



Received: 23-11-2024
Accepted: 03-01-2025

ISSN: 2583-049X

A Study to Assess the Effectiveness of Structured Teaching Programme (STP) on Knowledge Regarding Aspiration Pneumonia among Mothers of Infant at Selected Hospital in Maharashtra

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Abstract

“A study to assess the effectiveness of structured teaching programme (STP) on knowledge regarding aspiration pneumonia among mothers of infant at selected hospital in Maharashtra.”

Objectives

Primary Objective

To assess the effectiveness of Structured Teaching Programme on knowledge regarding aspiration pneumonia among mothers of infant at selected hospital in Maharashtra.

Secondary Objectives

1. To assess the existing level of Knowledge regarding selected aspiration pneumonia among infant.
2. To find out the association between the pre-test level of Knowledge score regarding aspiration pneumonia with their selected demographic variables.

Material and Methods

The study design is pre-experimental research design, one group pre-test post-test research design, so there is no comparison or control group. The investigator will administer pre-test and post-test on the same group.

Results

The major findings of the study show that the Pre-test & Post Test means of the knowledge was done by the Paired t test. The pre-test Average Mean knowledge score was 10.18 with standard deviation of 3.29%. And the post-test Average Mean knowledge score was 18.28 with standard deviation of 2.83%. The test statistics value of the unpaired t test was 14.45 with p value was 0.0001. The p value less than 0.05 hence reject the null hypothesis and accept the alternative hypothesis.

A study was conducted to assess the knowledge on aspiration pneumonia awareness, evaluate the effectiveness of structured teaching programme and to associate the knowledge of mothers of infant with that of demographic variables.

The experimental design was selected for the study. Data were collected

from 60 randomly selected samples by using the structured interview schedule. After structured teaching programme the paired 't' value was 14.45 with the $p < 0.0001$ which is highly significant. So, there is an improvement knowledge on aspiration pneumonia among mothers of infant. There is an association of level of knowledge with demographic variables. The effectiveness of Structured Teaching Programme was improved than pre-test.

Conclusion

Based on the analysis of the findings of the study, the following inference was drawn. There was gain in knowledge scores after administration of structured teaching programme. There was significant association of selected demographic variables. Thus, it was concluded that effectiveness of structured teaching programme on knowledge regarding aspiration pneumonia was found effective as a teaching strategy. The comparison of pre test & post test knowledge scores showed that there was significant gain in knowledge of mothers.

Overall, carrying out the present study was really an enriching experience for the investigator. The direction from the guide, various experts & cooperation of the participants played a major role in successful completion of the study.

At the time of pre-test, none of mothers of infant had good knowledge regarding aspiration pneumonia, 65% of mothers of infant had poor knowledge and 35% had average knowledge. Average knowledge score at the time of conducting a study was 10.18 with standard deviation of 3.29.

At the time of post test, none of mothers had poor knowledge regarding aspiration pneumonia, 80% mothers had average knowledge and 20% had good knowledge. Average knowledge score at the time of post test was 18.28 with standard deviation of 2.83.

Thus, it was concluded that effectiveness of structured teaching programme on knowledge regarding aspiration pneumonia was found effective as a teaching strategy.

Keywords: Structured Teaching Programme (STP), Pneumonia, Infant, Maharashtra

Introduction

Aspiration Pneumonia occurs when foreign materials (usually food, liquids, vomit, (or) fluids from the mouth) are breathed into the lungs (or) airways leading to the lungs. This may be lead to;

- A collection of pus in the lungs (lung abscess)
- Swelling and inflammation in the lungs
- A lung infection (Pneumonia).

Depending on the acidity of the aspirate, a chemical pneumonitis can develop & bacterial pathogens (particularly anaerobic bacteria) may add to the inflammation. Although fluids, foods, nasopharyngeal secretions & vomitus may cause problems when it, other substances such as talcum powder, lipids, and hydrocarbons may also cause Aspiration Pneumonia [1].

Aspiration pneumonia is defined as the development of an infiltrate in a patient at increased risk of oro-pharyngeal secretions. It affects individual of all ages, but occurs most frequently in children. Among children pneumonia is the most common cause of death worldwide. Every year 0.9 million infants die from aspiration pneumonia; indeed it is the leading cause of child death in the world. About 156 million new episodes occur each year worldwide, of which 151 million episodes are in the developing countries. Of all community cases, 7-13% are severe enough to be life threatening & requires hospitalization. In India also 25,000 infants die of Aspiration Pneumonia each year [2].

Aspiration pneumonia is bronchopneumonia that develops due to the entrance of foreign materials that enter the bronchial tree, usually oral or gastric contents (including food, saliva, or nasal secretions) [3].

India looks indeed like a leading third world Country; malnourished children breathe polluted air and suffer from lack of nutrition and hygiene. It leads the world with 27% of the global pneumonia cases. Worse, every minute, a child dies of in India, followed by Afghanistan, China, Pakistan and Bangladesh annually, two million [4].

Children under five dies from pneumonia and contributes to almost 20% of childhood mortality cases [5].

Few studies have been designed that distinguish between aspiration pneumonia and aspiration pneumonitis. Several studies suggest that 5-15% of the 4.5 million cases of community acquired pneumonia result from aspiration pneumonia, approximately 10% of patients who are hospitalized after drug overdoses will have an aspiration pneumonitis [6].

Infants & debilitated children should be positioned on the right side after feeding to minimize the possibility of aspirating vomitus. Solid foods should not be given until the infant can manage them. During feeding child should place in upright position. Proper feeding techniques should be carried out for weak, unco-operative Children Talking while eating is to be avoided because aspiration of food can occur with the inspiration of air. Oily nose drops & oily – based vitamin preparations are not appropriate for infants and also the nurse has an important role to promote health of the child through health ducation. Patients who aspirate have 3times higher mortality than patients do not aspirate. The strongest predictors of aspiration pneumonia are unconscious patients, patients with cerebra vascular disease, tracheostomy, chronic obstructive pulmonary disease, bronchitis, bronchial asthma and lung cancer. Weakest predictors of aspiration pneumonia are patients with viral infection, tonsillitis, pharyngitis, and laryngitis [7].

Review of Literature

A retrospective study to describe the characteristic features of foreign body aspiration in a group of infants and children. Study showing results are mean age of the patients was 4.4 years. 55.1% were male and 44.89% female. Time of presentation varied between 1 hour and 1.5 months after

aspiration. Only 64% of the patients (or) their families were aware of the aspiration the most common complaint was cough (96%) the breathing sounds were decreased in 60% of the patients. The study concluded that rigid bronchoscopy to be an effective and safe diagnostic and therapeutic procedure in children with foreign body aspiration. [9]

Quasi Experimental Design was used for the present study & 50 Mothers of under Five Children were selected using purposive sampling technique. A structured questionnaire was used to assess the knowledge & practices. Descriptive and inferential statistics were used to analyze the data. The analysis and the data were based on the objective and hypothesis. Both descriptive and inferential statistics were used for data analysis. The assessment of post- test knowledge score of the mother of under five children regarding prevention of pneumonia shows that, majority of mothers 29(58%) had good knowledge, 21(42%) having the average knowledge. And The assessment of post- test practice score of the mother of under five children regarding prevention of pneumonia shows that, majority of mothers 50(100%) had good practices. after implementation of STP on knowledge & practices of the mothers of under five children on prevention of pneumonia as compare to pre-test it shows that STP was effective educational strategies to create awareness. Keywords: Effectiveness, Structured teaching programme, mothers of under five children, pneumonia. [9]

Result

It Deals with analysis of data related to assessment of the knowledge regarding aspiration pneumonia among mothers of infant in selected hospitals Maharashtra in terms of frequency and percentage.

Table 1: Analysis of data related to General Assessment of pre-test Knowledge (Pre-Test)

n=60

| | Groups | Score | Frequency | Percentage |
|-----------|--------------|-------|--------------|------------|
| Pre-Test | Poor | 0-10 | 39 | 65.00 |
| | Average | 11-20 | 21 | 35.00 |
| | Good | 20-30 | 00 | 0.00 |
| Knowledge | Minimum | | 6 | |
| | Maximum | | 20 | |
| | Average (SD) | | 10.18 (3.29) | |

Table 1, reveals that 65% of mothers of infant in selected hospital had poor knowledge regarding aspiration pneumonia, 35% mothers of infant had average knowledge and no one had good knowledge. Average knowledge score at the time of pre-test was 10.18 with standard deviation of 3.29.

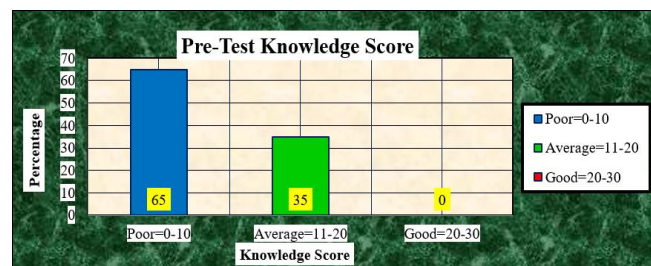


Table 2: Analysis of data related to General Assessment of Post Test Knowledge

(Post Test) n=60

It Deals with analysis of data related to assessment of the knowledge regarding aspiration pneumonia among mothers of infant in selected hospitals Maharashtra in terms of frequency and percentage.

Table 2: Analysis of data related to General Assessment of Post Test Knowledge

(Post Test) n=60

| | Groups | Score | Frequency | Percentage |
|-----------|--------------|-------|--------------|------------|
| Post Test | Poor | 0-10 | 0 | 0.00 |
| | Average | 11-20 | 48 | 80.00 |
| | Good | 20-30 | 12 | 20.00 |
| Knowledge | Minimum | | 12 | |
| | Maximum | | 25 | |
| | Average (SD) | | 18.28 (2.83) | |

Table 2, reveals that in post test, none of mothers had poor knowledge regarding aspiration pneumonia, 80% mothers had average knowledge and 20% had good knowledge. Average knowledge score at the time of post test was 18.28 with standard deviation of 2.83.

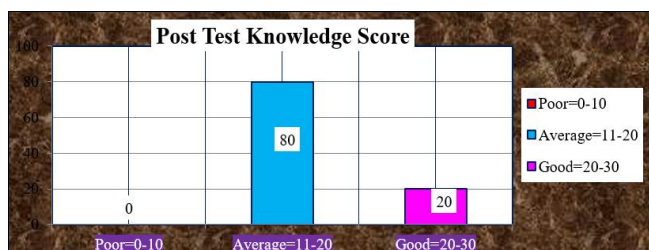


Fig 1: Cylindrical Graph Showing General Assessment of Post Test Knowledge Score

Table 3: General Assessment of Knowledge Score (Pre-test Vs Post Test) n=60

| | Groups | Score | Pre-test | | Post-test | |
|-----------|--------------|-------|--------------|------------|--------------|------------|
| | | | Frequency | Percentage | Frequency | Percentage |
| Knowledge | Poor | 0-10 | 39 | 65.00 | 0 | 0.00 |
| | Average | 11-20 | 21 | 35.00 | 48 | 80.00 |
| | Good | 20-30 | 00 | 0.00 | 12 | 20.00 |
| Knowledge | Minimum | | 6 | | 12 | |
| | Maximum | | 20 | | 25 | |
| | Average (SD) | | 10.18 (3.29) | | 18.28 (2.83) | |

Table 3, reveals that the total score of knowledge was divided in to three groups like poor (0-10 score), average (11-20 score) and good (21-30 score).

Table 5: Association of Knowledge Score in Relation to Demographic Variable

n=60

| Variable | Groups | Pre Test - Knowledge | | | Chi Squa re | d.f. | P value | Significance |
|-------------------------|---------------|----------------------|---------|------|-------------|------|---------|-----------------|
| | | Poor | Average | Good | | | | |
| Age (in years) | 20-25 Years | 15 | 09 | 0 | 1.13 | 3 | 0.768 | Not Significant |
| | 26-30 Years | 10 | 05 | 0 | | | | |
| | 31-35 Years | 11 | 04 | 0 | | | | |
| | 36-40 Years | 03 | 03 | 0 | | | | |
| Education of the Mother | Primary | 12 | 04 | 0 | 5.21 | 3 | 0.156 | Not Significant |
| | Secondary | 10 | 04 | 0 | | | | |
| | Undergraduate | 12 | 05 | 0 | | | | |
| | Post Graduate | 05 | 08 | 0 | | | | |
| Religion | Hindu | 12 | 08 | 0 | 3.99 | 3 | 0.261 | Not Significant |
| | Christian | 06 | 04 | 0 | | | | |
| | Buddhist | 10 | 01 | 0 | | | | |

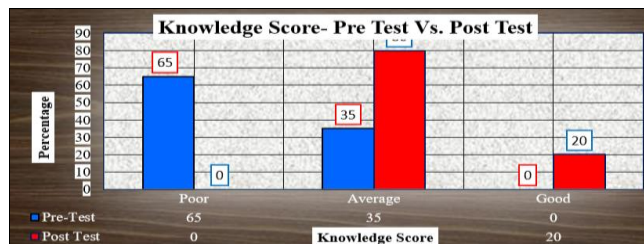


Fig 2: Bar Graph Showing General Assessment of Pre-test VS. Post Test Knowledge

Deals with analysis of data related to comparison of the knowledge regarding aspiration pneumonia among mothers of infant in selected hospitals Maharashtra city in terms of average pre-test and post test.

Table 4: Comparison of the Pre-test Vs Post Test knowledge of among mothers of infant at selected hospital

n=60

| Test | N | Mean | S.D. | t-Value | d.f. | P value |
|-----------|----|-------|--------|---------|------|---------|
| Pre-Test | 60 | 10.18 | (3.29) | 14.45 | 118 | 0.0001 |
| Post Test | 60 | 18.28 | (2.83) | | | |

The comparison of the Pre-test & Post Test means of the knowledge was done by the Paired t test. The pre-test Average Mean knowledge score was 10.18 with standard deviation of 3.29%. And the post test Average Mean knowledge score was 18.28 with standard deviation of 2.83%. The test statistics value of the unpaired t test was 14.45 with p value was 0.0001. The p value less than 0.05 hence reject the null hypothesis and accept the alternative hypothesis. It shows that, Structured Teaching Programme on knowledge regarding aspiration pneumonia among the mothers of infant in selected hospital was effective.

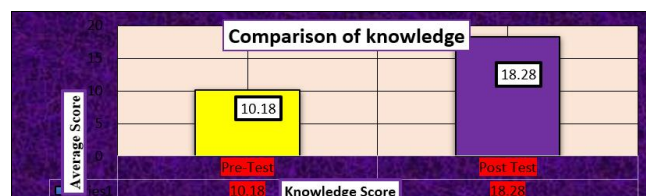


Fig 3: Bar Graph Showing Comparison of the Pre-Test vs Post Test Knowledge

It Deals with analysis of data related to the association of knowledge regarding aspiration pneumonia among mothers of infant in selected hospitals Maharashtra with selected demographic characteristics.

| | | | | | | | | |
|----------------------|---------------------------------|----|----|---|------|---|-------|-----------------|
| | Muslim | 11 | 08 | 0 | | | | |
| Type of Family | Nuclear | 17 | 07 | 0 | 0.94 | 2 | 0.622 | Not Significant |
| | Joint | 12 | 09 | 0 | | | | |
| | Extended | 10 | 05 | 0 | | | | |
| | Intact Family | 0 | 0 | 0 | | | | |
| Occupation of Father | Daily Wages | 16 | 07 | 0 | 0.89 | 3 | 0.827 | Not Significant |
| | Self Employee | 10 | 06 | 0 | | | | |
| | Government Employee | 06 | 05 | 0 | | | | |
| | Private Employee | 07 | 03 | 0 | | | | |
| Total Family Income | Rs. <5,000/ | 07 | 06 | 0 | 2.22 | 3 | 0.5 | Not Significant |
| | Rs. 5,001-10,000/ | 11 | 05 | 0 | | | | |
| | Rs. 10,001-15,000/ | 11 | 03 | 0 | | | | |
| | Rs. 15,001 And Above | 10 | 07 | 0 | | | | |
| Type of Delivery | Normal Delivery | 18 | 06 | 0 | 1.78 | 2 | 0.408 | Not Significant |
| | Normal Delivery With Episiotomy | 09 | 06 | 0 | | | | |
| | Instrumental Delivery | 0 | 0 | 0 | | | | |
| | Caesarean Section | 12 | 09 | 0 | | | | |

Table 5, reveals that the socio demographic variables are not significant with pretest knowledge scores.

The chi-square test was conducted to see the association of knowledge regarding aspiration pneumonia with selected demographic characteristics of among mothers of infant with -selected demographic characteristics of mothers of infant at selected hospital.

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