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RESEARCH ARTICLE

KNOWLEDGE OF MOTHERS REGARDING PREVENTION AND MANAGEMENT OF RESPIRATORY TRACT INFECTION IN CHILDREN

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ABSTRACT

The aim of this study was to assess the effectiveness of structured teaching programme on knowledge regarding prevention and management of respiratory tract infection in children, among the mothers. A quasi experimental pre test post test design was adopted. 50 mothers having children aged 0 to 5 years were selected by using purposive sampling technique. The pre test data collected using demographic Performa and a structured knowledge questionnaire on prevention and management of respiratory tract infection in children, among the mothers of selected rural community area. After that structured teaching programme was administered and post test was conducted on the 8th day to the samples.

The pre test knowledge score showed that 14% had adequate knowledge and 84% had average knowledge on prevention and management of respiratory tract infection in children. In the post test 6% were graded as average knowledge, 80% had adequate knowledge and 14% were graded as excellent knowledge after the7th day of administration of teaching programme.

INTRODUCTION

Acute respiratory tract infection (ARTI) is considered as one of the major public health problems and it is recognized as the leading cause of mortality and morbidity in many countries. The biggest problem for developing countries is the mortality from ARI in children less than five year of age.(Thamar.K.Y 2006) Acute respiratory infections (ARI), particularly lower respiratory tract infections (LRTI), are the leading cause of under-five morbidity for an estimated just about two million childhood deaths globally. ARI contributes to one-fifths of all under-five deaths in developing countries which is around 12 million every year. It is estimated that Bangladesh, India, and Nepal together account for 40% of the global ARI mortality. (Farzana 2013)

Among respiratory infections, Upper Respiratory Tract Infections (URTI) is the most common among children, which include infections of nose, throat, sinuses, and ears. Major symptoms of URTI comprise fever, sneezing, cough, and runny or stuffy nose, and sore throat, anorexia, headache, body aches, and fatigue. The Lower Respiratory Tract Infections (LRTI) such as bronchitis, pneumonia. (Vandana C 2013)

India being a large country with large population but minimal resources, the community services are not reachable to all children . In any community the under five children constitute a priority group. These children are vulnerable or special risk group and their health is related to their growth and development and survival.(park K 2005) National family health survey (NFHS -3) revealed that 6% of under five children had symptoms of an ARI (cough, short and rapid breathing). Out of these children 69% were taken to a health facility or health provider for treatment. (Bipin J P 2012) A study was conducted in rural Haryana, to assess the knowledge and practice of mothers about acute respiratory tract infection in children. The study reveals that the use of herbal tea in ARI was widely prevalent. (Saini NK 2002) It is seen that the knowledge of less educated mothers of children with ARI is low. Interventions like health education programme, media campaign, lady health workers (LHW), banners and NGOs etc can help to improve situation. (Rajesh K 2012)

A study evaluated the mothers' knowledge and practices in managing minor illnesses of children .The mean score for management of child with URTI was 4.9(SD=1.4) and for child with diarrhoea was 6.4(SD=1.2).(Nesrin N 2013).A study showed that there was a statistical significant improvements (P<0.01) in mother's knowledge and practices after giving the guidance booklet regarding respiratory illness in children,.(Nagwa A 2013) It was seen that planned teaching programme is effective in enhancing knowledge of mothers regarding pneumonia (Bijapur BS 2010) It was studied that home-based steam inhalation for the under-fives with acute upper respiratory infection was effective.(Lakshmamma VT 2009) A study showed that there was knowledge deficit among the mothers regarding the prevention of respiratory infection among children. (Samundeeswari V 2010) Another

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study revealed that the education had a vital role in improving the practice of caregivers and recovery of the children. (Vandana Chauhan 2013) A study evaluated the occurrence of ARI among infants and knowledge of mothers regarding acute respiratory infections which showed that majority of mothers (71.2%) had an average knowledge about ARI. (Pai MS 2004) Another study proved that Structured Teaching Programme on prevention of respiratory tract infection in children enhances mother's knowledge. (Sasikala T 2008)

The investigators in their day to day clinical practice as well as during the community postings have seen many children suffering from Respiratory tract infection (RTI). If mothers have adequate knowledge regarding RTI in children, they can prevent or early identify and get prompt treatment for their children with RTI. Therefore investigators developed a structured teaching programme for mothers on prevention and management of RTI in children, so that their knowledge will be enhanced and thereby they will be able to prevent RTI in their children and provide a good care to the children with RTI.

Objectives of the study

1. To determine the pre test knowledge level of mothers regarding prevention and management of respiratory tract infection in children.
2. To evaluate effectiveness of structured teaching programme regarding prevention and management of respiratory tract infection in children.
3. To find association between pre test knowledge scores and selected demographic variables.

MATERIALS AND METHODS

To accomplish the objectives of the problem under study, a quasi experimental pre test post test design was adopted for the study. A sample of 50 mothers having children aged 0 to 5 years were selected by using purposive sampling technique. The setting of the study was selected rural community area, Mangalore. Demographic performa and a structured knowledge questionnaire on prevention and management of respiratory tract infection in children were used to assess the knowledge of the mothers. Demographic performa of mothers consisted of Age, religion, education, socio-economic status, type of house, and number of family members, ventilation in house, previous information on prevention and management of respiratory tract infection in children and the structured knowledge questionnaire on prevention and management of respiratory tract infection in children consist 30 items. Pilot study was done to find the feasibility of the study. Finally to conduct the research study in a selected rural community area, formal written permission was obtained from the concerned authority. The purpose of the study was explained to the sample and their willingness was ascertained by taking informed written consent. The knowledge questionnaire was administered to the samples and the data was collected. The collected data was analysed using descriptive and inferential statistics.

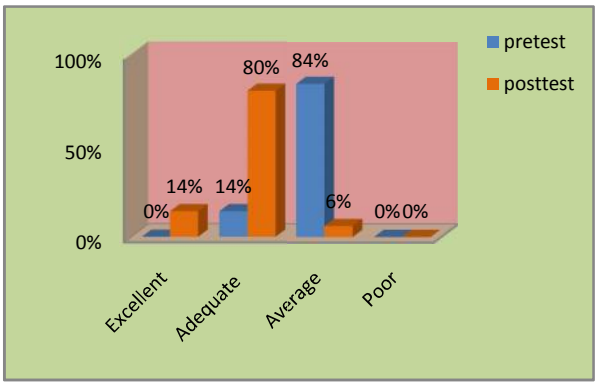

Figure 1 Description of samples according to pre-test& post- test knowledge grading

Figure 1 shows the pre test knowledge scores of mothers of under five children regarding prevention and management of respiratory tract infection in under children. This reveals that 14% of mothers had adequate knowledge 84% of

Table 1 Distribution samples according to demographic characteristics

Sl. no	Sample characteristic	Category	Frequency	Percentage
1.	Age in years	<25	13	26%
		25-29	27	54%
		30-34	9	18%
		>34	1	2%
2.	Religion	Hindu	27	54%
		Christian	5	10%
		Muslim	18	36%
3.	Occupation	Homemaker	44	88%
		Self employee	2	4%
		Private employee	3	6%
		Govt.employee	1	2%
4.	Education	primary	2	4%
		High school	27	54%
		PUC	20	40%
		Graduation& above	1	2%
5.	Monthly income in rupees	<3000	2	4%
		3001-5000	14	28%
		5001-7000	30	60%
		>7000	4	8%
6.	Number of the family member	1-4	24	48%
		5-6	24	48%
		7-8	2	4%
7.	ventilation in house	Adequate	49	98%
		Inadequate	1	2%

mothers had average knowledge regarding respiratory tract

Table 2 Area wise pre test knowledge scores of mothers

SI No	Area	Maximum possible score	Mean		Mean percentage		Standard deviation	
			Pre test	Post test	Pre test	Post test	Pre test	Post test
1	General aspect of respiratory tract infection	6	2.68	4.88	44.66%	81.3%	1.15	1.099
2	Classification, risk factors and causative organisms of respiratory tract infection	2	1.04	1.34	52%	67%	0.588	0.592
3	Clinical manifestations and complications of RTI	2	1.24	1.54	62%	77%	0.476	0.542
4	Prevention of RTI	10	4.6	6.9	46%	69%	1.737	1.528
5	Management of RTI	10	4.62	6.34	46.2%	63.4%	1.243	1.721

Table 3 Over all pre test and post test mean knowledge on prevention and management of RTI in under five children

Aspects	Mean	N	Standard Deviation	't'value
Pre test knowledge scores	14.14	50	2.748	16.385
Post test knowledge scores	20.9	50	2.76575	
Enhancement	6.8		0.018	

Infection in children with mean knowledge scores 14.12 and mean percentage 47.06%. And the post test knowledge scores of mothers of under five children regarding prevention and management of respiratory tract infection in under five children. This reveals that 14% of mothers had excellent knowledge, 80% of mothers had adequate knowledge, 6% of mothers had average knowledge regarding respiratory tract infection in under five children with mean knowledge scores 21.04 and mean percentage 70.13%

Table 3 reveals the overall pre and post test knowledge on prevention and management of RTI in under five children. It shows that the overall pre test mean knowledge score found to be 14.14 with SD 2.748 as compared to over all post test mean knowledge score noticed as 20.9400 with SD 2.76575. Further, enhancement mean knowledge score found to be 6.8 with SD 0.018.The data subjected for statistical paired t test showed a highly significant difference ($p<0.05$) existing between pre test and post test over all mean knowledge score . P value=0.000 ie <0.05, we accept the hypothesis. We conclude that there is a statistically significant difference between the pre and post knowledge scores. We can see that the mean knowledge has increased from 14.14 to 20.94 after the intervention structured teaching programme. Hence conclude that the structured teaching programme is effective ($p<0.05$)

Computed chi square ($\chi 2$) showed that there was a significant association between the knowledge score and the selected demographic variables such as Religion ($\chi 2$=0.753, tabled value=7.82), Occupation ($\chi 2$ =5.47, tabled value=9.49), Monthly income ($\chi 2$=8.82, tabled value=7.82), , Number of family members (=$\chi 2$10.98, tabled value=7.82). And there was no association between the pre test knowledge score and demographic variables that is age($\chi 2$=1.162,tabied value= 7.82),occupation ($\chi 2$=5.47,tabled value=9.49) Type of house ($\chi 2$ =0.65, tabled value=3.84),Ventilation in house ($\chi 2$=0, tabled value=3.84), Type of family managem($\chi 2$=0.58, tabled value=3.84), Received any previous information on prevention and ent of respiratory tract infection ($\chi 2$=0, tabled value=3.84) at 0.05 level of significance.

CONCLUSION

The investigators in their day to day clinical practice as well as during the community postings have seen many children suffering from Respiratory tract infection (RTI). Prevention is the best treatment for RTI. If mothers have adequate knowledge regarding RTI in children, they can prevent or early identify and get prompt treatment for their children with RTI. Therefore investigators has to develop a structured teaching programme for mothers on prevention and management of RTI in children, so that their knowledge will be enhanced and thereby they will be able to prevent RTI in their children and provide a good care to the children with RTI.

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