



## International Journal of Research In Paediatric Nursing

E-ISSN: 2664-1305  
P-ISSN: 2664-1291  
IJRPN 2020; 2(1): 26-30  
Received: 09-11-2019  
Accepted: 13-12-2019

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### A study to assess the effectiveness of planned teaching programme on knowledge regarding foreign body aspiration among mothers of toddler in selected urban community at Jaipur

**Pradeep Kumar Yadav, Dr. CP Sharma, Vivek Nehra and Anil Kumar Samota**

#### Abstract

**Introduction:** Child's community includes a number of places- playgrounds, gardens, fields, ponds, rivers or waste dumps, but their relative importance depends on a child's way of life. Accidents are a major cause of morbidity and mortality in children. An accident can be defined as an unexpected, unplanned occurrence of an event which usually produced unintended injury, death or property damage. Injuries cause almost 40% deaths among 1-4 year old children and three times more deaths than the next leading cause, Accidental death in children particularly during playing, while flying kites, fall from the terrace, injury from sharp objects, injury from fire crackers particularly during the festive seasons, improper use of electrically operated toys, sharp toys, scissors, knives, blades are not uncommon (1-5). Children aged 1-3 years are particularly at risk for foreign body aspiration because of their increasing independence, lessening of close parental supervision as they become older, increasing activity, curiosity because of hand – mouth interactions. Often foods such as grapes and smaller objects such as peanuts are easily aspirated into the bronchi by children, Foreign body aspiration (FBA) is a respiratory emergency and must be managed immediately or there can be a fatal outcome. Although there has been a decrease in complications associated with airway aspirations because of the significant advances in airway management and endoscopic.

#### Objective:

- To assess the knowledge of mothers of toddlers regarding foreign body aspiration.
- To evaluate the effectiveness of planned teaching programme on knowledge regarding foreign body aspiration among mothers of toddler.
- To find the association between post-test level of knowledge on foreign body aspiration and the selected demographic variables.

**Method:** The study is designed to assess the effectiveness of planned teaching programme on foreign body aspiration. Data will be collected from the mothers of toddlers in selected urban community at Jaipur. The research design adopted for the study in pre experimental design one group pre test post test only design.

**Result:** The study will enhance the knowledge of foreign body aspiration among the mothers of toddler and prevent further complications. The overall post-test mean knowledge score was 70.76%

**Conclusion:** The finding indicates that there is lack of knowledge among mothers of toddler regarding foreign body aspiration and information through various means like planned teaching programme is a useful source for improving the knowledge.

**Keywords:** Assessment, effectiveness, planned teaching program, knowledge, foreign body aspiration

#### Introduction

Child's community includes a number of places- playgrounds, gardens, fields, ponds, rivers or waste dumps, but their relative importance depends on a child's way of life. For instance, millions of children throughout the world live on the street and are vulnerable to a myriad of hazards including violence and unintentional injury as well as environmental risks such as infection from scavenging on waste dumps <sup>[1]</sup>.

Accidents are a major cause of morbidity and mortality in children. An accident can be defined as an unexpected, unplanned occurrence of an event which usually produced unintended injury, death or property damage. Injuries cause almost 40% deaths among 1-4 year old children and three times more deaths than the next leading cause, Accidents represent a major epidemic of non-communicable disease throughout the world.

With industrialization, advancement in technology, better healthcare and preventive measures like immunization, accidents are becoming important cause of death in children world over. With better education and opportunities for work for both parents, number of members of family working is increasing day by day. Accidental death in children particularly during playing, while flying kites, fall from the terrace, injury from sharp objects, injury from fire crackers particularly during the festive seasons, improper use of electrically operated toys, sharp toys, scissors, knives, blades are not uncommon (1-5) [2].

Commonly accidents occurs between late afternoon and early evening, in the summer, during school holidays and at weekends, Factors such as stress, death in the family, chronic illness, homelessness or moving home increase the likelihood of the child having an accident. Some happen when the usual routine is changed or when people are in a hurry distractions and inadequate supervision is often the cause of accidents. Poor housing and overcrowded conditions lead to increased numbers of accidents some accidents are caused by lack of familiarity with surroundings, for example, when visiting friends or relatives, or in holiday accommodation. Children's of 0-4-year-olds have the most accidents at home; Boys are more likely to have accidents than girls [3].

Children aged 1-3 years are particularly at risk for foreign body aspiration because of their increasing independence, lessening of close parental supervision as they become older, increasing activity, curiosity because of hand – mouth interactions. Often foods such as grapes and smaller objects such as peanuts are easily aspirated into the bronchi by children [4].

Foreign body aspiration (FBA) is a frequent cause of accidental death in children below the age of 6 years all over the world [1]. It is considered a true emergency in the pediatric age group and leads up to 300 deaths per year in the USA [2]. A large number of FBAs in the tracheobronchial tree occur in the Indian sub-continent [3, 4] Educational campaigns as a public health measure in some countries have brought down the incidence of FBA as well as the associated mortality [5, 6] The aim of this study was to assess the level of awareness in parents or caregivers about FBA [6].

Aspiration of foreign body into the respiratory tract, its varied clinical presentation, proper diagnosis and management has posed challenging questions for both otorhinolaryngologists as well as pediatricians for a long time. Foreign body aspiration (FBA) is a respiratory emergency and must be managed immediately or there can be a fatal outcome [6].

### Background of Study

Foreign body aspiration can be a life-threatening emergency. An aspirated solid or semisolid object may lodge in the larynx or trachea. If the object is large enough to cause nearly complete obstruction of the airway, asphyxia may rapidly cause death. Lesser degrees of obstruction or passage of the obstructive object beyond the carina can result in less severe signs and symptoms.

Chronic debilitating symptoms with recurrent infections might occur with delayed extraction, or the patient may remain asymptomatic. The actual aspiration event can usually be identified, although it is often not immediately appreciated Foreign bodies can be inert or irritating. If they

irritate they will cause inflammation and scarring. They can bring infection into the body or acquire infectious agents and protect them from the body's immune defenses. They can obstruct passageways either by their size or by the scarring they cause. Some can be toxic [6].

### Statement of the problem

“A study to assess the effectiveness of planned teaching programme on knowledge regarding foreign body aspiration among mothers of toddler in selected urban community at Jaipur”.

### Objectives of the study

- To assess the knowledge of mothers of toddlers regarding foreign body aspiration.
- To evaluate the effectiveness of planned teaching programme on knowledge regarding foreign body aspiration among mothers of toddler.
- To find the association between post-test level of knowledge on foreign body aspiration and the selected demographic variables.

### Hypothesis

All hypotheses will be tested at 0.05 level of significance.

- **H1**-The mean post-test knowledge level of mothers of toddlers regarding foreign body aspiration will significantly higher than mean pre-test knowledge level of mothers.
- **H2**- There will be significant association between post-knowledge score of mothers with their selected demographic variables.

### Material and Methods of the study

The study is designed to assess the effectiveness of planned teaching programme on foreign body aspiration.

### Source of data

Data will be collected from the mothers of toddlers in selected urban community at Jaipur.

### Research design

The research design adopted for the study in pre experimental design one group pre test post test only design.

### Research approach

The Research Approach adopted for this study is an evaluative research.

### Population

In the present study population consists of the mothers of toddlers.

- **Target population:** All the mothers of toddlers in urban area community at Jaipur.
- **Accessible population:** The mothers of toddlers of selected urban area at Jaipur district.

### Research variables

Research variables are the concepts of various levels of abstractions that are entered manipulated and collected in a study.

- **Independent variable:** In this study, the independent variable is planned teaching programme regarding foreign body aspiration.
- **Dependent variable:** In this study, the dependent

variable is knowledge on foreign body aspiration.

- **Demographical variable:** Age, sex, educational qualification, religion, occupation, number of children in the family etc.

#### Method of data collection

- **Research method:** Pre-experimental research design.
- **Sampling technique:** Non probability convenient sampling technique will be used for the selection of the subjects.
- **Sample size:** Number of the sample size in this study will be 60.
- **Setting of the study:** Selected urban area at Jaipur, Rajasthan.

#### Criteria for selection of sample

##### Inclusion criteria

- Mothers who speak and writes Hindi, English and local language.
- Mothers who has children 1-3 years.
- Mothers who are willing to participate in this study.

##### Exclusion criteria

- Mothers who are not present during the time of data collection.
- Mothers who have undergone any teaching programme on foreign body aspiration.

#### Data Collection Tool

Sec A: - Structured questionnaire schedule to the demographic data of the mothers of toddler.

Sec B: - Structured questionnaire schedule to assess the knowledge of foreign body aspiration among mothers of toddler.

#### Data collection procedure

The data collection procedure will be carried for a period of 3 weeks. The study will be concluded after obtaining permission from the concerned authorities and informed consent from the samples.

The data will be collected in.

- A prior formal permission will be obtained from the urban community authority for collecting the required information.
- Informed consent will be obtained from the sample and assure them regarding maintains privacy and confidentiality.
- Structured questionnaire will be administered to assess the knowledge of mothers of toddler on foreign body aspiration in terms of pretest.
- Planned teaching programme will be given on foreign body aspiration.
- Structured questionnaire will be administered to check the knowledge of foreign body aspiration.
- Duration of the study is 30 days.

#### Plan for data analysis

The researcher will use suitable and appropriate, descriptive and inferential statistical analysis and will be presented in forms of figures of table.

- **Descriptive statistics:** Mean, frequency, percentage, Standard deviations, range and mean score of subject will be used to quantify the level of knowledge on foreign body aspiration.

- **Inferential statistics:** Post-test will be used to examine the effectiveness of planned teaching programme by comparing pre-test score and post-test score. Chi square test: Will be worked out to determine the association of demographic variables. T test: Assess the relationship between pre-test - post-test knowledge.

#### Process of data collection

The investigator obtained written permission from the medical officer of community health centre Amber at Jaipur prior to data collection. The investigator had assured the confidentiality to the mothers of toddler regarding their responses and consent was obtained from them. The pre-test and planned teaching programme was given individually to 60 mothers of toddler in community health centre Amber at Jaipur. The data collection period extended from 25-07-17 to 24-08-17. The time taken for each member was 20 mts. After 7 days of pre-test, the post test was conducted for the mothers of toddler using the same structured knowledge questionnaire to assess the effectiveness of planned teaching programme. The average time taken for the post test was 20 minute. The data collection was terminated by thanking the mothers of toddler for their participation and cooperation. The collected data was compiled for the data analysis.

#### Plan for data analysis

Data analysis is a systematic organization and synthesis of the research data and testing of research hypothesis using data.

The data obtained was planned to analyze by both descriptive and inferential statistics on the basis of objectives and hypothesis of the study. Demographic data containing sample characteristics were analyzed by using frequency and percentage.

The associations of the knowledge score on foreign body aspiration with selected demographic variables were analyzed by using Chi-square test.

The knowledge of mothers of toddler before and after the administration of the individual planned teaching programme was calculated by using frequency, mean, median, percentage, standard deviation and cumulative percentage.

The data analysed were presented under the following headings.

**Section I:** Sample characteristics.

**Section II:** Knowledge scores of mothers of toddler regarding foreign body aspiration.

**Section III:** Effectiveness of a planned teaching programme on foreign body aspiration in terms of gain in knowledge scores of mothers of toddler.

**Section IV:** Hypothesis testing.

#### Results

##### Description of the final tool

###### Tool I: Baseline Performa

Structured knowledge questionnaire was used to collect the demographic data. It consists of identification data such as Age, religion, occupation, family type, family income, and previous knowledge regarding foreign body aspiration.

1. **Age:** The study represents the percentage distribution of study subjects by age group, out of 60 subjects 25% (15) of the subjects belongs to the age group of below 21-25 years and 33.33% (20) in the age group of 26-30 years, 25% (15) of them are in age group 31-35 years

- and 16.67% (10) mother of toddler belongs to above 36 years age group.
2. **Religion:** The study represents the percentage distribution of study subjects by religion, out of 60 subjects 53.33% (32) of the subjects were Hindu, 30% (18) Muslims and 16.67% (10) was Christian.
  3. **Income of Family:** Percentage distribution of study subjects with reference to income of Family showed that out of 60 subjects 11.67% (7) of subjects belongs to 5000-10000 per month income, 38.33% (23) of them belong to 10001-15000 per month, 35% (21) belongs to 15001-20000 per month and 15% (9) belongs to above 20001 per month income of family.
  4. **Occupation of mother:** The study represents the percentage distribution of study subjects by occupation of mother group, out of 60 subjects 43.34% (26) of the subjects belongs to the house wife group, 23.33% (14) in the teacher group and 8.33% (5) social worker and 25%(15) of them are in other occupation.
  5. **Family type:** The study represents the percentage distribution of study subjects by type of family type group, out of 60 subjects 20% (12) of the subjects belongs to belongs to joint family and 15% (9) in the group of extended family and 60% (36) of them are in nuclear family and 5%(3) are belongs to blended family.
  6. **Prior knowledge regarding foreign body aspiration:** Distribution of study subjects with reference to Knowledge about foreign body aspiration is that out of 60 mothers of toddler 26.67% (16) has idea about foreign body aspiration and 73.33% (44) have not idea about foreign body aspiration.

#### **Tool II: Structured knowledge questionnaire to assess the knowledge of mothers of toddler.**

##### **Major findings of the study**

The data findings have been organized and finalized according to the plan for data analysis and are presented under the following sections.

**Part I:** Description of the demographic characteristics of the mothers of toddler.

**Part II:** Analysis of knowledge scores of mothers of toddler regarding the foreign body aspiration

**Part III:** Effectiveness of the planned teaching programme on foreign body aspiration.

**Part IV:** Association of pretest knowledge scores of mothers of toddler with selected demographic variables.

**Part I:** Description of the demographic characteristics of mothers of toddler

The percentage distribution of subjects shows that majority 20(33.33%) of the mothers of toddler were in the age group of 26-30 years, maximum number of subjects were Hindu 32 (53.33%), majority income of family 10001-15000 per month 23(38.33%), majority of the subjects occupation house wife 26 (43.34%), majority of subject family type nuclear family 36(60), and 44 (73.33%) had not attended any in-service program on foreign body aspiration.

In similar study population, the youngest patient was 3months old, and the oldest patient was 84 months old (7years) (mean age $\pm$ 23.2 months, SD $\pm$ 20.6). Of the patients, 74.5% were male, and 25.5% were female. The frequencies of clinical symptoms in patients with and without FBA are shown in the Table. We examined the

difference between the two study groups (FBA vs. non-FBA) for each symptom. No significant relationship was observed between the presence of a foreign body in the airways and the presence of chronic cough ( $\chi^2$ 41.86,  $P$ 40.24).

#### **Part II: Analysis of knowledge scores of mothers of toddler regarding the foreign body aspiration.**

Assessment of the level of pre-test knowledge score among mothers of toddler depicts that, majority 57 (95%) of respondents had inadequate knowledge scores and 1 (1.67%) of them had moderate knowledge scores, and 2 (3.33%) had adequate knowledge of the respondents possessed very poor, good or very good knowledge score category. The finding of the study has revealed that there is an urgent need to educate the mothers of toddler regarding foreign body aspiration

#### **Part III: Evaluation of effectiveness of the PTP on foreign body aspiration.**

The knowledge scores of mothers of toddler regarding foreign body aspiration has revealed that, post-test mean knowledge score was found higher 4.45(74.16%) and SD of 0.67 when compared with pre-test mean knowledge score which was 2.38(39.72%) with SD of 0.90. The mean effectiveness score was (28.65%) with SD of 0.06the results of the study depicts that the planned teaching programme was very effective in improving the knowledge of the mothers of toddler regarding foreign body aspiration.

Area wise comparison of effectiveness of PTP also shows significant difference between pretest and posttest as most effectiveness found in the section discussing knowledge of foreign body aspiration where the pretest mean knowledge score was pretest mean  $\pm$  (10.95 $\pm$ 2.368) and post test mean knowledge score was (18.4 $\pm$ 2.301) with an effectiveness in the knowledge score as 46.90%(5.16 $\pm$  0.44). The area discussing anatomy and physiology of lungs where the pre-test mean knowledge score was 51.67% whereas post-test mean knowledge score was 77.38% with effectiveness in the knowledge our all score as 42.11%. The finding of the study has revealed that post test knowledge score was significantly higher than pre test knowledge score. The result has revealed the effectiveness of planned teaching programme regarding foreign body aspiration.

#### **Conclusion**

The main aim of the study was to assess the knowledge of mothers of toddler regarding foreign body aspiration and to improve their knowledge about foreign body aspiration. The knowledge of mothers of toddler was improved by a planned teaching programme. The following conclusions were drawn based on the findings of the study.

Assessment of the level of pre-test knowledge score among mothers of toddler depicts that, majority 57(95%) of respondents had average knowledge scores and 23 (46%) of them had poor knowledge scores and none of the respondents possessed very poor, good or very good knowledge score category.

The knowledge scores of mothers of toddler regarding foreign body aspiration has revealed that, post-test mean knowledge score was found higher 4.45(74.16%) and SD of 0.67 when compared with pre-test mean knowledge score which was 2.38(39.72%) with SD of 0.90. The mean effectiveness score was (28.65%) with SD of 0.06 the

results of the study depicts that the planned teaching programme was very effective in improving the knowledge of the mothers of toddler regarding foreign body aspiration. Association of demographic variables with pre-test scores was computed using chi-square test. Analysis has shown that, there was no association between the pre-test knowledge score and demographic knowledge.

### Discussion

This chapter presents the major findings of the study and discusses them in relation to the findings of other research studies. The study intended to assess the effectiveness of planned teaching programme on foreign body aspiration among mothers of toddler in selected urban community at Jaipur.

Data was collected from 60 mothers of toddler selected by convenience sampling before administering planned teaching programme data were collected using structured knowledge questionnaire. Then mothers of toddler were asked to complete same questionnaire one week after the educational intervention. The collected data was tabulated, analysed and interpreted by using descriptive and inferential statistics. The findings of the study have been discussed with reference to the objectives and hypotheses stated.

In similar study were supported by a study conducted to know the effectiveness of planned teaching programme on knowledge regarding foreign body aspiration. A total of 60 mothers of toddler of practicing in foreign body aspiration were invited to participate in the study. The planned teaching programme was administered. Mothers of toddler's knowledge on foreign body aspiration is limited, but after administration of PTP the knowledge of mothers improved. The finding of the study has shown that their mean post test knowledge score (18.4%) was significantly higher than their mean pre-test knowledge score (10.95%) 70.

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