Children are an embodiment of our dreams and hopes for the future. They are the most vulnerable group in the society. UNICEF Statistics (2005) reported that acute respiratory infections (ARI) is one of the leading causes of under-five mortality in developing countries, responsible for 1.9 million deaths annually. Among 42 countries in the world 90 percent of child mortality burden, 14-24 percent of the under-five mortality burden is due to pneumonia. Nearly 70 percent of this pneumonia mortality occurs in Africa and south-east Asia regions. Most of the children have about 4-6 attacks of ARI each year.

Park (2002) stated that every year ARI in young children is responsible for an estimated 4 million deaths worldwide. Bangladesh, India, Indonesia and Nepal together account for 40 percent of the global ARI mortality. In India, of the 2.5 million born, 1.5 million do not reach their 1st birthday, and 5 million their fifth birthday. It means every day nearly 2500 under-five children die of which 600 die due to acute respiratory infection.

WHO Report (2000) stated that children below 5 years of age suffer about 5 episodes of ARI per child per year; thus accounting for about 238 million attacks. Consequently, although most of the attacks are self-limiting episodes, ARI is responsible for about 30-50 percent of visits to health care facilities and for about 20-40 percent admissions to hospitals.

**Objectives**

The present study sought to:

(i) determine the knowledge, attitude and knowledge on practices of mothers regarding ARI during pre-test and post-test;

(ii) evaluate the effectiveness of a planned teaching programme (PTP) among mothers in the experimental group;

(iii) determine the relationship between knowledge, attitude and knowledge on practices of mothers regarding ARIs during pre-test and post-test; and

(iv) determine the relationship between knowledge, attitude and knowledge on practice of mothers regarding ARIs during post-test and selected demographic characteristics (age of the mother, educational status, type of family, family monthly income, occupation and sources of information, age of the child, gender and birth order of the child).

**Hypothesis**

All the hypotheses were tested at 0.05 level of significance.

1. There will be a significant increase in the level of knowledge, attitude and knowledge on practice regarding ARIs among the mothers who had PTP.

2. There will be a significant difference in the post-test level of knowledge, attitude and knowledge on practice scores of mothers regarding ARIs during pre-test and post-test.

3. There will be a significant relationship between knowledge, attitude and knowledge on practice scores of mothers regarding ARIs during pre-test and post-test.

4. There will be a significant association between post-test knowledge, attitude and knowledge on practice of mothers regarding ARIs and selected demographic variables as age of mother, education, type of family, occupation, family income, source of information regarding ARIs, age of child, gender and birth order.

**Assumptions**

The study assumes that (i) knowledge, attitude and knowledge on practice of mothers have a strong influence on adoption of healthy behaviour; (ii) health education promotes early health seeking behaviour; (iii) group teaching will provide opportunity for active learning among the participants; (iv) a nurse has an important role to play in the health education regarding ARI among mothers.
and (v) adequate knowledge of the disease condition will help in adopting positive attitude towards healthy practice.

Conceputal Framework: The framework of present study was based on the modified Rosenstocks Health Belief Model (1996). According to this model, there are three factors i.e. individual perception, modifying factors, and likelihood of taking action which determine the individual’s decision towards taking preventive action.

Research Approach: The researcher aimed to evaluate the effectiveness of PTP on ARIs. An evaluative approach was considered appropriate.

Research Design: The researcher adopted a quasi experimental design, non-equivalent control group pre-test post-test design. In this design there are two groups - control and experimental.

Setting of the Study: Two children speciality hospitals were selected for the purpose of the study. One hospital served as the experimental group and the other as the control group. The study was conducted at the outpatient departments of the two hospitals.

Population: The population of the study consisted of mothers of under-five children suffering from ARIs.

Sample: The sample consisted of 60 mothers (30 each in the experimental and control groups) of under-five children with ARIs. The mothers who visited the outpatient department of the two hospitals at Trichy during the study period and those who fulfilled the inclusion criteria were selected for the study.

Sampling technique: Non-probability convenient sampling was used for this study.

Research tool and technique: A semi-structured questionnaire consisting of 20 questions to assess the knowledge regarding ARIs covering the Meaning, Causes, Predisposing factors, Signs and symptoms, Spread, Prevention, Treatment and Complications, Three-point Likerts’ scale with 10 statements to assess attitude of mothers towards ARIs and knowledge on practice questionnaire with 12 statements to assess the knowledge on practices regarding ARIs. The tool was prepared by the investigator after thorough study of all the possible literature available, field visit, interview with the mothers in the paediatric outpatient departments and consultation with the experts in the field. Investigators’ experience also contributed substantially towards preparation of the tool. The study was carried out by means of an interview schedule.

Planned Teaching Programme: PTP using the Lecture-cum-demonstration and group discussion was given at the outpatient department only to experimental group. The content included Meaning, Causes, Predisposing factors, Signs and symptoms, Spread, Prevention, Treatment and Complications, after pre-test interview.

Validity and Reliability: The tool was evaluated by 7 experts on the basis of the results of the pilot study, the questionnaire and the teaching programme were modified and refined, validity and reliability of the questionnaire was also established.

Data analysis: Data was analysed by descriptive statistics (frequency, percentage, mean and standard deviation) and inferential statistics (paired ‘t’ test correlation coefficient and chi square); paired ‘t’ test were used to find out the differences between pre-test and post-test of the study groups. Correlation coefficient were used to determine the association between knowledge, attitude and knowledge on practice. Chi square values were used to see the relationship between knowledge, attitude and knowledge on practice with selected demographic characteristics.

The research proposal was approved by the dissertation committee prior to the pilot study. Permission was obtained from the Principal, Head of the Child Health Nursing Department, the hospital in-charge of both the experimental and control groups. Informed consent was obtained from each participant of the study before starting the data collection. Assurance was given to the subjects that anonymity of each individual and confidentiality of the information given by them would be maintained.

Findings of the Study
1. There was a gross inadequacy (100%) of knowledge regarding ARIs among mothers in both the groups.
2. PTP was found to be effec-
tive in improving the knowledge, attitude and knowledge on practice of mothers regarding ARIs as shown by the post-test scores of experimental group (Table 1).

3. There was a significant positive correlation between knowledge, attitude and knowledge on practice in both the groups during the pre-test and post-test.

4. Significant relationships were found between knowledge, attitude and knowledge on practice with certain demographic variables viz. educational status, type of family and monthly income.

Recommendations

- Similar studies can be done (i) on a larger scale, (ii) in urban and rural areas so as to compare the findings; (iii) with randomisation; (iv) on prevalence of ARIs in Trichy district; and (v) on prevention and risk factors of ARIs in the community.

- An information booklet can be prepared as a teaching aid in the hospitals and outpatient clinics.

- A longitudinal study can be done using post-test after 1 month, 6 months and 1 year to see retention of knowledge.

- Similar study can be done among school children.

- A study can be conducted to evaluate the effectiveness of an information booklet regarding ARIs.

**Implications for Nursing**

**Nursing service:** The result of the study will help the nurses to enlighten their knowledge on importance of health education. They could also participate in giving health education to patients under their care, and take properly educate the mothers of children admitted in the hospital and those attending the outpatient clinics.

**Nursing education:** The findings can be used as an example by the tutor in the class rooms for giving importance to health education.

**Nursing administration:** Nursing administration could formulate policies that will include all nursing staff to be actively involved in health education programmes in their respective hospitals and colleges.

**Nursing research:** The findings of the study can be used to further justify the need for education of the people in the awareness and preventive aspects of health.

**Conclusion**

The study showed that the health education imparted to the mothers had an effect on their knowledge, attitude and knowledge on practice regarding acute respiratory infections had a great potential for accelerating the awareness among the mothers on various topics.

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**Table 1 : Comparison of pre-test and post-test scores of mothers among control and experimental groups regarding acute respiratory infections.**

<table>
<thead>
<tr>
<th>Groups</th>
<th>Components</th>
<th>Pre-test Mean (M)</th>
<th>Post-test Mean (M)</th>
<th>Mean Difference (MD)</th>
<th>SD</th>
<th>DF</th>
<th>Paired 't' test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control (n=30)</td>
<td>Knowledge</td>
<td>17.16</td>
<td>17.15</td>
<td>0.34</td>
<td>0.7</td>
<td>29</td>
<td>3</td>
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<tr>
<td></td>
<td>Attitude</td>
<td>18.86</td>
<td>18.93</td>
<td>0.07</td>
<td>0.2</td>
<td>29</td>
<td>1.5</td>
</tr>
<tr>
<td></td>
<td>Knowledge on Practice</td>
<td>21.83</td>
<td>21.93</td>
<td>0.1</td>
<td>0.2</td>
<td>29</td>
<td>1.5</td>
</tr>
<tr>
<td>Experimental (n=30)</td>
<td>Knowledge</td>
<td>18.2</td>
<td>65.56</td>
<td>47.36</td>
<td>6.76</td>
<td>29</td>
<td>38.345***</td>
</tr>
<tr>
<td></td>
<td>Attitude</td>
<td>19.06</td>
<td>23.7</td>
<td>4.84</td>
<td>1.4</td>
<td>29</td>
<td>18.8***</td>
</tr>
<tr>
<td></td>
<td>Knowledge on Practice</td>
<td>20.73</td>
<td>26.66</td>
<td>5.93</td>
<td>2.47</td>
<td>29</td>
<td>13.11***</td>
</tr>
</tbody>
</table>

***p<0.05 't' value is significant at 0.05 level. Mean post-test scores of the control group means that there exists a true difference between the groups in knowledge attitude and knowledge on practice scores. The effectiveness of PTP on ARIs is evident in the experimental group.
aspects regarding acute respiratory infections.

References

OBITUARY

Mr GR Daniel, ex-Principal, College of Nursing left for his heavenly home on 13 July 2009. He was hospitalised for cardio-vascular attack for a few days. Mr Daniel had his basic nursing education (Diploma and BSc Nsg) in India and MSc Nsg, Midwifery, Pharmocology, Medication, First aid etc. from USA. He had worked in various positions like Staff Nurse, Nursing Supdt, Principal at different institutions such as Willis F Plene Memorial Hospital, Wai, Satara, Pravara Medical Trust and Medical College, Loni, Ahmednagar, Terna Group of Hospitals, New Panvel, Navi Mumbai etc. He was an excellent teacher, efficient administrator, committed leader with ethical values. Mr Daniel was an active life member of TNAI.