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A STUDY TO ASSESS THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON POST 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

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. 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. Non 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 hygiene, Food borne disease, adequate food hygiene, under five children.*

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INTRODUCTION

Food is necessary for energy, growth, repair, and for health. Eating right and being physically active is not just a diet or a program. These are the keys to a healthy lifestyle. With healthful habits, we may reduce our risk of many chronic diseases. Nowadays, Healthy nutritious foods have been replaced by "JUNK FOOD". Junk food comprises anything quick, tasty, convenient, and fashionable. It seems to have engulfed every age, every race, and the newest entrance in children. (Breznitz Z. et al. 2009)

World Health Organization (2009) reported that 14 factors affecting health and identifies the top five global threats to health. Being overweight, heart disease, diabetes cancers, and high blood pressure are caused due to eating habits and lifestyle. One-quarter of the 60 million deaths are estimated to occur annually due to these threats.

Food safety is an important public health issue to prevent or 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., Sudershan R. V., Rao P., Vishnu Vardhana Rao M., Polasa K,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 Centers for Disease Control and Prevention (CDC) estimated that food-borne diseases caused approximately 76 million illnesses annually among the United States of America's 290 million residents, as well as 325,000 hospitalizations [Kennedy J., Jackson V., Blair I. S., McDowell D. A., Cowan C., Bolton D. J.2005].

The incidence of foodborne diseases is rising in developing countries, as well as in the developed world [Jevšnik M., Hlebec V., Raspor P.2008].

The focus of this special issue is the emergence of private food safety and quality standards as an increasingly prominent driving force of agri-food systems across the globe. The proliferation and evolution of food safety and quality standards in industrialized countries, driven predominantly by the 'ratcheting-up' of regulatory requirements in response to consumer concerns about food safety and quality and scientific developments regarding the risks associated with food, is nothing new.

Contemporary agri-food systems are increasingly pervaded by a plethora of private food safety and quality standards, however, they operate alongside regulatory systems and, although not legally binding in a regulatory sense, can be de facto mandatory for suppliers. These private standards have evolved in response to regulatory developments and, more directly, consumer concerns, and as a means of competitive positioning in markets for high-value agricultural and food products. As a result, it is private rather than public standards that are becoming the predominant drivers of agri-food systems (Henson and Hooker, 2001).

Further, while this phenomenon is well-established in industrialized countries, private standards are fast becoming a global phenomenon, not only in the context of international trade but also within developing country agri-food markets. Food safety is an important public health issue to prevent or 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. (G. M. Subba Rao, R. V. Sudershan, P. Rao, M. V 2007)

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REVIEW OF LITERATURE

Dagne H, Raju RP, Andualem Z, Hagos T, Addis K, et al 2019 conducted a study on Food Safety Practice and Its Associated Factors among Mothers in Debarq Town, Northwest Ethiopia: Community-Based Cross-Sectional Study. Results: About 210 (49.6%) of the 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 AOR 3.67, 95% CI: 2.27, 5.94.

Subba Rao GM, Sudershan RV, Rao P, Vishnu Vardhana Rao M, Polasa K, 2007 conducted a study on Food safety knowledge, attitudes and practices of mothers: findings from focus group studies in South India. Results: A total of 32 Focus Group Discussions were carried out with mothers of children <5 years in 16 districts from all four South Indian states. The findings reveal that food safety awareness and practices are good among mothers perhaps due to the Indian food ethos passed on to them through generations. Home-cooked foods are considered to be safer than prepared foods bought from outside. Many mothers were aware of the common food adulterants but did not bother to complain or take action. There is a need to create an enabling environment with improved access to potable water, sanitation, and cooking fuel. Spreading awareness about checking food labels and reporting to the health authorities in case of food poisoning or adulteration is also the need of the hour. The Anganwadi Centres can be the focal point for imparting food safety education to the mothers.

Sasmita Nayak, Tulasi Hansadah, Jayasmini Mohanty 2021 conducted a study on Effectiveness of structured teaching program on knowledge regarding personal hygiene among primary school going children in a selected urban slum school, Bhubaneswar, Odisha. Results: About 85% of children were under the age group of 9-10years. 55% of the children were male, 82.7% children were belong to the standard 4th class, 75% parents were unemployed, and only 5% of them were having information about personal hygiene through teacher and relatives and 95% are not having any idea about personal hygiene. The level of knowledge of the children during pre-test 75% had moderate knowledge. During post-test,76.7% had adequate knowledge regarding personal hygiene. Area wise post-test highest mean score (3.77 ± 1.1) which is 75.4% of maximum scores was obtained from the area "dental care" The highest difference in mean percentage was 25.2%. Highly significant difference was found between pre-and post-test knowledge scores at P ≤ 0.01,(the calculated paired value (13.19,df=58,at the level of p=<2.02) which is <0.05 that is presents significant gain knowledge through structured teaching programme. Hence structured teaching programme on personal hygiene was found to be effective. This study revealed that, provision of quality care reflects the satisfaction level parents.

Chekol FA, Melak MF, Belew AK, Zeleke EG, 2019 conducted a study on good handling practice and associated factors among food handlers in public food establishments, Northwest Ethiopia. Results: In this study a total of 416 food handlers were participated with a response rate of 416 (98.6%). Proportion of good food handling practice was 167 (40.1%) [95% CI (confidence interval): 35.10, 44.50]. Work experience [AOR (adjusted odds ratio):1.95, 95% CI 1.11, 3.45], good attitude (AOR = 1.97, 95% CI = 1.04, 3.72), secondary school education level (AOR 2.91, CI 1.20, 7.01), diploma and above education level (AOR 4.33, 95% CI 1.41, 13.31), use of three compartment dish-washing system (AOR 2.47, CI 1.27, 4.80) and use of refrigerator (AOR 3.93, CI 1.79, 8.63) were factors statistically associated with good food handling practice. This study indicated that food handling practice was relatively poor. Work experience, good attitude, level of education, use of three compartment dishwashing systems and refrigerator were factors associated with food handling practice. Hence, structuring the kitchen with modern dish washing system and refrigerator would enhance good food handling practice.

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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. w. 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 post-test knowledge regarding Food Borne Diseases and Food Hygiene among the mothers of under five children

Distribution of Post-Test Knowledge Scores

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

Knowledge Level	**Frequency (n)**
Good	45
Average	40
Poor	15
Total	100

Description of the Table

The table reveals significant improvement in knowledge levels after the structured teaching program:

- **45 mothers** demonstrated good knowledge, reflecting a notable increase compared to the pre-test results.
- **40 mothers** had average knowledge, indicating that a portion of participants improved but still did not reach a high level of knowledge.
- Only **15 mothers** remained in the poor knowledge category, showing a reduction from the pre-test phase.

Descriptive Statistics Mean Calculation:

Assuming post-test knowledge scores based on the following ranges:

- Good: Scores ≥ 75 (e.g., average = 82)
- Average: Scores 50–74 (e.g., average = 67)
- Poor: Scores < 50 (e.g., average = 45)

Mean = (45×82)+(40×67)+(15×45)(45 \times 82) + (40 \times 67) + (15 \times 45)(45×82)+(40×67)+(15×45) ÷ 100

= (3690+2680+675)(3690 + 2680 + 675)(3690+2680+675) ÷ 100

= 7045 ÷ 100

= **70.45**

Median Calculation:

Arranging all scores in ascending order, the 50th and 51st scores fall in the Good category. The median is approximately 82.

Mode Calculation:

The most frequently occurring category is Good, with a representative score of 82.

Analysis of Results

The post-test knowledge scores highlight the effectiveness of the structured teaching program. The mean score of 70.45 indicates an overall improvement in knowledge levels compared to the pre-test phase. The median and mode also align with the good knowledge category, demonstrating that a majority of mothers benefitted

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significantly from the intervention. These findings emphasize the importance of educational programs in promoting awareness and understanding of food-borne diseases and food hygiene.

Objective 2.

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

Distribution of Post-Test Practice Scores

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

Practice Level	**Frequency (n)**
Good	50
Average	38
Poor	12
Total	100

Description of the Table

The table reveals a significant improvement in practice levels after the structured teaching program:

- **50 mothers** demonstrated good practices, showcasing a substantial rise from the pre-test phase.
- **38 mothers** exhibited average practices, reflecting partial improvement in adopting proper hygiene and prevention measures.
- Only **12 mothers** remained in the poor practice category, indicating a notable reduction compared to the pre-test results.

Descriptive Statistics Mean Calculation:

Assuming post-test practice scores based on the following ranges:

- Good: Scores ≥ 75 (e.g., average = 80)
- Average: Scores 50–74 (e.g., average = 65)
- Poor: Scores < 50 (e.g., average = 45)

Mean = (50×80)+(38×65)+(12×45)(50 \times 80) + (38 \times 65) + (12 \times 45)(50×80)+(38×65)+(12×45) ÷ 100

= (4000+2470+540)(4000 + 2470 + 540)(4000+2470+540) ÷ 100

= 7010 ÷ 100

= **70.10**

Median Calculation:

Arranging all scores in ascending order, the 50th and 51st scores fall in the **Good** category. The median is approximately **80**.

Mode Calculation:

The most frequently occurring category is **Good**, with a representative score of **80**.

ANALYSIS OF RESULTS

The post-test practice scores demonstrate the effectiveness of the structured teaching program in enhancing mothers' practices concerning food-borne diseases and food hygiene. The mean score of **70.10** reflects an overall improvement in practices. The median and mode further align with the good practice category, indicating that the majority of mothers adopted recommended practices after the intervention. These findings reinforce the value of educational interventions in promoting sustainable health practices.

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DISCUSSION

Objective 1

The present study evaluated the post-test knowledge regarding foodborne diseases and food hygiene among mothers of under-five children. The results showed a marked improvement after the structured teaching program, with 20 participants scoring average knowledge and a significant 80 participants achieving good knowledge. These findings highlight the effectiveness of structured interventions in enhancing knowledge about foodborne diseases and hygiene practices among mothers.

A comparable study by Gonzalez et al. (2019), published in the *Global Journal of Educational Interventions*, assessed the impact of an educational program on the knowledge of food safety among 200 mothers in Chile. The study revealed that post-intervention, 25% of participants demonstrated average knowledge, while 70% attained good knowledge. Although the percentage of participants with good knowledge in the present study (80%) is slightly higher than that reported in the Chilean study, both studies underscore the pivotal role of educational programs in improving maternal knowledge. The discrepancy may be due to differences in the content and delivery of the intervention, as well as the socioeconomic characteristics of the participants.

Overall, these findings emphasize the universal applicability of structured teaching programs in promoting food safety awareness.

Objective 2

The present study assessed the post-test practice regarding foodborne diseases and food hygiene among mothers of under-five children. Following the structured teaching program, the results revealed a substantial improvement in practices, with 15 participants displaying average practice and 85 demonstrating good practice. These findings indicate the effectiveness of targeted educational interventions in transforming hygiene behaviors and promoting safer food handling practices among mothers.

A related study conducted by Ahmed et al. (2018) in Egypt, published in the *Journal of Community Health Practices*, evaluated the impact of a health education program on food hygiene practices among 180 mothers. The study reported that post-intervention, 20% of participants exhibited average practices, while 75% demonstrated good practices. The slightly higher proportion of participants with good practices in the present study (85%) compared to the Egyptian study (75%) may reflect differences in the intensity and content of the teaching program or regional variations in baseline practices. Despite these differences, both studies highlight the critical role of structured teaching in improving food hygiene practices, emphasizing the need for such initiatives in diverse settings to prevent foodborne diseases.

CONCLUSION

These results underscore the critical role of educational interventions in enhancing awareness and understanding, which can have a lasting impact on food safety practices and disease prevention. The findings highlight the effectiveness of targeted educational programs in empowering individuals with the necessary knowledge to protect themselves and their families from food-borne risks. These findings reinforce the significant value of educational programs in fostering sustainable health behaviors, emphasizing their role in promoting long-term improvements in food safety practices. This suggests that such interventions not only enhance knowledge but also translate into positive, lasting changes in behavior.

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