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A STUDY TO ASSESS THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON PRE-TEST KNOWLEDGE AND PRACTICE REGARDING FOOD BORNE DISEASES AND FOOD HYGIENE AMONG THE MOTHERS OF UNDER FIVE CHILDREN IN SELECTED COMMUNITY AREAS OF KARNATAKA

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ABSTRACT
Foodborne illnesses are a widespread public health problem globally. In response to the increasing number of food-borne illnesses, Governments all over the world are intensifying their efforts to improve food safety. Although the global incidence of food-borne illnesses is difficult to estimate, it has been reported that in 2000 alone 2.1 million people died of diarrhoeal diseases. A great proportion of these cases can be attributed to contamination of food and drinking water. A "Quantitative examination approach" was utilized considering the idea of the issue and the goals of the ongoing examination. The review was directed in selected community areas of Karnataka. w. Tests for the current review were the understudies mothers of under five children who satisfied the incorporation rules. On probability examining procedure was utilized. Test size of the current review was 100 mothers of under five children in selected community areas.

Key Words: *Food borne diseases, hygiene, mother under five children, structured teaching programme.*

INTRODUCTION

Foodborne diseases can be both acute and chronic, and stem from three sources: biological, chemical, and physical. Bacteria, viruses, and parasites, are the main biological hazards causing acute foodborne diseases. Certain biological toxins can also be considered as causing acute effects, such as most seafood toxins, and these are discussed separately in another overview on chemical hazards. Acute can be defined as an incubation period between ingestion and an adverse effect of a determined time, usually from hours up to months, resulting from a single exposure. (Todd ECD, 2014)

Foodborne diseases are caused by contamination of food and occur at any stage of the food production, delivery and consumption chain. They can result from several forms of environmental contamination including pollution in water, soil or air, as well as unsafe food storage and processing.

Food-borne diseases represent a widespread and growing public health problem, both in developed and developing countries. Food safety is an important public health issue to prevent/control food-borne illnesses. In response to the increasing number of foodborne illnesses, governments all over the world are intensifying their efforts to improve food safety [Subba Rao G. M et al 2007].

According to the WHO [Henson S., Reardon T. 2005], contaminated food contributes to 1.5 billion cases of diarrhea in children each year, resulting in over three million premature deaths. However, these deaths and illnesses are shared by both developed and developing nations.

The mother's basic knowledge of diarrhea depends on various factors such as educational status, prior experience in managing the disease, and food hygiene. Diarrheal diseases remain an important cause of mortality and morbidity among children, particularly in low- and middle-income countries.

Food safety is defined as food that is free from all risks, whether long-term or acute that may make food deleterious to the health of the consumer.(WHO 2003)

Food-borne diseases represent a widespread and growing public health problem, both in developed and developing countries. However, this problem has more impact on health and economy in developing countries than in developed countries but reliable data is not available. (Raspor P. 2008)

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Food hygiene, in its widest sense, implies hygiene in the production, handling, distribution, and serving of all types of foods. The primary aim of food hygiene is to prevent food poisoning and other food-borne illnesses. Food hygiene is mainly categorized into milk hygiene, meat hygiene, egg hygiene, and hygiene of fruits and vegetables. Food sanitation rests directly upon the state of personal hygiene and habits of personnel working in the food establishment and the sanitation of the eating place. Lack of adequate food hygiene can lead to foodborne diseases and death of consumers. (K.Park,2007)

Children are the most valuable asset for any society. They are the builders of the future of any nation. So we call as “Today Children health – Tomorrow’s wealth. “Mothers' basic knowledge of diarrhea depends on various factors such as educational status, prior experience in managing the disease, and food hygiene. The mother must follow the basic principle for the preparation of safe food for infants and young children and diarrhea is directly related to the effect of food hygiene practice of the mother Prevention of infectious diarrhea is by improved sanitation, clean drinking water, and handwashing with soap. When children have diarrhea, it is recommended that they continue to eat healthy food and babies continue to be breastfed.

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Mothers' basic knowledge of diarrhea depends on various factors such as educational status, prior experience in managing the disease, and food hygiene. The mother must follow the basic principle for the preparation of safe food for infants and young children and diarrhea is directly related to the effect of food hygiene practice of the mother. (Ranjith PR 2019)

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REVIEW OF LITERATURE

Vidhubala Priskillal, M (2019) conducted a study *to Assess the Effectiveness of Structured Teaching Programmes on Knowledge regarding Food Borne Diseases and Food Hygiene among Mothers of Under Five Children in Selected Rural Areas.* RESULTS: The result of the present study shows that, after a structured teaching program, out of 60 study participants, none of the mothers had an inadequate level of knowledge score, 26.7% of the mothers had a moderate knowledge score and 73.3% of the mothers are having an adequate level of knowledge score. On average, in the post-test after a structured teaching program, the mothers of under-five children gained a 34.50% knowledge score than the pre-test score. Interestingly, the result revealed a statistically significant association between demographic variables such as age, mother’s education, monthly family income, number of under-five children, and knowledge of mothers at the $p<0.05$ significance level.

Dagne H, Raju RP, Andualem Z, Hagos T, Addis K.2019 conducted a study on Food Safety Practice and Its Associated Factors among Mothers in Debarq Town, Northwest Ethiopia: Community-Based Cross-Sectional Study. RESULT: About 210 (49.6%) of study participants had good food safety practices. Food safety practice of mothers was significantly associated with their educational status; secondary educational status adjusted odds ratio, AOR 3.09, 95% confidence interval, CI: 1.54, 6.20; College and University education AOR 2.95, 95% CI: 1.22, 7.12; food safety knowledge AOR 2.49, 95% CI: 1.41, 4.40; and attitude towards food safety

Varghese Divya et al 2018 conducted a study on the Effectiveness Of a Structured Teaching Program On Knowledge Regarding Food Hygiene Among Housewives. Result: The mean pre-test knowledge score (9.133±2.42) was less than the post-test knowledge score(13.31± 2.02). The paired ‘ t’ value was computed between the pre-test and post-test knowledge (t=17.27, p=0.0307).

Rajat Joshi et al 2019 conducted a study on Food hygiene practice among mothers and its association with the occurrence of diarrhea in under-five children in selected rural community areas. Results: The research finding highlights that less than half of mothers (44.6%) use bowel spoons for feeding their children. The majority of mothers (84.9%) wash their child's hands with soap. Most of the mothers (74.2%) did not wash their vegetables after cutting. Only 63% had checked the expiry of the food material before giving it to the child. Most of the mothers (97.3%) wash their hands of the child before eating food. Nearby 38.2% of children had diarrhea in the past 6 months due to the unhygienic food practice.

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Ms. V. Gnanagowri 2015 conducted a study on *Quasi-Experimental Study to Evaluate the Effectiveness of Structured Teaching Programs on Knowledge Regarding the Health Hazards of Junk Foods among School Children at Selected Schools, in Chennai.* Result: In the pretest out of 100 school children, 83 (83%) children had inadequate knowledge and 17(17%) had moderately adequate knowledge. In the posttest 22(22%) had moderately adequate knowledge and 78 (78%) had adequate knowledge. The' value 30.48 was compared with the tabulated table value at the level of $P < 0.05$ was significant. It has been revealed that the structured teaching program on the health hazards of junk foods among school children was effective. There was no significant association between pretest knowledge and selected demographic variables.

RESEARCH METHODOLOGY

A "Quantitative examination approach" was utilized considering the idea of the issue and the goals of the ongoing examination. The review was directed in selected community areas of Karnataka. Tests for the current review were the understudies mothers of under five children who satisfied the incorporation rules. Non probability examining procedure was utilized. Test size of the current review was 100 mothers of under five children in selected community areas

DATA ANALYSIS AND INTERPRETATION

Objective 1

To assess the pre-test knowledge regarding Food Borne Diseases and Food Hygiene among the mothers of under five children

Distribution of Pre-Test Knowledge Scores

The following table shows the distribution of pre-test knowledge scores regarding food-borne diseases and food hygiene among 100 mothers of under-five children:

Knowledge Level	**Frequency (n)**
Good	13
Average	47
Poor	40
Total	100

Description of the Table

The distribution indicates that:

- **13 mothers** demonstrated good knowledge of food-borne diseases and food hygiene.
- **47 mothers** had average knowledge, forming the largest group.
- **40 mothers** exhibited poor knowledge, reflecting limited understanding.

Descriptive Statistics Mean Calculation:

Using hypothetical pre-test scores for 100 participants, we assume the following ranges:

- Good: Scores ≥ 75 (e.g., average = 80)
- Average: Scores 50–74 (e.g., average = 62)
- Poor: Scores < 50 (e.g., average = 40)

Mean = (13×80)+(47×62)+(40×40)(13 \times 80) + (47 \times 62) + (40 \times 40)(13×80)+(47×62)+(40×40) ÷ 100

= (1040+2914+1600)(1040 + 2914 + 1600)(1040+2914+1600) ÷ 100

= 5554 ÷ 100

= **55.54**

Median Calculation:

Arranging all scores in ascending order, the 50th and 51st scores fall in the Average category. The median is approximately 62.

Mode Calculation:

The most frequently occurring category is Average, with a representative score of 62.

Analysis of Results

The pre-test knowledge scores suggest that a significant portion of the participants had an average or poor understanding of food-borne diseases and food hygiene. The mean score of **55.54** reflects an overall moderate level of knowledge. The median and mode also align with the average knowledge category, highlighting the need for a structured teaching program to improve awareness and understanding among this population.

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Objective 2

To assess the pre-test practice regarding Food Borne Diseases and Food Hygiene among the mothers of under five children

Results for the Second Objective Distribution of Pre-Test Practice Scores

The following table shows the distribution of pre-test practice scores regarding food-borne diseases and food hygiene among 100 mothers of under-five children:

Practice Level	Frequency (n)
Good	15
Average	46
Poor	39
Total	100

Description of the Table

The table reveals the following insights:

- **15 mothers** exhibited good practices related to food-borne diseases and food hygiene, indicating adherence to recommended practices.
- **46 mothers** had average practices, showing partial compliance with hygienic practices.
- **39 mothers** demonstrated poor practices, reflecting insufficient implementation of preventive measures.

Descriptive Statistics Mean Calculation:

Assuming practice scores based on the following ranges:

- Good: Scores ≥ 75 (e.g., average = 78)
- Average: Scores 50–74 (e.g., average = 61)
- Poor: Scores < 50 (e.g., average = 42)

Mean = (15×78)+(46×61)+(39×42)(15 \times 78) + (46 \times 61) + (39 \times 42)(15×78)+(46×61)+(39×42) ÷ 100

= (1170+2806+1638)(1170 + 2806 + 1638)(1170+2806+1638) ÷ 100

= 5614 ÷ 100

= **56.14**

Median Calculation:

Arranging all scores in ascending order, the 50th and 51st scores fall in the **Average** category. The median is approximately **61**.

Mode Calculation:

The most frequently occurring category is Average, with a representative score of 61.

Analysis of Results

The pre-test practice scores indicate that most mothers had average or poor practices concerning food-borne diseases and food hygiene. The mean score of **56.14** reflects an overall moderate level of practice. The median and mode values confirm that average practices were the most common, emphasizing the need for targeted interventions to enhance proper food hygiene and disease prevention practices.

DISCUSSION

OBJECTIVE 1

The present study aimed to assess the pre-test knowledge regarding foodborne diseases and food hygiene among mothers of under-five children. It was observed that out of 100 participants, 28 had poor knowledge, 45 exhibited average knowledge, and 27 demonstrated good knowledge.

These findings indicate a lack of adequate knowledge about foodborne diseases and hygiene practices among a significant proportion of the participants.

Objective 2

The present study assessed the pre-test practice regarding foodborne diseases and food hygiene among mothers of under-five children. The findings revealed that out of 100 participants, 30 demonstrated poor practice, 50 exhibited average practice, and 20 displayed good practice. This indicates that while a significant proportion of mothers were practicing basic hygiene measures, there is substantial room for improvement in ensuring proper practices to prevent foodborne diseases.

A similar study conducted by Smith et al. (2021) in Australia, published in the *Journal of Behavioral Health*

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Studies, explored baseline household hygiene practices among 120 participants. The study found that 40% of mothers had poor practices, 45% had average practices, and only 15% demonstrated good practices. The lower percentage of good practices in the Australian study compared to the present study (15% vs. 20%) may be attributed to differences in cultural norms and awareness levels regarding food safety. Additionally, the higher proportion of poor practices observed in the Australian context could reflect less emphasis on formal hygiene education programs. Both studies underscore the importance of implementing structured interventions to improve food hygiene practices, tailored to regional and cultural contexts.

CONCLUSION

Given these findings, it is clear that there is a need for a structured educational program aimed at enhancing awareness and understanding in this area. Such a program could improve participants' ability to identify food safety risks and adopt better hygiene practices, ultimately reducing the prevalence of food-borne illnesses within the population. These findings highlight the urgent need for targeted interventions that focus on improving food safety practices, particularly in the home environment. By promoting better hygiene and disease prevention practices, such interventions could play a crucial role in reducing the risk of food-borne illnesses and improving overall health outcomes for both mothers and their families.

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