A study to assess the effectiveness of hands on skill training programme on knowledge of first aid for choking among the mothers of under five children in selected areas at Jaipur

Pradeep Kumar Yadav, Anil Kumar Samota, Rahul Yadav, Babu Lal Yadav and Heera Lal

Abstract
Any object large or small that finds its way into the body either through a wound in the skin or via one of the body orifices such as the nose, eye, ear, vagina or rectum is called as a “foreign body” [1, 2]. Choking is the blockage or hindrance of respiration by a foreign-body obstruction in the internal airway, including the pharynx, hypo pharynx, and trachea [3]. Airway obstruction can be fatal if it leads to serious impairment of oxygenation and ventilation [4]. Choking is a leading cause of morbidity and mortality among children, especially those who are 3 years of age or younger. This is largely because of the developmental vulnerabilities of a young child's airway and the underdeveloped ability to chew and swallow food [5]. Young children also commonly put objects in their mouths as they explore their environments. The most common objects on which children choke are food, coins, balloons, and other toys. Certain characteristics, including shape, size, and consistency, of certain toys and foods increase their potential to cause choking among children [6].

Objective
1. To assess the level of knowledge regarding first aid for choking among the mothers of under five children.
2. To evaluate the effectiveness of hands on skill training programme on knowledge of first aid for choking among the mothers of under five children.
3. To find out the association between the knowledge of first aid for choking and selected demographic variables.

Method: The study is designed to assess the effectiveness of Hands on Skill Training Programme on knowledge of First Aid for choking. Data will be collected from the mothers of under five children in selected area 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 First Aid for choking among the mothers of children and prevent further complications. The overall post-test mean knowledge score was percentage of 71.25%.

Conclusion: The finding indicates that there is lack of knowledge among mothers of under five children regarding First Aid for choking and information through various means like Hands on Skill Training Programme is a useful source for improving the knowledge.

Keywords: assessment, effectiveness, hands on skill training programme, first aid, knowledge, mother of under five children

Introduction
Small children characteristically explore matter with their mouth and are prone to aspirate foreign bodies into the air-passages [7]. Aspiration of body can occur at any age but is most common in older infants and children age 1-3 years. A sharp or irritating object produces irritation and edema. A round pliable objects does not readily break apart is more likely to occlude an airway than an object with different shapes. A small object may cause little if any pathogenic change whereas object of sufficient size to obstruct a passage can produce various changes including atelectasis, emphysema, inflammation and abscess [8]. A broken or cracked rattle can be dangerous because the beads can easily be aspirated while the infants have the toy in the mouth. Stuffed animals are another potentially dangerous toy if any of any of the parts, such as the eyes or nose, are removable buttons or plastic pieces. An active infant can grab a low- hanging mobile and quickly chew off a small piece. As soon as the infant’s crawls or plays on the floor the floor must be kept free of any small articles that can
be picked and swallowed such as coins [9]. Food items are the second most common cause of aspiration and the most frequent offenders are nuts, grapes candies, and marshmallows, large amount of peanuts, butter or with pits or seeds [10]. Pacifiers can also be dangerous because the entire object may be aspirated if it is small or the nipple and shield may become detached from the handle and become lodged in the pharynx. Improvised pacifiers such as those commonly made in hospitals from a padded nipple also present dangers.

Background of study
Food items are the second most common cause of aspiration and the most frequent offenders are nuts, grapes candies, and marshmallows, large amount of peanuts, butter or with pits or seeds [11].

A child’s world centers around the home, school and the community. The biggest threats to children’s health lurk in the very places where they should be safest – home, school and community. A house is an exciting place for infants and small children, who love to explore but aren’t aware of the potential dangers. It is important to supervise these young explorers so that their natural curiosity does not lead them into dangerous situations that can result in injury [12].

First Aid for Choking is a life-threatening event in children that requires early diagnosis and prompt successful management. As it is said ‘prevention is better than cure,’ prevention is the most critical or key in reducing morbidity due to foreign body aspiration. Therefore more effort on caregivers’ education is essential. Hence it is important that the mother who is the strength of life, the rock of her family, the gentle heart beat to her children, should be brave enough to deal in such emergency situations, as choking for more than four minutes without oxygen causes brain damage or even death. Depression or becoming panic does not work out in such emergency situations [13].

Objectives of the study
1. To assess the level of knowledge regarding first aid for choking among the mothers of under five children.
2. To evaluate the effectiveness of hands on skill training programme on knowledge of first aid for choking among the mothers of under five children.
3. To find out the association between the knowledge of first aid for choking and selected demographic variables.

Hypothesis
All hypotheses will be tested at 0.05 level of significance.
• H1- There will be significant difference between mean pre-test and post test scores knowledge among mothers of under five children on first aid for choking.
• H2: There will be significant association between pre-test knowledge scores of Mothers of under five children regarding first aid for choking and selected Demographic variables.

Material and methods of the study
The study is designed to assess the effectiveness of Hands on Skill Training Programme on knowledge of first aid for choking

Source of data
Data will be collected from the mothers of under five children in selected area 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 under five children.
• Target population: All the mothers of under five children in selected area at Jaipur.
• Accessible population: The mothers of under five children of selected 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 variables
  In this study, hands-on skill training programme on first aid for choking is the independent variable.
• Dependent variable: In this study, knowledge of the mothers of under five children on first aid for choking is the dependent variable.
• Demographical variables: The demographical variables includes Age, Educational status, Type of family, Place of residence, religion, family income.

Method of data collection
Criteria for selection of sample
Inclusion criteria
• Mothers who are willing to participate.
• 2. Mothers of under five children.
• 3. Mothers who can read and write hindi.

Exclusion criteria
1. Mothers who are not willing to participate.
2. Mothers who have children more than five years of age.
3. Mothers who cannot read and write hindi.

Data collection tool
A. Questions related to knowledge regarding general aspects of choking
B. Questions related to knowledge regarding risk factors of choking.
C. Question related to knowledge regarding clinical features and diagnostic measures of choking.
D. Question related to knowledge regarding management and prevention of Choking.

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.
1. A prior formal permission will be obtained from the authority for collecting the required information.
2. 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 Hands on Skill Training Programme on knowledge of first aid for choking in terms of pretest.
3. Hands on Skill Training Programme will be given on first aid for choking.
4. Structured questionnaire will be administered to check the knowledge of first aid for choking.
5. 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 first aid for choking.

- **Inferential statistics:** Post-test will be used to examine the effectiveness of Hands on Skill Training 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 selected area at Jaipur prior to data collection. The investigator had assured the confidentiality to the under five children regarding their responses and consent was obtained from them. The pre-test and Hands on Skill Training Programme was given individually to 40 mothers of under five children in selected area at Jaipur. The data collection period extended from 25-07-18 to 24-08-18. The time taken for each member was 20 mts. After 7 days of pre-test, the post test was conducted for the mothers of under five children using the same structured knowledge questionnaire to assess the effectiveness of Hands on Skill Training Programme. The average time taken for the post test was 20 minute. The data collection was terminated by thanking the mothers of under five children 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 first aid for choking with selected demographic variables were analyzed by using Chi-square test. The knowledge of mothers of under five children before and after the administration of the individual Hands on Skill Training 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 under five children regarding first aid for choking.

**Section III:** Effectiveness of Hands on Skill Training Programme on first aid for choking in terms of gain in knowledge scores of mothers of under five children.

**Section IV:** Hypothesis testing.

**Results**
Descriptive and inferential statistics were used to analyze the data that was collected. The Findings of data has been finalized and organized in accordance with the plan for data analysis. These are presented under the following sections.

**Section–I:** Demographic profile of mothers of under five children.

**Section–II:** Knowledge of mothers of under five children regarding myths first aid for choking in pre-test and post-test.

**Section–III:** Comparison of pre-test and post-test knowledge score regarding first aid for choking among mothers of under five children.

**Section–IV:** Association of the post-test knowledge scores of mothers of under five children with the selected demographic variables.

**Section–I**
**Age:** The majority 47.50% of the Mothers of under five children were aged below 30 years, followed by 27.50% were above 45 years old, and remaining 25% of them were aged between 31-45 years.

**Education:** The majority 42.50% of the Mothers of under five children’s level of education were Sr. Sec. Education, followed by 27.50% were Primary Education, 17.50% were illiterate, and remaining 12.50% level of education were Graduation.

**Religion:** The majority 40% of the Mothers of under five children were Hindu, followed by 27.50% were Muslim, 17.50% were Sikh, and remaining 15% were Christian.

**Type of Family:** The majority 55% of the Mothers of under five children were belongs to Joint Family, and remaining 45 were from nuclear family.

**Place of residence:** The majority 72.50% of the Mothers of under five children were from Rural area, Followed by 27.50 from Urban area and no one from Semi urban area.

**Monthly income of family:** The majority 42.50% of the Mothers of under five children family income were Rs 20000- 30000, followed by 30% of the Mothers of under
five children family income were Above Rs30000, 15% were below Rs 10000 and remaining 12.50% of the Mothers of under five children family income were Rs 10000-20000.

Section–II: The majority 65% of the Mothers of under five children had inadequate knowledge, followed by 25% had moderate knowledge and 10% had adequate knowledge regarding First Aid for choking in the pre-test. After Hands on skill training program 47.50 % of the Mothers of under five children had adequate knowledge, followed by 37.50% had moderate knowledge and 15% of them had inadequate knowledge regarding First Aid for choking.

The maximum mean percentage obtained by the Mothers of under five children is found in the General Aspects of Choking, (73.89%). Followed by 72.08% in the aspect of Clinical Features And Diagnostic Measures of Choking, 70.00% Risk Factors of Choking and least mean percentage obtained in the aspect of Management and prevention of Choking (69.17%). The overall Mean±SD of Post-test knowledge score was 21.38± 5.246 and mean percentage of 71.25%.

Section–III: From the table 10 it is evident that the obtained “t” value 6.089 is greater than the table value at 0.05 level of significance. Therefore, “t” value is found to be significant. It means there is gain in knowledge level of Mothers of under five children regarding first aid for choking. This supports that hands on skill training programme on first aid for choking is effective in increasing the knowledge level of Mothers of under five children.

Section–IV: The χ2 value computed between the knowledge level of Mothers of under five children regarding first aid for choking and selected demographic variables. The variables Age, Education and type of family were significant at 0.05 level and Religion, Place of Residence and Family income (monthly) were not significant at 0.05 level. Therefore the hypothesis stated there will be significant association between knowledge of under five children family income were above Rs 30000 and remaining 12.50% of the Mothers of under five children family income were Rs 10000-20000.

Conclusion
The following conclusions were drawn on the basis of the present study to assess the effectiveness of skill training program on knowledge regarding first aid of choking among the mothers of under five children in selected area at, Jaipur. Assessment of the mothers of under five children knowledge level regarding first aid of choking. Percentage distribution of the samples with reference to shows The overall Mean ±SD of pretest knowledge score was 13.65± 6.070 and mean percentage of 45.50%.

of the mothers of under five children had inadequate knowledge, After hands on skill training program The overall Mean ±SD of post-test knowledge score was 21.38± 5.246 and mean percentage of 71.25%.knowledge regarding first aid for choking. Statistically significant association between the knowledge level of mothers of under five year children regarding first aid of choking and selected demographic variables. The variables age, education and type of family were significant at 0.05 level and religion, place of residence and family income (monthly) were not significant at 0.05 level therefore the hypothesis stated there will be significant association between knowledge of mothers of under five children regarding first aid of choking and selected demographic variables is accepted.

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 hand on skill training programme on First Aid for Choking among Mothers of under five children in selected area at Jaipur.

Data was collected from 40 Mothers of under five children selected by convenience sampling before administering hand on skill training programme data were collected using structured knowledge questionnaire. Then Mothers of under five children 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 hand on skill training programme on knowledge regarding foreign body aspiration. A total of 40 Mothers of under five children of practicing in First Aid for Choking were invited to participate in the study. The hand on skill training programme was administered. Mothers of under five children” knowledge on First Aid for Choking is limited, but after administration of hand on skill training programme 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

References
3. Donna Wong L. “Nursing care of infants and children” Edito, 5, 332.
7. Tinh Ngugen, Disadvantages of not providing kids with toys, easy publish, 2009, 625
URL:http://www.google.com