Women's College of Home Science & B.C.A, Loni, Maharashtra, India

ABSTRACT

Mothers are considered the food handlers in the home; their role is to ensure food safety and hygiene for their infants and children. The hygienic practices dramatically reduce routine exposures to pathogenic microorganisms. The aim of this study was to evaluate the food hygiene counseling impact on knowledge, attitude and practices of the mothers towards their preschool children. Mothers and their preschool children aged 3-5 years belongs to Pravaranagar region (40 Villages) of Ahilyanagar District, Maharashtra State, India were selected for the study. A pre-test–post-test control group design was chosen. The experimental group received food hygiene education through counselling by the researcher, while the control group did not. The Food hygiene knowledge, attitude and practices level of the mothers in the experimental group and control group was assessed after the intervention programme. KAP method was used to measure the impact of counselling. The data showed that in the present study maximum number of the poor and fair scorer's mothers had upgraded food hygiene knowledge, attitude and practices score to the upper levels i.e. fair and good levels. This shift was appreciable observed in the experimental group after imparting food hygiene education counseling (p-value < 0.05). While in the control group a significant improvement was not observed. It is overall concluded as from the Chi-square test, there is an improvement in the experimental groups due to the impact of food hygiene counselling intervention programme. Continuous educational program for mothers regarding food hygiene and food poisoning through trained extension worker should be provided.

How to cite this paper: Dr. Deshmukh Kanchan Samish "Food Hygiene Counseling Impact on Knowledge, Attitude and Practices of the Mothers Towards Their Preschool Children" Published in International Journal of Trend in Scientific Research and Development (ijtsrd), ISSN: 2456-6470, Volume-9 | Issue-2, April 2025, pp.933-937, URL: www.ijtsrd.com/papers/ijtsrd78577.pdf

IJTSRD78577

KEYWORDS: *Food hygiene, Knowledge, Attitude, Practices, Mother, Preschool children*

1. INTRODUCTION

Hygiene is an essential part of healthy living. Not just selecting the right food choices but also cooking and consuming them in a hygienic way is equally important in preventing the infectious diseases. One does not have to spend a fortune for healthy hygienic cooking practices (Food pyramid India).

Food poisoning is a common childhood illness along with other types of gastrointestinal diseases. Most- if not all- children will develop food poisoning at some point in their childhood. Children are considered at high risk for food poisoning which can be attributed to their underdeveloped immune systems. Their systems are not as effective at fighting off bacteria and viruses compared to an adult. Once children become infected, they can have a hard time getting well (Salerno and Arnoff, 2007).

Almost all forms of food poisoning among children produce nausea, vomiting, abdominal cramps and diarrhea. The bacterial causes of food poisoning tend to cause these symptoms as well as fever and headache. Symptoms can start within hours to days after eating the contaminated food and last for (1to7) days. Good environmental and personal hygiene, proper food preparation, handling and storage are some basic preventive measures that can be taken to prevent food poisoning (Dempsey, 2007). International studies have shown that a significant proportion of food borne diseases arise from practices in the kitchen of a home (Scott, 1996; Bryan, 1988; Redmond and Griffith, 2004). Several studies assessing different kinds of consumer groups identified food prepared in the family home as a major source of food poisoning (Jay et al, 1999;

Anderson et al, 2004).Infants and young children are affected mostly, due in part to their immature immune systems (Scheule, 2004).

In the developing world, a substantial number of more than100 million cases of acute diarrhoea in children younger than 5 year old reported yearly resulted from contamination of food. Many children also fall ill on account of hepatitis A, enteric fever, intestinal worms and other infections caused by unhygienic preparation of foods in households and unsafe drinking water**.** Socio cultural constraints, such as social infrastructure, ignorance, incorrect beliefs and practices, taboos, poverty, insufficient food, lack of safe water and sanitation, and shortage of fuel and time may aggravate the situation (Motarjemi et al, 1993).

A significant proportion of food borne illnesses arise from practices in the home kitchen. Information are needed about how food becomes unsafe at home and about what changes in environmental conditions, beliefs and behavior must be accomplished in order to reduce food hazards (Rao et al, 2007).In less developed countries, many people are poisoned because of the consumption of foods produced under unhygienic conditions; lack of hygiene education, contaminated waters, inappropriate food storage conditions, lack of cleaning and pesticide residue (Sanlier, 2009).

Three important factors play major role in the incidence of food poisoning especially with regard to food handlers which are knowledge, attitude and practices (Angelillo et al, 2001 and Patil et al, 2005).

Food contamination remains a significant and recurring challenge to global public health, leading to morbidity and mortality. The 2010 estimates from the Foodborne Epidemiology Reference Group (FERG) of the World Health Organization (WHO) on the global impact of foodborne diseases (FBDs) highlight millions of deaths and disability-adjusted life years (DALYs) linked to these conditions (Havelaar, A.H. et al,2010). FERG suggests that the global burden of illnesses due to food safety issues is comparable to that of malaria and tuberculosis. However, it is argued that the true impact of foodborne diseases may be even more significant than FERG estimates suggest (Pires, S.M.; Devleesschauwer, B. 2021). To address this concern, a process to update these estimates was announced in 2021, with an expected completion date in 2025 (WHO 2021).

The burden of foodborne diseases (FBDs) is particularly severe in regions such as Asia and Africa and among vulnerable demographics, especially children (Havelaar, A.H. et al,2010). In these areas, the tropical and subtropical climates create favorable conditions for the proliferation of pathogenic microorganisms, including bacteria, viruses, and parasites (BVPs) (Oduoye, M.O.; et al,2024, Kirk, M.D.; et al,2010,).

Mothers are considered the food handlers in the home; their role is to ensure food safety and hygiene for their infants and children. Mothers need to take many precautions to minimize pathogenic contamination of home-prepared foods, because they are the final line of defense against food borne illnesses (Sudershan et al, 2008). Considering above background, this study was conducted to find out the food hygiene counseling impact on knowledge, attitude and practices of the mothers towards their preschool children

1.1. Objectives of the Study

- To counsel and educate mothers towards food hygiene of the preschool children.
- To evaluate the food hygiene counseling impact on knowledge, attitude and practices of the mothers towards their preschool children.

2. Material and Methods

2.1. Sample Selection

The study was carried out in pravaranagar region, which are situated in Rahata, Shrirampur, Rahuri and Sangamner Talukas of Ahilyanagar District of Maharashtra State. The List and names of the preschool children (3-5 years of age) and their mothers had been collected from the various preschools and anganwadi schools of selected villages. 300 mothers were selected as sample for the intervention programme study. Out of these 300 mothers 153 mothers treated as the experimental group for intervention and the other 147 as the control group. The educational level of the mother was considered as the matching variable for both the experimental and the control groups.

2.2. Method of data collection

A pre-test–post-test control group design was chosen. The data was collected before and after the study in both the control and the experimental group. A structured education intervention protocol was developed and used for intervention. The experimental group received food hygiene education through counselling by the researcher, while the control group did not. After the intervention, the final data collection was undertaken in both the experimental and control groups after the 3 months gap period from the completion of food hygiene counselling intervention programme. In the present study KAP method was used to measure the impact of counselling. The KAP of mother's toward food hygiene questionnaire items were rated and scored.

The total score obtained for KAP on food hygiene was classified into 3 categories: poor, fair and good.

3. Result and Discussion

3.1. Distribution of the Mothers on the basis of educational level

Table 1: Distribution of the Mothers for counselling intervention programme on the basis of educational level

Mothers educational level	Selected Mothers (n=300)		Total (n=300)
	EG(n=153)	CG (n=147)	
Illiterate (unable to read and write)	3	2	5
Primary School	24	23	47
Secondary School	68	68	136
Higher Secondary School	29	28	57
Under graduate (UG)	20	16	36
Graduate /Post graduate(PG)	9	10	19
Total	**153**	**147**	**300**

EG=Experimental Group **CG=**Control Group **n=**number

Education is one of the most personal variables likely to have a positive impact on acquisition of knowledge by the respondents and development of attitude and practices by them. Hence in the present study sampled mothers were distributed on the basis of educational level for the food hygiene counselling intervention programme. These mothers were further classified into two groups in such a way that they could be matched. Out of these 300 mothers, 153 mothers were randomly selected and treated as the experimental group for intervention and the other 147 as the control group.

Educational level wise distribution of the selected mothers in the sub sample shown in the **table 1** indicates that most of 136 mothers had educational status up to secondary level. Followed by 57 had up to higher secondary school level, 47 up to primary school level, 36 up to under graduate (UG) level, 19 up to graduate /post graduate (PG) level. Only 5 mothers were illiterate in the counselling intervention programme.

3.2. Impact of Food Hygiene Counselling

Table 2: Impact of Counselling Intervention on Food Hygiene Knowledge of the Mothers

Food Hygiene Knowledge Score Level	EG (n=153)					CG (n=147)			
	Pre Test		Post Test		Chi-square (alternative)	Pre Test		Post Test	
	n	%	n	%		n	%	n	%
Good >19	22	15	93	61	68.263*(less)	25	17	24	16
Fair >10 to 19	100	65	50	33	31.398*(greater)	99	67	101	69
Poor < 10	31	20	10	6	11.266*(greater)	23	16	22	15
Total	153	100	153	100		147	100	147	100

Table 3: Impact of Counselling on Attitude towards Food Hygiene of the Mothers

Attitude towards Food Hygiene Score Level	EG (n=153)					CG (n=147)			
	Pre Test		Post Test		Chi-square (alternative)	Pre Test		Post Test	
	n	%	n	%		n	%	n	%
Good>26	22	15	91	59	64.879* (less)	25	17	25	17
Fair >13 to 26	100	65	52	34	28.877 (greater)	98	67	99	67
Poor<13	31	20	10	7	11.266*(greater)	24	16	23	16
Total	153	100	153	100		147	100	147	100

Table 4: Impact of Counselling on Food Hygiene Practices of the Mothers

Food Hygiene Practices Score Level	EG (n=153)					CG (n=147)			
	Pre Test		Post Test		Chi-square (alternative)	Pre Test		Post Test	
	n	%	n	%		n	%	n	%
Good>32	22	14	105	69	90.509* (less)	25	17	25	17
Fair >16 to 32	101	66	38	25	50.673*(greater)	99	67	99	67
Poor<16	30	20	10	6	10.382*(greater)	23	16	23	16
Total	153	100	153	100		147	100	147	100

EG=Experimental Group CG= Control Group

*** Significant at 5% level (p-value < 0.05)**

Mothers are considered the food handlers in the home; their role is to ensure food safety and hygiene for their infants and children. Food hygiene counselling about precautions to minimize pathogenic contamination of home-prepared foods during handling and preparing food for eating was imparted to the mothers of experimental group.

The Food hygiene knowledge, attitude and practices level of the mothers in the experimental group and control group was assessed after the intervention programme. Observed data related to food hygiene knowledge, attitude and practices level of the mothers has been presented in **table 2, 3** and **4**. The data showed that in the present study maximum number of the poor and fair scorer's mothers had upgraded food hygiene knowledge, attitude and practices score to the upper levels i.e. fair and good levels. This shift was appreciable observed in the experimental group after imparting food hygiene education counselling. While in the control group a significant improvement was not observed.

The overall performance was appreciable in the post assessment of the experimental group. The increase in food hygiene knowledge, attitude and practices score level of the mothers was good and statistically significant at 5 percent level (p-value < 0.05). Thus, it is overall concluded as from the Chi-square test, there is an improvement in the experimental groups due to the impact of food hygiene counselling intervention programme.

4. Conclusion

The food hygiene education counselling program had a positive effect to upgrade mothers' knowledge, attitude and improve their hygienic practices.

5. Recommendations

Continuous educational program for mothers regarding food hygiene and food poisoning through trained extension worker should be provided.

6. References

[1] Anderson JB, Shuster TA, Hansen KE, Levy AS, Volk, A(2004). A camera's view of consumer food handling behaviors. Journal of the American Dietetic Association 2004; 104(2):186–191.

[2] Angelillo, I., Foresta, M., Scozzafava, C., and Pavia, M (2001). Consumers and foodborne diseases: knowledge, attitudes and reported behavior in one region of Italy. International Journal of Food Microbiology, 2001; 64, 161–166.

[3] Bryan F(1988). Risks of practices, procedures and processes that lead to outbreak of food borne diseases. Journal of Food Protection 1988; 8:663–673.

[4] Dempsey, D (2007). Special considerations in pediatric patients, In: Olson K., Anderson I.B., Benowitz N.L., Blanc P.D., Clark R.F., Kearney T.E., Osterloh J.D. (eds), poisoning and drug overdose, 5th ed., McGraw-Hill, New York, London, San Francisco, California, 2007; 58-62.

[5] Foodpyramidindia Avail:- http://www.foodpyramidindia.org/foodhygiene.html

[6] Havelaar, A. H.; Kirk, M. D.; Torgerson, P. R.; Gibb, H. J.; Hald, T.; Lake, R. J.; (2010) World Health Organization Foodborne Disease Burden Epidemiology Reference Group. World Health Organization Global Estimates and Regional Comparisons of the Burden of Foodborne Disease in 2010. PLoS Med. 2015, 12, e1001923. [Google Scholar] [CrossRef] [PubMed]

[7] Jay LS, Comar D, Govenlock LD (1999). A national Australian food safety telephone survey. Journal of Food Protection 1999; 62:921–928.

[8] Kirk, M. D.; Pires, S. M.; Black, R. E.; Caipo, M.; Crump, J. A.; Devleesschauwer, B.; Döpfer, D.; Fazil, A.; Fischer-Walker, C.L.; Angulo, F. J. (2010) World Health Organization estimates of the global and regional disease burden of 22 foodborne bacterial, protozoal, and viral diseases, 2010: A data synthesis. PLoS Med. 2015, 12, e1001921. [Google Scholar]

[9] Motarjemi Y, Kaferstein F, Moy G, Quevedo F (1993). Contaminated weaning food: a major risk factor for diarrhoea and associated malnutrition. FactsInfant Feed 1993; 71:79-92.

[10] Oduoye, M. O.; Akilimali, A.; Karim, K. A.; Moradeyo, A. A.; Abdullahi, Z. Z.; Muzata, D.; Christopher, G. U.; Chipinga, J.; Simiyu, B. W.; Isiko, I. (2024) Diseases Transmitted to Humans through Foodborne Microbes in the Global South. In Food Safety and Quality in the Global South; Springer Nature: Singapore, 2024; pp. 561–597. [Google Scholar]

[11] Patil, S., Cates, S., and Morales, R (2005). Consumer food safety knowledge, practices, and demographic differences: findings from a meta-analysis. Journal of Food Protection, 2005; 68 (9), 1884–1894.

[12] Pires, S. M.; Devleesschauwer, B. (2021) Estimates of global disease burden associated with foodborne pathogens. In Foodborne Infections and Intoxications; Academic Press: Cambridge, MA, USA, 2021; pp. 3–17. [Google Scholar]

[13] Rao G., Sudershan R, Rao P., Rao M., and Polas K (2007). Food safety knowledge, attitudes and practices of mothers—Findings from focus group studies in South India, 2007; 49, (2): 441–449.

[14] Redmond EC, Griffith CJ (2004). Microbiological and observational analysis of cross contamination risks during domestic food preparation. British Food Journal 2004; 106:581–597.

[15] Salerno, D. A. and Arnoff S. C (2007). Nelson Textbook of Pediatric, Nonbacterial food poisoning, Kleigman R.M., Behrman R.E., Jenson H.B. and Santon B.F. (Eds), 18th ed., Elsevier, New York, 2007; 2918-2921.

[16] Sanlier N (2009). The knowledge and practices of food safety by young and adult consumers, Food Control, 2009; 20, (6): Pp. 538–54.

[17] Scheule B (2004). Food safety education: Health professionals 'knowledge and assessment of WIC client needs. Journal of the American Dietetic Association 2004; 104:799–803.

[18] Scott E (1996). Foodborne disease and other hygiene issues in the home. Journal of Applied Bacteriology 1996; 80: 5–9.

[19] Sudershan., R., Rao G., Rao, P., Rao, M., and Polasa, K(2008). Food safety related perceptions and practices of mothers – A case study in Hyderabad, India, Food Control, Elsevier Ltd. 2008; 19, 506–513.

[20] WHO.(2021) WHO Steps up Action to Improve Food Safety and Protect People from Disease. 7 June 2021. Available online: https://www.who.int/news/item/07-06-2021-who-steps-up-action-to-improve-food-safety-and-protect-people-from-disease (accessed on 22 January 2024).