



### RESEARCH ARTICLE

## A STUDY TO ASSESS THE EFFECTIVENESS OF VIDEO ASSISTED TEACHING ON KNOWLEDGE OF MOTHERS REGARDING FIRST AID MANAGEMENT OF CHOKING AMONG CHILDREN IN SELECTED HOSPITALS AT ALUVA

Ansu Maliyakal , Sr Prabha Grace, Athulya C J, Aleena Josy, Aneeta Jose, Ansa Cherian, Diya Paulson and Muhammed Raaid

1. Assistant professor ,Carmel College of Nursing,Kerala.
2. Principal ,Carmel College of Nursing ,Kerala.

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### Abstract

Children are curious and explore the world through their senses, particularly by putting objects in their mouths. This behaviour places them at risk of choking but timely and appropriate first aid management can be crucial in saving lives during such incidents. The present study aimed to assess the effectiveness of video assisted teaching on knowledge of mothers on first aid management of choking among children in selected hospital at Aluva. The research approach used was Quasi Experimental study with one group pre-test post-test design with a sample size of 30 selected by Non-Probability Convenient Sampling technique with help of structured questionnaire. The findings of the study shows that 3.3% mothers have good knowledge, 80% mothers have average knowledge and 16.7% mothers have poor knowledge. After Video Assisted Teaching, the result shows that 46.7% of mothers have very good knowledge about the first aid management of choking among children and 53.3% of mothers have good knowledge about first aid management of choking among children in posttest. Chi-Square test was used to find the association between pretest knowledge score and selected demographic variables at 0.05 level of significance. A paired 't' test was performed to know whether there is any significant differences in knowledge before and after teaching programme. The mean knowledge score in pre-test was 12.2 with standard deviation of 1.93. The mean knowledge score in post-test was 19.8 with standard deviation of 1.95. Thus the difference in level of knowledge was confirmed by Paired 't' test value of -17.9, which was highly significant at 'p' < 0.01 level. There is significant association between the educational status and pre-test knowledge score.

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**Introduction:-**

Foreign body obstruction is a life-threatening emergency condition in children which sometimes lead to lethal consequences. Children are curious and explore the world through their senses, particularly by putting objects in their mouths. This behaviour places them at risk of choking but timely and appropriate first aid management can be crucial in saving lives during such incidents<sup>7</sup>. Most of the foreign body aspiration occur in home during unsupervised play. Choking (often also called suffocation) leads to various degrees of asphyxiation or lack of oxygen in the blood stream. Complications associated with choking include cerebral anoxia, esophageal perforation. Moreover, death due to the suffocation occurring in home environment account for 95 % of cases<sup>8</sup>Children can choke at any age, but young children are at greater risk due to narrow airways that are more easily blocked. Boys have a slightly higher risk of choking incidence compared to girls. Anything small object like a coin, or battery, can pose a choking hazard for babies and toddlers, who tend to put small objects in their mouth. Quick intervention, such as Heimlich maneuver or back blows is helpful in dislodging the obstruction and restoring normal breathing.<sup>1</sup>

**Need of the Study: -**

Childhood safety has become an important concern in today's society as children are highly vulnerable to accidental injuries, especially in early years of life. According to the American Academy of Pediatrics, death by choking is a leading cause of death and injury among children younger than 5 years of age. The American Academy of Paediatrics reports that choking causes the death of at least one child every five days in the United States alone, and thousands more require emergency care annually due to choking-related incidents<sup>9</sup>. Annually in United States more than 300 deaths of children are due to choking secondary to upper airway obstruction. The incidents are usually due to foods, toys or other small objects. More than 90% occur in infants and children younger than 2 years of age. Food continues to be the most common objects involved reported choking episodes in infants and child, with round or cylindrical foods.<sup>2</sup>

According to Indian academy of pediatrics children younger than 3 years of age account for 73% of cases.<sup>3</sup> David T. et al investigates unintentional nonfatal and fatal choking injuries in children aged 0–19 years by Centers for Disease Control and Prevention, revealed that from 2001 to 2016, there were a total of 305,814 nonfatal injuries and 2347 choking deaths in children from 0 to 19 years. Children under five years of age accounted for 73% of nonfatal injuries and 75% of choking fatalities. There was a statistically significant increase in the nonfatal injuries rate when comparing 2005–2010 and 2011–2016 (19/100,000 versus 26/100,000, respectively). There was a decrease in the choking fatalities rate in all children (0.18/100,000 versus 0.16/100,000, respectively) but no change in fatalities rate for children under five<sup>4</sup>

Poverty, lack of parental supervision, and lack of care giver education about choking hazards are associated with increased risk. Parents or caregivers are often able to resolve the choking themselves without any emergency services or a hospital visit. The first aid measures can save the life of child if correctly applied and done immediately. Therefore, it is important for the mothers, who are often the primary caregivers, gain adequate knowledge and skills to respond effectively in these critical moments.

Traditional health education methods such as verbal instructions or written pamphlets may not adequately prepare mothers to handle such emergencies. A study was conducted to evaluate the impact of media advertising on public awareness of foreign body aspiration. The result showed that the number of bronchoscopies to reduce foreign body aspiration was lower than that before advertising. Therefore, the study concluded that in addition to media advertising, offering individual education programs focusing on foreign body aspiration for young children's parents may have proven effective in preventing this type of aspiration<sup>5</sup>. Thus video-assisted teaching has shown promising results in enhancing understanding, retention, and practical skills. So the present study aimed to assess the effectiveness of video assisted teaching on knowledge of mothers on first aid management of choking among children in selected hospital at Aluva.

**Objectives of the Study:-****The main objectives of study was:-**

- to assess the pre-test level of knowledge of mothers on first aid management of choking among children,
- to develop a Video Assisted Teaching regarding the first aid management of choking among children, to assess the post- test level of knowledge of mothers on first aid management of choking among children

- to find out the association between knowledge of mother and selected demographic variables.

**Operational Definitions: -**

**Video Assisted Teaching: -**

In this study it refers to systematically planned, a pre-recorded video that explains meaning, causes, steps of management of choking and preventive measures of choking

**Knowledge: -**

In this study it refers to gravid information on meaning, causes, steps of management of choking and preventive measures of choking assessed through a structured knowledge questionnaire

**Mothers: -**

In this study it refers to women who have at least one child and are attending in the selected hospitals during the time of study.

**First aid management of choking: -**

In this study, it refers to the immediate and basic emergency procedure preferred to relieve airway obstructions due to choking in children, including techniques like back blows and hemlichmanevuer (abdominal thrusts).

**Children: -**

In this study it refers to children at the age of 0-12 years are considered in the content of study.

**Effectiveness: -**

In this study it refers to determining the extent to which information in the Video Assisted Teaching programme has achieved the desired effect as expressed by gain in knowledge.

**Assumption: -**

- Mothers are primary caregivers for children and likely to be present during choking incidents
- Mothers may lack adequate knowledge regarding first aid management of choking in children before the Video Assisted Teaching
- Proper knowledge regard first aid management of choking in children reduces deaths in children due to choking.
- There will be a measurable change in knowledge after Video Assisted Teaching.

**Hypothesis: -**

**Null Hypothesis (H0)** - There is no significant difference in the knowledge scores of mothers regarding first aid management of choking among children.

**Alternative Hypothesis (H1)** - There is a significant difference in the knowledge scores of mothers regarding first aid management of choking among children.

**Material and Methods: -**

The research approach used was Quasi Experimental study with one group pre-test post-test design. The study consists of 30 samples, selected by Non-Probability Convenient Sampling technique. The data was collected prior and after Video assisted teaching program by a Structured Knowledge Questionnaire. The data collection was conducted for 7 days. A formal permission was obtained from Principal, Carmel College of Nursing to conduct study. The mothers from hospitals, were selected for data collection using convenient sampling technique. The study was conducted in three phases.

**Phase 1:** Prior to collection of data the permission was obtained from administrative head of Carmel hospital, Aluva. The researcher initially established rapport with the study samples and assured confidentiality. The investigators met the mothers and explained the purpose of study. Pretest was conducted among 30 mothers using knowledge questionnaire through Google form.

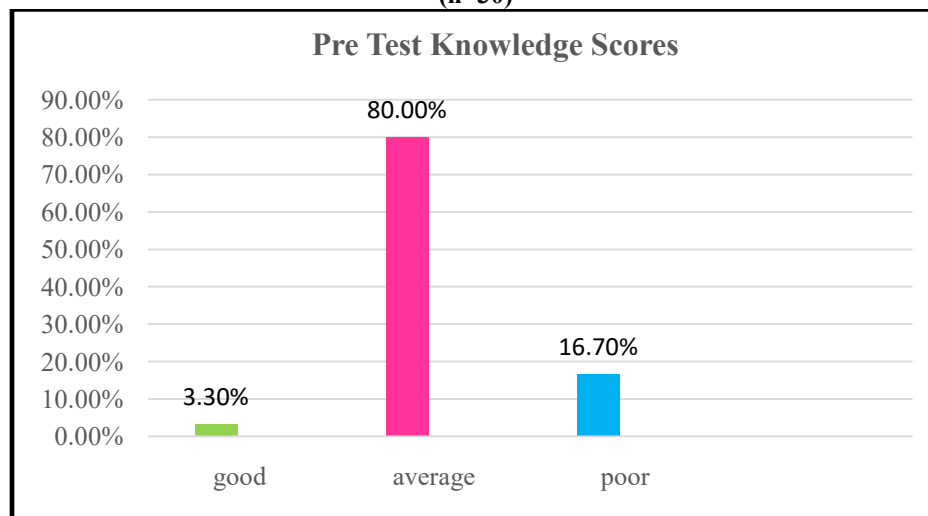
**Phase 2:** After receiving pretest Video Assisted Teaching programme was send to their Whatsapp number.

**Phase 3:** After 7 days post test was conducted through Google form

### Results:-

Majority (56.6%) of the sample were in age group between 30-40 years and highest 46.60% of samples are Muslims. More mothers (56.60%) had educational qualification up to degree level of education and most of them (53.30%) were home makers. Majority 46.60% of mothers have only one child and highest (86.6%) of them has never experienced the choking episode. However (66.60%) had previous knowledge regarding first aid management of choking. The data was tabulated and analyzed using descriptive and inferential statistics. The major findings of the study shows that 3.3% mothers have good knowledge, 80% mothers have average knowledge and 16.7% mothers have poor knowledge. After Video Assisted Teaching, the result shows that 46.7% of mothers have very good knowledge about the first aid management of choking among children and 53.3% of mothers have good knowledge about first aid management of choking among children in posttest.

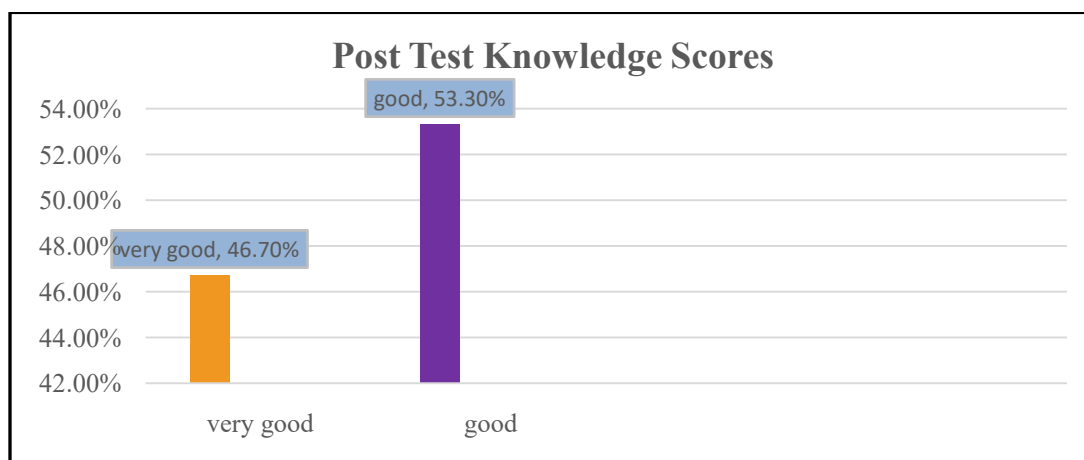
### Pretest Knowledge of Mothers on First Aid Management of Choking Among Children:- Frequency and percentage distribution of samples based on pre test knowledge (n=30)



Fig,1: frequency and percentage distribution of samples based on pretest knowledge scores

The Bar diagram demonstrates that majority, 80% mothers have average knowledge, 16.7% mothers have poor knowledge and only 3.3% mothers have good knowledge.

### Post Test Knowledge of Mothers on First Aid Management of Choking Among Children:- Frequency and percentage distribution of samples based on post test knowledge (n=30)



Fig,2: frequency and percentage distribution of samples based on posttest knowledge scores

The Bar diagram displays that more than 46.7% mothers have very good knowledge, 53.3% mothers have good knowledge and none had poor knowledge.

#### **Effectiveness of Video Assisted Teaching Programme:-**

**Table 1.Determination of the effectiveness of structured teaching programme by comparing pre-test and post-tests scores**

VARIABLES	MEAN	STANDARD DEVIATION	MEAN DIFFERENCE	PAIRED TEST	'T' 'p' VALUE
Pre-test	12.2	1.93	7.6	17.9	<0.01
Post -test	19.8	1.95			

A paired 't' test was performed to know whether there is any significant differences in knowledge before and after teaching programme. The mean knowledge score in pre-test was 12.2 with standard deviation of 1.93. The mean knowledge score in post-test was 19.8 with standard deviation of 1.95. Thus, the difference in level of knowledge was confirmed by Paired 't' test value of 17.9, which was highly significant at 'p' < 0.01 level. Chi-Square test was used to find the association between pretest knowledge score and selected demographic variables at 0.05 level of significance. The findings also reveal that there is significant association between the educational status and pre-test knowledge score

#### **Discussion:-**

The major findings of the study shows that 3.3% mothers have good knowledge, 80% mothers have average knowledge and 16.7% mothers have poor knowledge. After Video Assisted Teaching, the result shows that 46.7% of mothers have very good knowledge and 53.3% of mothers have good knowledge in posttest. The result of the present study is supported by a quantitative quasi experimental study of Sreevidhya K P to assess the effectiveness of video assisted teaching programme on knowledge regarding first aid management of foreign body aspiration among mothers of under-five children in selected anganwadis under Nadathara Gramapanchayath, the pre test knowledge of mothers regarding first aid management of foreign body aspiration majority of the samples 24 (80%) had moderate knowledge. However the study findings are contradictory which shows post-test analysis reveals that most of the samples 30 (100%) had adequate knowledge<sup>6</sup>.

In demographic variables 56.60% mothers are of age 30-40 years, 46.6% belongs to Muslims, 56.6% have completed degree, 53.3% mothers are home makers, 56.6% have monthly income less than 25000, 86.6% have never experienced choking in their children and 66.60% have previous knowledge. Comparing with the study of MS Nazma Ahmed and MS Jayashree Kakoti on effectiveness of structured teaching program on knowledge of first aid for choking among the mothers of under five children the demographic variables 65% mothers are of 26-35 years of age. The study results contradictory findings with present study that there is a significant association between the type of family and knowledge scores with 'p' value 0.012. In another study of Sree Vidya K P, findings are similar, which shows 53.3% samples were 43% were graduated 66% had previous knowledge on choking.<sup>6</sup> The effectiveness of teaching programs in both study, using Video assisted teaching in the present study and using structured teaching program in the study by MS Nazma Ahmed and MS Jayashree Kakoti, clearly demonstrates that a focused educational intervention is an effective tool for significantly increasing the mothers' knowledge regarding first aid for choking<sup>10</sup>. The present study have 'p' value <0.01. Similar findings was demonstrated with the study of Suhasini Vinayak, with 'p' value is <0.01 and study of Sree Vidya K P with 'p' value of <0.01<sup>6</sup>.

#### **Implication:-**

##### **Nursing Education:-**

Nursing education can integrate innovative teaching strategies like video-assisted teaching into pediatric nursing and community health nursing curriculum. It encourages use of audiovisual aids in teaching lifesaving first aid skills, ensuring nursing students become skilled educators for the community.

##### **Nursing Practice:-**

Nurses working in pediatric wards, OPDs, and community settings can include video-assisted demonstrations on first aid for choking as part of discharge teaching or health awareness programs. By teaching first aid management of choking, nurses actively contribute to prevention of complications and mortality in children. Nurses in primary health centers, schools, can use this methodology to train mothers, Anganwadi workers, school teachers, and caregivers effectively

**Nursing Research:-**

Research findings can influence nursing protocols and health education guidelines, promoting inclusion of structured, video-based teaching modules in hospital and community programs.

**Limitations:-**

- Study is limited to specific geographic area with particular community may limit the generalisation
- Long term follow up was not possible because of limited availability of time
- Tool used was structured thus free response was restricted

**Recommendation:-**

- The study can be replicated in a large sample size to generalize the findings
- Similar study can be conducted on a larger sample size
- Similar study can be conducted by adopting different research designs
- The knowledge and practice of mothers can be assessed on paediatric emergencies
- Experimental study with control group and experimental group can be conducted
- Retrospective studies can be conducted to assess the incidence of choking among children
- Information booklet can be given and its effectiveness can be assessed

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