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A study to assess the effectiveness of planned teaching programme knowledge regarding acute respiratory infections and their prevention among mothers of under five in the rural community of Pune city

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Abstract

Acute respiratory infections (ARIs) are the leading cause of death among children less than 5 years in India. Emergence of newer pathogenic organisms, reemergence of disease previously controlled, wide spread antibiotic resistance, and suboptimal immunization coverage even after many innovative efforts are major factors responsible for high incidence of ARI.

Aim of the Study: The main aim of the study was to Effectiveness of planned Teaching Programme on Knowledge of Mothers of Under-Five Children Regarding Acute Respiratory Tract Infections in Selected Rural community of Pune.

Methodology: In view of the nature of the problem selected for the study and objective to be accomplished evaluative research approach was considered. Sample select for the study was 50 mothers. Simple random sampling technique was used.

Result: Result showed the differences in the pre-test and post-test mean scores were 18.5 indicating that the knowledge is improved considerably during post-test. The obtained 't' value is 24.1 ($p < 0.01$), which is highly significant at 1% level. This clearly indicates that there is a significant difference in the knowledge of mothers of under-five children before and after the implementation of planned Teaching Programme. Hence the research hypothesis H1 is accepted i.e. there will be significant difference between pre-test and post-test knowledge scores of mothers of under-five children with regard to ARI.

Conclusion: The study concluded that there has been a consistent increase in knowledge of prevention and management of upper respiratory tract infections scores in post-test when compared to pre-test. Therefore, the planned teaching program was effective to increase level of knowledge regarding of upper respiratory tract infections.

Keywords: Knowledge, effectiveness planned teaching program, upper respiratory tract infections, mothers, and children

Introduction

Acute respiratory infections (ARIs) are the leading cause of death among children less than 5 years in India. Emergence of newer pathogenic organisms, reemergence of disease previously controlled, wide spread antibiotic resistance, and suboptimal immunization coverage even after many innovative efforts are major factors responsible for high incidence of ARI. Drastic reduction in the burden of ARI by low-cost interventions such as hand washing, breast feeding, availability of rapid and feasible array of diagnostics, and introduction of pentavalent vaccine under National Immunization Schedule which are ongoing are necessary for reduction of ARI. Except during the neonatal period, ARIs are the most common causes of both illness and mortality in children under five, who average three to six episodes of ARIs annually regardless of where they live or what their economic situation is. However, the proportion of mild to severe disease varies between high- and low-income countries, and because of differences in specific etiologist and risk factors, the severity of LRIs in children under five is worse in developing countries, resulting in a higher case-fatality rate [1].

Acute respiratory tract infections are the most common cause of illness and death among children in the world. In India, in the year 2001, outpatient attendance attributed to acute respiratory infections was as high as 20 percent to 40 percent of all the clients and 12 percent to 35 percent of in patients [2].

This programme was taken up as a pilot project in the country in the year 1990. Since 1992-1993, this programme is being implemented a part of the child survival and safe motherhood programme, which is now an integral part of the RCH programme^[3].

Typically, children will have cold or flu-like symptoms, with a runny nose or nasal congestion sneezing with a scratched throat, irritating throat, a cough, some might have a fever or change in their ability to eat or drink. In most cases, parents and caregivers can manage these symptoms. However, in some cases it may be associated with group A Streptococcal infection^[4].

Several factors predispose children under five years of age for ARIs. These factors may be attributed to child factors such as age and female sex maternal factors such as lower age unemployment and lower educational status environmental-related factors such as urban residence rural residence wet season and co-morbid diseases. Host includes factors such as malnutrition, immunization status, vitamin A deficiency, absence of breast-feeding, low birth weight and young age^[5].

Acute respiratory infections mostly in the form of pneumonia, is leading cause of death in under-five children killing more than 2 million children annually. Upto 40 percent of children seen in health clinics are suffering from acute respiratory infection, mostly in the form of pneumonia and many deaths attributed to other causes are in fact "hidden" acute respiratory tract infections cases.

Need for the Study

Young children fall an easy prey to infectious diseases. Under-five group is the most important age group in all societies, not because they constitute about 30 percent of total population, because there is a renewed awareness that the determinants of infectious disease are laid down at this age group^[6].

Globally, acute respiratory tract infections (ARTIs) are the leading cause of childhood morbidity and mortality. However, these infections remain poorly understood due to absence of affordable and effective diagnostic tools. In this study, viral acute respiratory tract infections were studied in hospitalised children up to 5 years of age (n = 256) using a commercial multiplex real time PCR. RSV (45.69%), RV (17.88%), HBoV (7.95%), Infl A (7.28%), HMPV (6.6%), HPIV3 (5.96%) and Infl A virus (3.97%) were the common etiological agents detected. There was no significant correlation between the clinical signs and symptoms in patients with and without a viral aetiology. Multiplexed real time PCR is an important tool for early detection of viral agents of paediatric ARTI^[8].

Acute respiratory infections (ARI) are responsible for almost 20% of all deaths of children aged less than 5 years worldwide. The proportion of under-fives with ARI that are taken to an appropriate health-care provider is a key indicator for coverage of intervention and care-seeking, and provides critical inputs to the monitoring of progress towards child survival-related Millennium Development Goals and Strategies^[9].

ARIs are the major cause of mortality among children aged less than 5 years especially in developing countries. Worldwide, 20% mortality among children aged less than 5 years is attributed to respiratory tract infections (predominantly pneumonia associated). If we include the neonatal pneumonia also in the pool, the burden comes

around to be 35-40% mortality among children aged less than 5 years accounting for 2.04 million deaths/year. Southeast Asia stands first in number for ARI incidence, accounting for more than 80% of all incidences together with sub-Saharan African countries. In India, more than 4 lakh deaths every year are due to pneumonia accounting for 13%-16% of all deaths in the pediatric hospital admissions. Million deaths study based on the register general of India mortality statistics had reported 369,000 deaths due to pneumonia among children 1-59 months at the rate of 13.5/1000 live births. More number of deaths due to pneumonia was reported from central India^[10].

Health education is the process by which individuals and groups of people learn to behave in a manner conducive to the promotion, maintenance or restoration of health regarding acute respiratory infections. Hence the Investigator has planned to take up a study to impart and improve the knowledge of the mothers of the under-five children with regard to selected acute respiratory tract infections in selected rural community of Pune city.

Aim of the Study

The main aim of the study was to Effectiveness of planned Teaching Programme on Knowledge of Mothers of Under-Five Children Regarding Acute Respiratory Tract Infections in Selected Rural community of Pune city.

Material and Methods

In view of the nature of the problem selected for the study and objective to be accomplished experimental research approach was considered to assess the effectiveness of planned teaching program on Knowledge of Mothers of Under-Five Children Regarding Acute Respiratory Tract Infections. The research design selected for the study was pre-experimental one group pretest posttest design. The accessible population in this study where significant mothers of under five children who were present on the day of data collection. The study was conducted in rural slum area i.e. Loni Kalbhor rural area of, Pune city. This study sample size was 50 mothers of under five children who are fulfil sampling criteria. Simple random sampling technique was used. Even after prior appointments, if subjects were found busy in their emergency work, care was taken not to interrupt them in their work and again suitable time was taken. Study tool was filled personally by interviewing the subjects. The sample characteristics were described using frequency and percentage. Pearson's co-relation coefficient was used to assess the effectiveness of structured teaching. The content validity and reliability of the tool was done, which suggested that the tool was reliable. The pilot study was done on 6 samples and found that the study was feasible for the final study.

The data obtained was analyzed in terms of the objective of the study using descriptive and inferential statistics. The plan of data analysis was developed under the excellent direction of experts in the field nursing and statistics.

Result

Section I: Demographic variable

1 more than one third of mothers of under- five children belongs to 25-35 years (45%), More than half of the mothers were housewives (56%). 40 percent of families were having monthly family income of Rs.1000/- to Rs.5000/, majority of (50%) of mother having 2 children More than one fourth

of sample were having family size of four members (26%), Majority of mothers have taken care of their under-five children during ARI (90%).

Section-II: Findings related pre-test Level of the knowledge of mothers of under-five children regarding to acute respiratory tract infections

Table 1: The distribution of knowledge levels, with frequencies and percentages for each level (Poor: 15/30%, Average: 20/40%, Good: 15/30%) along with their respective mean and standard deviation values (Poor: Mean = 11.5, SD = 2.8)

Knowledge level	Frequency	%	Mean	SD
Poor	15	30	11.5	2.8
Average	20	40		
Good	15	30		

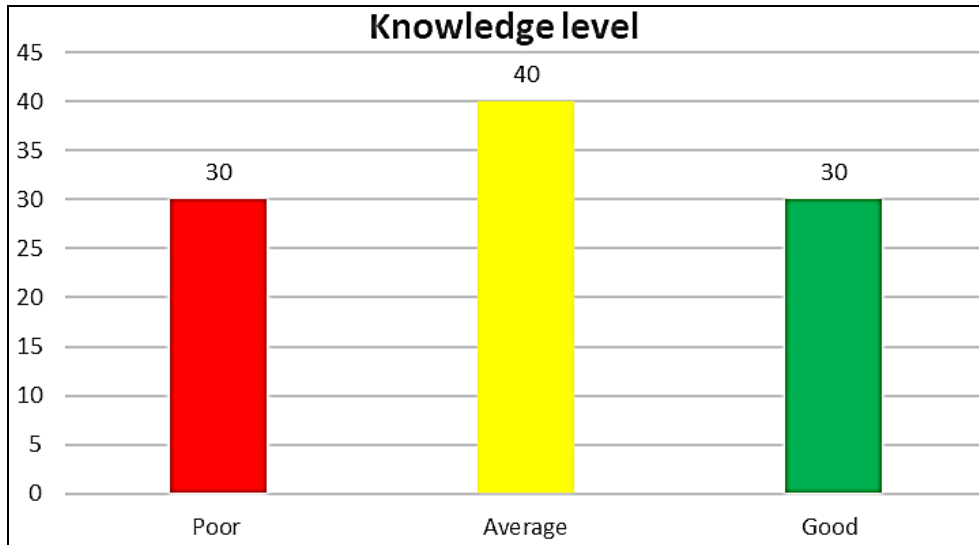


Fig 1: Level of the knowledge of mothers of under-five children in pre- test t regarding acute respiratory tract infections

In pre-test data showed Level of knowledge regarding acute respiratory tract infection were 30% having poor, 40% were average and 30% were good knowledge level. The pre-test knowledge level mean was 11.5 with 2.8 SD.

regarding acute respiratory tract infection were 70% having good, 30% were average and 10% were poor knowledge level. The post-test knowledge level mean was 18.55 with 2.9 SD.

Section III: Findings Related Post Test Level of the Knowledge of Mothers of under-Five Children Regarding to Acute Respiratory Tract Infections

Section IV: Findings Related to Effectiveness of Structured Teaching Programme Knowledge Regarding Acute Respiratory Infections and its Prevention among Mothers of under Five in Rural Community

In post test data showed Level of knowledge was gained

Table 2: Group Pre-test: 50 participants, Mean = 11.57, SD = 2.8, T-value = 25.6420, P-value < 0.0001, Statistically Significant; Group Post-test: 50 participants, Mean = 18.55, SD = 2.9

		N	Mean	SD	T-value	P-value	Remarks
Group	Pre-test	50	11.57	2.8	25.6420	<0.0001	Statistically Significant
	Post-post	50	18.55	2.9			

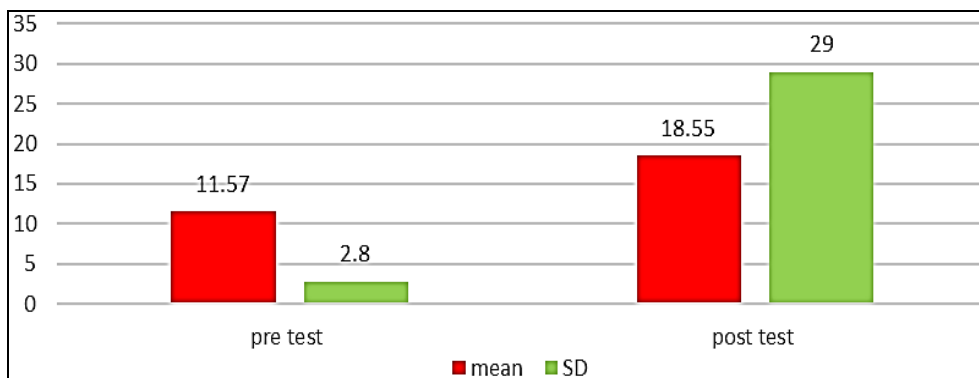


Fig 2: Effectiveness of planned teaching Programme knowledge regarding acute respiratory infections and its prevention among mothers of under five in rural community

Present study data showed that Knowledge scores regarding acute respiratory tract infections in post-test is higher (18.55) than in the pre-test (11.5). The differences in the

pre-test and post-test mean scores were 7.98 indicating that the knowledge is improved considerably during post-test. The obtained 't' value is 25.6 ($p < 0.01$), which is highly

significant at 1% level. This clearly indicates that there is a significant difference in the knowledge of mothers of under-five children before and after the implementation of planned Teaching Programme. Hence the research hypothesis H_1 is accepted i.e., there will be significant difference between pre-test and post-test knowledge scores of mothers of under-five children regarding ARI.

Section V: Findings Related to the Association between Knowledge and Selected Demographic Variables

There was no significant association found between socio-demographic variables with knowledge regarding acute respiratory tract infections among mothers of under –five children. Like monthly income, Number of under five children in a family. Except Age of the mothers, Family size, Mothers exposure to ARI, showing significant association found between socio-demographic variables with knowledge regarding acute respiratory tract infections among mothers of under –five children.

Discussion

The present study was undertaken to pre-experimental study to assess Effectiveness of planned Teaching Programme knowledge regarding Acute Respiratory Infections and its prevention among mothers of under five in rural community of Pune city.

The study might be compared to a Quasi experimental one group pre-test-post-test research design was adopted to conduct the study among 45 mothers of under five children residing in Mati, Rural area of Lucknow, Uttar Pradesh, who matched the inclusion criteria were selected through non-probability purposive sampling technique. The results revealed that the mean post-test knowledge score was higher than mean pre-test knowledge score with standard deviation 15.31 ± 1.84 and 7.06 ± 1.25 respectively. The improvement of knowledge score is the mean difference of 8.25 which shows that there was a significant change in knowledge level of mothers of under five children. The study concluded that the structured teaching programme was effective in improving the level of knowledge regarding acute respiratory tract infections among mothers of under five children^[11].

Conclusion

The study concluded that there has been a consistent increase in knowledge regarding upper respiratory tract infections scores in post-test when compared to pre-test. Therefore, the planned teaching program was effective to increase level of knowledge regarding upper respiratory tract infections.

Conflict of Interest

The authors certify that they have no involvement in any organization or entity with any financial or non-financial interest in the subject matter or materials discussed in this paper.

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