

## Effectiveness of URTI Preventive Education Programme on Recovery of children and Practice of caregivers

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**Abstract :** A quasi-experimental study was conducted to assess the predisposing factors of URTI, effectiveness of teaching programme on the recovery of children and on the practice of their caregivers. This study was conducted in a child nursing home at district Haridwar, Uttarakhand. Total 51 children and their caregivers who met the selection criteria were selected by convenient sampling technique. Pretest was taken by using structured questionnaire, practice checklist and rating scale followed by URTI preventive education programme. After five days post test was taken. The mean post test practice score ( $9.8 \pm 1.27$ ) was higher than the mean pretest practice score ( $5.8 \pm 1.43$ ) and 't' value was 15.3. The mean post test assessment score ( $22.01 \pm 1.03$ ) was higher than the mean pretest assessment score ( $16.03 \pm 1.43$ ) and 't' value was 24.9. The difference between pretest practice score and posttest practice score was 4 and between pretest assessment score and posttest assessment score was 5.98. It means practice and assessment score improved after implementation of education programme. The finding of the study reveals that the education had a vital role in improving the practice of caregivers and recovery of the children.

**Keywords** - Children, care givers, URTI

### I. INTRODUCTION

Children represent the future, and to ensure their healthy growth and development ought to be a prime concern of all societies. WHO states that each year around three million under five children die due to environment-related diseases. Among them Acute respiratory infections (ARI) are more common and responsible for 1.6 million deaths of under five children each year.<sup>1,2</sup> On an average, children below five years of age suffer around eight to twelve episodes of ARI per year. ARI is responsible for about 30-50% visits and 20-40% admission to health care facilities and also a leading cause of disabilities such as deafness as a result of otitis media.<sup>3</sup>

Among respiratory infections, Upper Respiratory Tract Infections (URTI) are most common in children, which include the infections of the nose, throat, sinuses, and ears. The major symptoms of URTI comprise fever, sneezing, cough, runny or stuffy nose, sore throat, loss of appetite, headache, body aches, and fatigue. Lower Respiratory Tract Infections such as bronchitis, pneumonia, and bronchiolitis are not URTIs although they may start with a URTI or develop as a complication of a URTI.<sup>4,5</sup> Benjamin Franklin in 18th century proved that respiratory tract infections transmits from one person to another by droplet and hand contact with an infected person. Later, more than hundred types of rhinoviruses were discovered which are responsible for URTI.<sup>6</sup>

After infection, viral replication begins within eight to fifteen hours and symptoms appear within two to five days. The symptoms peaks and worsen in first two to three days. These symptoms usually resolve spontaneously in seven to ten days but some can last for two to three weeks. In children, cough lasts for more than 10 days in 35-40% cases and continues for more than 25 days in 10% cases.<sup>6</sup> The reason of URTI in infants and young children are native immune systems towards various viruses, close contact with other children and family members, and no concern about personal hygiene.<sup>7,8</sup>

#### 1.2 Need of the study

There are no proved medical treatments for URTI which have been conclusively demonstrated to shorten the duration of infection. It is a self limited disease that can last for eight to ten days, but its symptoms can irritate the young infants and children mainly due to nasal congestion. As their nostrils are blocked, they face respiratory problems because all small children are nose breather.

URTI can be prevented by some precautions such as hand washing, proper hygiene, avoiding air pollution, proper ventilation, nutritious diet, sanitation and prevention from cold.<sup>9</sup> It can be treated by taking some domiciliary management such as complete bed rest, increased fluid intake, saline nasal drops, keeping the child away from passive smoke and use of home remedies for cough and cold such as Tulsi, Honey, ginger, Hot drinks, etc. Use of warm steam inhalations provide warmth and moisture to the mucous membrane of respiratory tract which helps in reducing the symptoms of URTI such as pain and inflammation.<sup>10</sup>

### **1.3 Problem statement**

A quasi-experimental study to evaluate the effectiveness of ‘URTI Preventive Educational Programme’ on recovery of children (3-10 years) and practice of their informal caregivers in selected hospital of Uttarakhand, 2012

### **1.4 Objectives**

1. To determine the predisposing factors of URTI among children between 3-10 years.
2. To assess the effectiveness of “URTI Preventive Educational Programme” on the recovery of children between 3-10 years.
3. To assess the effectiveness of “URTI Preventive Educational Programme” on the practice of informal caregivers of children.
4. To find association between socio-demographic data and practice score of the informal caregivers of children.

### **1.5 Hypotheses**

**1H<sub>1</sub>** – The mean post test assessment and practice score will be higher than the mean pretest assessment and practice score.

**2H<sub>1</sub>**- There will be significant association between the practice of the care givers and socio-demographic data.

### **1.6 Conceptual Framework**

The conceptual frame work selected for this study was based on “Health Belief Model”. It is a health behavior change and psychological model developed by Irwin M. Rosenstock in 1966. This model was designed to predict the behavioral response to the treatment by the clients.

## **II. MATERIAL AND METHODS**

The research design used in this study was quasi- experimental in nature. The study was conducted at child nursing home in district Haridwar, Uttarakhand. Fifty one children and their caregivers were selected on the basis of inclusion and exclusion criteria. Non probability convenience sampling technique was used for this study. The tools used for the study were structured questionnaire, practice checklist and rating scale consisting of section I (Socio- demographic variables such as age of the child, age of the caregiver, relationship of caregiver with the child, gender of the child, number of children in the family, type of family, educational status of the caregiver, occupation of caregiver and family monthly income, Section II (consisting of predisposing factors of URTI includes 24 questions about the living condition and surrounding environment of the children which may be responsible for URTI which were categorized into three categories physical, biological and social factors, Section III (Self reported practice checklist consists of 12 items related to the practice of the caregivers of children during sickness of the child and Section IV (Rating scale for the assessment of children with URTI consisting of 6 items, sneezing, rhinorrhea, nasal congestion, cough, sore throat and fever. These items were placed into four categories, such as, absence of symptoms, mild illness, moderate illness and severe illness). The content validity of the tools were ensured by submitting the tools to the experts in the field of community medicine, pediatrician, child health nursing, and medical surgical nursing. Pilot study was conducted on five samples in outpatient department of HIHT, Rishikesh, Uttarakhand. The reliability of the tool was established by Karl Pearson followed by Spearman’s Brown Formula  $r=0.95$ .

## **III. RESULTS AND FINDINGS**

### **3.1 Related to Socio demographic variables of samples:**

According to Table no 1 most of the children (57%) were male between the age group of three to six years (73%). Among the care givers most were mothers (65%) who were graduate and above (41%). Most of the care givers (78%) had unskilled occupations and between the age group of 31-40 years (63%). Most of the care givers (56%) had two children, belonging to joint family (53%) and most of them (61%) had monthly family incomes more than Rs 12000.

**Table No. 1: Socio-demographic characteristics of study subjects.**

(n=51)

Sample characteristics	Frequency (f)	Percentage (%)
<b>Age of child</b>		
3-6 years	37	73
7-10 years	14	27
<b>Age of the care giver</b>		
20-30 years	12	23
31-40 years	32	63
41-50 years	06	12
Above 50 years	01	02
<b>Relationship of care giver with the child</b>		
Mother	33	65
Father	12	23
Grand-parent	06	12
<b>Gender of the child</b>		
Boy	29	57
Girl	22	43
<b>Number of children in the family</b>		
One	12	24
Two	29	56
Three	05	10
Four	05	10
<b>Type of family</b>		
Joint	27	53
Nuclear	24	47
<b>Educational status of the care giver</b>		
No formal education	03	06
Primary	05	10
Secondary	14	27
Graduate and above	21	41
Professional	08	16
<b>Occupation of care giver</b>		
Skilled	11	22
Unskilled	40	78
<b>Monthly family income</b>		
Rs.2000-5000	02	04
5100-8000	04	08
8100-12000	14	27
More than 12000	31	61

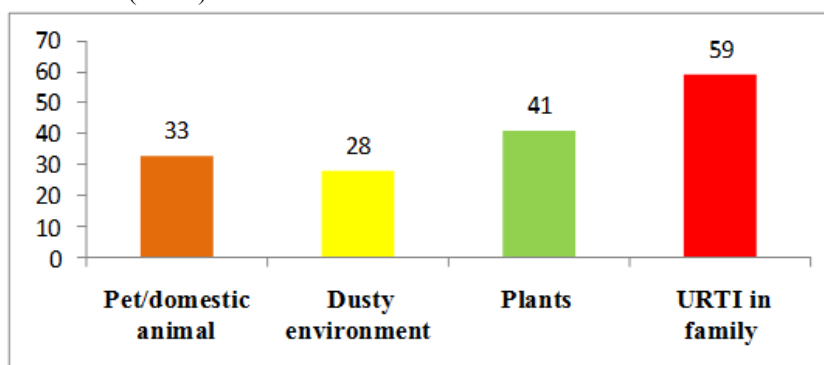
### 3.2 Related to predisposing factors of URTI

#### Physical factors

The common physical factors of the samples which can contribute to URTI were urban living area, open waste disposal, exposure to cold, same sickness (URT) in the family, smoking inside the house and irregular intake of fruits by the child.

#### Biological factors

Figure no 1 shows biological factors of the samples which can cause URTI among children. These were pet or domestic animals, dusty environment near the house, plants near the house and member in the family with same infections (URT).



**Figure No 1: Bar diagram showing percentage distribution of biological factors**

### Social factors

Figure no 2 shows social factors of the samples which can cause URTI among children. These were school going children, sleeping in common room and smoking inside the house by family members.

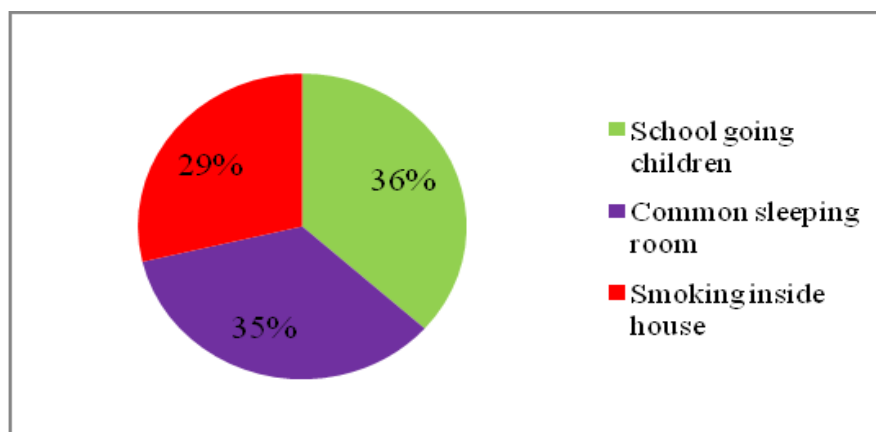


Figure no. 2: Pie chart showing percentage distribution of social factors

### 3.3 Related to pre-test and post-test practice and assessment scores of the samples

Table No. 2: Pre-test and post test practice score of the care givers

Practice score	Range	Mean $\pm$ SD	Mean Difference	't' value
Pre-test	03-09	5.8 $\pm$ 1.43	4	15.38*
Posttest	06-12	9.8 $\pm$ 1.27		

$t_{50} = 1.6753$  at  $p < 0.05$

\* significant

Data presented in Table no 2 shows that the mean post-test practice score (9.8) was higher than the mean pre-test practice score (5.8). The score predict the significant difference (4) at  $p < 0.05$  level.

Table No. 3: Pre-test and post test assessment score of the children.

Assessment score	Range	Mean $\pm$ SD	Mean Difference	't' Value
Pre-test	12-19	16.03 $\pm$ 1.43	5.98	24.9*
Posttest	19-24	22.01 $\pm$ 1.03		

$t_{50} = 1.6753$  at  $p < 0.05$

\* significant

Data presented in Table no 3 shows that the mean post-test assessment score (22.01) was higher than the mean pre-test assessment score (16.03). The score predict the significant difference (5.98) at  $p < 0.05$  level.

### 3.4 Association between practices of the caregivers with socio-demographic variables

Among socio-demographic variables no one had association with the practice of caregivers.

## IV. NURSING IMPLICATIONS

The nursing implications are discussed under nursing practice, nursing education, nursing administration and nursing research.

#### Nursing practice

- Nurses enhance people's ability to deal with the multiple factors that influence their health status and health needs. The goal of nursing is to promote health, prevent illness, restore health and alleviate suffering.
- It helps nurses to understand the level of practice of care givers.
- Thus nurses can help in building good health of the children by providing information about the prevention of URTI among children.

#### Nursing education

- Parents should be encouraged to have continuing education on preventive measures of URTI such as structured instructional module. Education materials available in the hospital setting will enhance quick reference and applicable of into practice.

### **Nursing administration**

- Nurses as administrators can influence the quality of nursing care in health care organisations by planning different health education programmes, in-service education programmes and supervising care at different levels. They can plan outreach activity in collaboration with other agencies.
- This study emphasis the need for education programmes for the parents in community and hospital settings to prevent respiratory infections among children so that their health status can be improved.

### **Nursing research**

- Nurses need to be actively engaged in all phases of the research process, to address ongoing questions of interest to continue to improve child care. The present study could be source of literature for others intending to conduct a similar study related to URTI management among children.

## **V. CONCLUSION**

From the findings of the study, it can be concluded that the administered teaching programme was effective as a method, to improve the practice of the care givers of children between 3-10 years and early recovery of the children. Selected variables such as age of the child, age of the care givers, educational status of the caregiver, family income, number of children in the family and type of family had statistically no significant association with the practice of the care givers.

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