

Effectiveness Of Structured Teaching Program On Knowledge Regarding Food Hygiene Among Housewives.

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Abstract

Background : Food is potential source of infection and is liable to contamination by microorganisms at any point during its journey from the producer to the consumer. Lack of adequate food hygiene can lead to food borne diseases and death of consumers. Almost 1 in 10 people in the world fall ill after eating contaminated food and 420000 die every year, resulting in the loss of 33 million healthy life years. Food poisoning outbreaks have increased from 50 in 2008 to 312 in 2017. Structured teaching program on food hygiene shows improvement in their existing knowledge.

Objectives : 1.To compare the pretest and posttest knowledge regarding food hygiene among the housewives in selected urban area, Bangalore. 2.To determine the association of pretest knowledge regarding food hygiene with the selected baseline variables of housewives.

Methods: The research design for the study was quasi experimental one group pre test-post test design. The sample size comprised of 90 housewives of a selected urban area, Bangalore. Samples were selected by purposive sampling technique. Data were collected using a semi structured knowledge questionnaire regarding food hygiene which was followed by a structured teaching program.

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 computed between the pre test and post test knowledge (t=17.27, p<0.001) was statistically significant. There was a significant association between pre test knowledge scores with housewife's previous knowledge (p=0.0055) and their educational status (p=0.0307).

Interpretation and conclusion: The housewives lacked knowledge regarding food hygiene. The structured teaching program was very effective in improving the knowledge as evidenced by post test. There was a significant association between pre test knowledge scores with previous knowledge and educational status of housewives. Study concluded that structured teaching program is an effective strategy in improving the knowledge of housewives regarding food hygiene.

Keywords: Housewives, Food Hygiene, Knowledge, Structured Teaching Program.

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I. Introduction

Food hygiene, in its widest sense, implies hygiene in production, handling, distribution and serving of all types of foods. The primary aim of food hygiene is to prevent food poisoning and other food born illnesses. The 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 food born diseases and death of consumers¹. Common infection which likely to transmit through the food handlers are dysentery, typhoid, paratyphoid fever, enteroviruses, viral hepatitis and helminthes. The food handlers suffering from any of the illnesses are strictly not allowed to prepare and handle the food². The food handlers in the homes are mostly the house wives. Educating the food handlers about the personal hygiene, dishwashing and pest control are the best way to promote food hygiene and thereby prevents the food born diseases to all the age groups in a community.

Need for the study

Surveillance of the food borne diseases outbreaks are fairly well established in developed countries even then, only about 10% of actual cases in industrialized countries are recorded in official statistics. In case of

developing countries it could be even less than 1% [WHO.1990]. In India, such surveillance of food born diseases is poor and official statistics do not accord any special position to food³.

The report of NIN reported that infants and children are affected most by food born illnesses. In India, about 4,00,000 children [< 5 years] die every year due to diarrhea (NIN, 2006). Many more suffer from hepatitis A and enteric fever caused by poor hygiene and unsafe food/drinking water. Food handlers [usually mothers] play a major role in ensuring food safety for children.

Food born diseases are associated with a production-marketing system that has been altered from one where the local farmer supplies local grocers to a system where food is produced on a vast industrial scale. The consumption of convenient food involves the assumption that measures to safeguard against the introduction of health hazards during food preparation. Besides the risk involved in their preparation, convenient foods are consumed without the usual measures that can mitigate risks associated with food borne pathogens¹. The study conducted in South India, most of the diarrheal deaths among children (< 5 years) are attributed to food and water contamination⁴. Mothers are usually the final line of defense against food borne illnesses. Thus the role of mothers in ensuring food safety at home is well accepted. There are hardly any studies in India to understand their knowledge, attitude and practices on food safety. A total of 32 focus group discussions were carried out with mothers of children > 5 years in 16 districts from all the four South Indian states. The findings revealed that food safety awareness and practices are good among mothers perhaps due to the Indian food passed on to them through outside. Many mothers were aware of common food adulterants but do not bother to complain or take action. Spread awareness about checking food labels and reporting to the health authorities in case of food poisoning. Children under 5 years of age carry 40% of the food borne disease burden, with 125000 deaths every year⁵. Diarrheal diseases are the most common illnesses resulting from the consumption of contaminated food, causing 550 million people to fall ill and 230000 deaths every year. (WHO, 31 October 2017). In India the highest number of deaths of children under 5 years of age is mainly due to malnutrition and unhygienic food practices (TIMES OF INDIA, 28 March 2015). Hospitalization resulting from food borne disease outbreaks have increased in recent years but can be prevented if people follow proper food handling practices. During 2008 in Karnataka alone, 1,034 food borne disease outbreaks were reported. More than 23,000 people got sick during these outbreaks, and 22 people died. Almost half of the outbreaks had a single cause or food source. Integrated Disease Surveillance Programme (IDSP) has indicated that food poisoning is one of the commonest outbreaks reported in 2017 in Karnataka. Dr. A. C. Dhariwal, Director of National Centre for Disease Control (NCDC) said that "it is important to follow safety measures and maintain hygiene while handling food. It is a matter of concern for all as food poisoning outbreaks have increased from 50 in 2008 to 312 in 2017". Housewives should ensure the healthiness of all members at home. So knowledge regarding food hygiene should be improved through effective training which indeed prevents food borne diseases.

II. Review Of Literature

A study conducted on knowledge, attitude and practice of food safety among the women of Khazar bazaar revealed that there was a positive association between attitude and literacy. By using simple random sampling techniques, a convenient sample of 300 respondents was collected for the study. A pre-designed and pre-tested proforma was used to collect the demographic information and WHO questionnaire was used to collect information of KAP of food safety. In this study positive association was reported between attitude and literacy ($P < 0.5$). The mean standard deviation score of KAP were 8.65(1.24) 16.03(1.75) and 30.87(4.22) respectively. All the respondents had consistently good knowledge (58.3%), Attitude (81.7%) and practice (79.0%) Pearson's correlation test showed that there were correlation between score of knowledge and attitude ($r = 0.176$; $p = 0.002$) and knowledge and practice ($r = 0.608$; $p = 0.000$) and between the mean score of attitude and practice ($r = 0.190$; $p = 0.001$). The findings suggested that there were positive relationship between knowledge and attitude, knowledge and practice and also attitude and practice ($p < 0.01$). And also positive association between individual (KAP) variable suggest that knowledge regarding food safety is increased by training on measures of safety and its importance in the transmission of disease which increase attitude and practice⁶.

A study to assess the knowledge, attitude and hygienic practices of food vendors in Owerri town of Nigeria used cross sectional descriptive with a proportionate convenient sampling technique to select 200 food vendors from the 3 local government areas in Owerri town. Data were collected using a pre tested semi structured interviewer administered questionnaire. Descriptive analysis were done with frequencies and summary statistics. Chi square statistics were computed to determine significant relationships and p value was set at 0.05 significant level. While a majority of the respondents had a good level of knowledge (81%) and positive attitude (71%) about food hygiene, only 37% of the respondents had a good level of hygienic practice. It was revealed that 32% and 46% of the respondents received training on food hygiene and environmental health worker inspection respectively. It was also revealed that there were statistically significant relationship between knowledge ($p = 0.001$), attitude ($p = 0.000$), formal training on food hygiene ($p = 0.000$) and the level of

food hygienic practices. The public health management of food vending services should involve the development of strategies that will equip them with the necessary knowledge and skill to provide vending services in a hygienic and safe manner⁷.

A study was conducted in New Delhi to assess the knowledge and attitude of food handlers working in a medical college in New Delhi. Among 136 samples the health education was given them by interaction sessions using a flipchart and posters . After 3 months post test was conducted. The result showed that there was a significant increase in knowledge about hand hygiene measures ,namely washing hands before handling food 23.5% to 65.4% and keeping nails cut and clean(8.1% to 57.4%) was observed in baseline self reported hand washing practice reveals low figures for washing hands after micturition (82.4%), smoking (52.8),and consistent use of soap at the work place (24.3%) which improved after health education but not to the desired extent finding highlight the importance of providing health education in food and personal hygiene to food handlers and incorporation the same in existing guidelines for good establishment laid down by civic agencies in Delhi⁸.

OBJECTIVES

- ✱ To compare the pretest and post test knowledge regarding food hygiene among the housewives in selected urban area,Bangalore.
- ✱ To determine the association of pretest knowledge scores regarding food hygiene with selected baseline variables of housewives.

OPERATIONAL DEFINITIONS

EFFECTIVENESS

The degree to which something is successful in producing a desired result or success (Oxford Dictionary).

In this study it refers to the significant increase in the knowledge score as determined by a structured questionnaire.

STRUCTURED TEACHING PROGRAM

In this study it refers to systematically developed instruction in the form of flashcards including purchasing, storage, preparation, food poisoning and prevention in English and Kannada which is designed for group of housewives in providing information regarding food hygiene.

FOOD HYGIENE

Conditions for practices in the handling, preparation and storage of food that minimize food borne infections (Oxford Dictionary).

HOUSEWIVES

A married women whose main occupation is caring for the family , managing household affairs and doing house works (Oxford Dictionary).

URBAN AREA

In present study, Urban area refer to any population more than 5000.

In relating to or characteristics of a town or city (Oxford Dictionary).

ASSUMPTIONS

Housewives may not have adequate knowledge about food hygiene. Housewives will have interest to know about food hygiene.

HYPOTHESIS

H1: There will be a significant difference between the pretest and post test knowledge scores regarding food hygiene among the housewives at 0.05 level of significance.

H2- There will be asignificant association between pretest knowledge scores of housewives regarding food hygiene with baseline variables at 0.05 level of significance.

VARIABLES

INDEPENDENT VARIABLES

Structured teaching programme regarding food hygiene.

DEPENDENT VARIABLES

Knowledge level of the housewives regarding the food hygiene.

EXTRANEIOUS VARIABLES

Baseline variables such as age, education, monthly family income and previous knowledge

DELIMITATION

This study is delimited to the housewives of selected urban area.

PROJECTED OUTCOME

Finding of the study would reveal that the existing knowledge of housewives regarding food hygiene and effectiveness of structured teaching programme, which will improve their knowledge. Educating the housewives regarding food hygiene will help to prevent food poisoning and other food borne illnesses. It helps the

community to practice proper food hygiene measures. There by promoting good health of the individual ,family and community.

III. Methodology

A quantitative approach and quasi experimental one group pre test-post test design was adopted for the study. The study was conducted in an urban area, Bangalore. Sample size of the study comprises of 90 housewives selected by purposive sampling technique. Permission was obtained from the Principal, College of nursing and District Health Officer and an urban area was selected . IEC was obtained. The data collection instruments included a proforma of baseline variables of housewives and structured knowledge questionnaire with 20 items on various contents like purchasing, storage, preparation, food poisoning and prevention of food borne diseases. Content validity of tool was checked by experts. The reliability of the knowledge questionnaire was established using Split half technique (Carl Pearson's correlation method: $r=0.92$ and $r'=0.95$). The pilot study was conducted to check the feasibility of the study. The study was found to be feasible. Informed consent was obtained from the participating housewives. They were given the pre test structured questionnaire to assess the knowledge for 15 minutes. After pretesting the knowledge, structured teaching program was given for 20 minutes. Post test was taken after 7 days of administration of structured teaching program in the same manner as the pre test was done by using the same questionnaire.

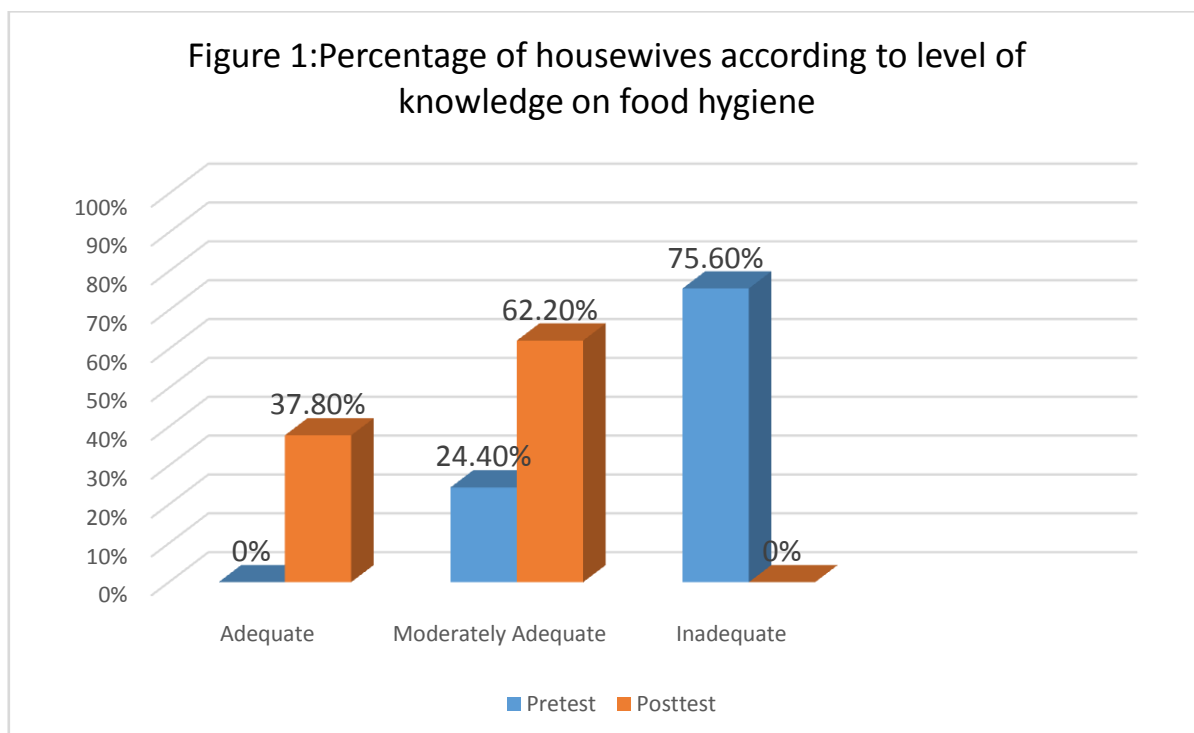
IV. Results

Baseline variables of the housewives.

About 38.89%(35) of the housewives belonged to 21-30 years, 45.33%(39) had a monthly income of Rs.10496-15705. About 36.66% (33) had high school education and 62.22%(56) had no previous knowledge regarding food hygiene.

Pre and post test knowledge scores of housewives.

Findings showed that 75.60% of housewives had inadequate knowledge and 24.4% had moderately adequate knowledge in the pre test. The post test level of knowledge shows that 37.8 % of housewives had gained adequate knowledge and 62.2 % had moderately adequate knowledge (Figure 1)



Effectiveness of structured teaching program on knowledge of housewives regarding food hygiene.

The mean pre test knowledge score was 9.133 ± 2.42 where as the mean post test knowledge score was 13.31 ± 2.02 . The mean difference of knowledge score was 4.177. The obtained ' t ' value of 17.27 was significant at $p < 0.05$ level ($p < 0.001$). (Table 1)

Table 1: Mean, SD, paired t value of pre and post test knowledge scores of housewives.
n =90

VARIABLES	MEAN	SD	MEAN DIFFERENCE	PAIRED t TEST	P VALUE
Pre test	9.133	2.42	4.177	17.27	<0.0001
Post test	13.31	2.02			

Association between pre-test knowledge scores of housewives and their baseline variables.

There was a significant association between pre test knowledge scores of housewives with educational status and their previous knowledge (pvalue=0.030,p=0.005) and there was no association with other baseline variables of housewives such as monthly income and age.

LIMITATION

The study was limited to the house wives of selected urban area whoever present during the time of data collection.

IMPLICATIONS

1 .NURSING PRACTICE

Nursing play an important role in preparing the community to practice good food hygiene. STP developed by the researchers for the present study will help the nurses and other health care professionals in providing anticipatory guidance in food hygiene and during home visits providing education and guidance to the community.

2. NURSING ADMINISTRATION

The nurse administrator should plan, organize and conduct training program like module of training of community health workers in different community setting based on importance of maintaining good food hygiene.

3.NURSING EDUCATION

During the teaching program the nursing students can take about different aspect of food hygiene. Nurses can also take an active part in conducting awareness programs on various places to increase the awareness of food hygiene practices.

4 NURSING RESEARCH.

Nurses, who form an important part in the healthcare team and should take initiatives to conduct research programs to assess the knowledge of food hygiene in different community setting.

V. Discussion

1.FINDINGS RELATED TO PRETEST AND POSTTEST KNOWLEDGE

The present study showed that the pre test knowledge score of house wives ranged 5-15 with the total score of 20. The mean score was 9.133+-2.42. The post test knowledge score of house wives ranged 8-18. The mean score was 13.31+-2.02. The t value obtained is significant at p <0.05level [t=17.27,p<0.001]. The study revealed that there was a significant difference between the pre test and post test knowledge scores regarding food hygiene among house wives.

A similar study was conducted in New Delhi to assess the knowledge and attitude of food handlers working in a medical college. Among 136 samples the health education was given them by interaction sessions using a flipchart and posters . After 3 months post test was conducted. The result showed that there was a significant increase in knowledge about hand hygiene measures ,namely washing hands before handling food 23.5% to 65.4% and keeping nails cut and clean(8.1% to 57.4%) was observed. In baseline self reported hand washing practice reveals low figures for washing hands after micturition (82.4%), smoking (52.8),and consistent use of soap at the work place (24.3%) which improved after health education.⁸

2. FINDINGS RELATED TO ASSOCIATION OF PRETEST KNOWLEDGE REGARDING FOOD HYGIENE WITH SELECTED BASELINE VARIABLES OF HOUSEWIVES.

In the present study,the association of pre test knowledge scores with the selected baseline variables like age, education, monthly income and previous knowledge regarding food hygiene were completed by using paired t test and one way ANOVA and found that there was significant association between pretest knowledge scores of house wives and base line variables like educational status and previous knowledge.

A similar study was conducted in Portugal to assess the food hygiene knowledge of professional food handlers from an institutional catering company which manufactures and distributes meals to the canteens of schools , kindergartens ,and nursing homes in Portugal. A total of 101 food handlers from 18 geographically distributed business units were assessed. Data collection employed a previously used , multiple choice questionnaire , aimed at exploring the food safety knowledge and practices of individual respondents. The average score of questions answered correctly was 13 out of 23(56.5%) with a SD of 3.22.However , the percentage of correct answers varies with the issues questioned , being significantly lower on issues such as temperature control (p< 0.001) and sources of contamination / high risk foods (p<0.001). The level of

knowledge was influenced by the level of formal education ($p=0.025$) of respondents. The results reinforced the importance of conducting a preliminary assessment of training needs and evaluating the effectiveness of training.⁹

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