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Effectiveness of Structured Teaching Programme on Respiratory Hygiene Practices among school children

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Abstract

Background of the Study: Children are more vulnerable group to respiratory infections. If a child follows proper respiratory hygiene practices, the spread of respiratory infection can be reduced. A child spends most of the precious time in school. Schools are important setting for the spread of infections, especially respiratory tract infections. The close proximity interaction in schools and within students social network each other the transmission of infections, particularly few because of their coughing and sneezing behaviours and habits. The proper respiratory hygiene is one of the foremost techniques to reduce respiratory tract infection. The respiratory hygiene is deemed as the simplest method for control of respiratory tract infection. **Method:** The experimental research design is selected for the study. The 30 samples are selected by non probability convenience sampling technique. The tools used for the data collection are proforma for selected personal variables, signs and symptoms of respiratory tract infection assessment tool, structured knowledge questionnaire. **Results:** The study shows that there is no significant association between the knowledge on respiratory hygiene practices among school children and their selected personal variables except for standard of studying and parental education. There is a significant difference between pre test and post test knowledge scores of children regarding respiratory hygiene practices. **Conclusion:** The Structured Teaching Program was effective in enhancing the knowledge regarding respiratory hygiene practices among school children. Therefore, the study reinforces the need to organize health campaigns and teaching program which enhances knowledge regarding respiratory hygiene practices among school children.

Keywords: Respiratory hygiene practices, School children, STP.

INTRODUCTION

Childhood is believed to be one of the most interesting, enjoyable and happiest period in one's life. Every child has the right to possess good health with special emphasis on immunization, good nutrition, clean water, adequate sanitation and safe healthy environment.

A child spends most of the precious time in school. Schools are important setting for the spread of infections, especially respiratory tract infections. The close proximity interaction in schools and within students social network each other the transmission of infections, particularly few because of their coughing and sneezing behaviours and habits [1].

Acute Respiratory Infection may cause inflammation of the respiratory tract from nose to alveoli with a wide range of combination of signs and symptoms. ARI is often classified by clinical syndromes depending on site of infection [2].

Every year, ARI in young children is responsible for an estimated 3.9 million death worldwide ARI is an important cause of morbidity in children on an average children below 5 years of age suffer about 5 episodes of ARI per child per year. It accounting for about 238 millions account [3].

In India, ARI is major causes of death. It is the one of reason for admission in hospital. Hospital recorded that 13% of inpatient death in paediatric ward are due to ARI. In India, during year 2014, about 34.81 million cases of ARI recorded [4].

The occurrence of respiratory infections in school children mainly it focuses on unprotectable practice while coughing and sneezing. Exploring to the contaminated particles leads in suffering from respiratory tract infection.

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These are many risk factors for respiratory infections like air pollution, solid fuel smoke, passive smoking etc. Environmental factors such as overcrowding with complaint poor ventilation at homes and schools may make the health effects of indoor air pollution [5].

Hand and respiratory hygiene interactions for respiratory infection are to children. If a child follows the respiratory hygiene practices from early period if self it has many benefits to child health. The risk of adverse effects is very low and there is a potential for additional benefits such as a reduction in gastro intestinal infections which could make hygiene interventions more cost-effective [6].

Respiratory hygiene targets and potentially very common transmission pathway i.e droplet spread. Common cold\flue spread from large droplet and by contact between peoples in close proximity. Hence, respiratory hygiene plays a major role, in preventing the spread of flue like symptoms. If many or all schools are able to reduce transmission through respiratory hygiene, the global burden of respiratory infection and child mortality can be reduced [7].

STATEMENT PROBLEM

A study to assess the effectiveness of Structured Teaching Programme on Respiratory Hygiene Practices among school children at selected schools in Mysuru.

OBJECTIVES OF THE STUDY

1. To assess the knowledge regarding respiratory hygiene practice among school children.
2. To explore the prevalence of respiratory infections among school children.
3. To determine the effectiveness of Structured Teaching Programme on respiratory hygiene practices
4. To determine the association between knowledge of school children regarding respiratory hygiene practice with their selected personal variables.

HYPOTHESIS

H_1: There will be significant difference in respiratory hygiene practices among school children before and after administration of Structured Teaching Programme

H_2: There will be significant association between knowledge levels of school children regarding respiratory hygiene practices with their selected personal variables.

ASSUMPTIONS

1. School children are at risk of respiratory tract infection.
2. School children may have some knowledge regarding respiratory hygiene practices.
3. Awareness can increase the knowledge regarding respiratory hygiene practices among school children.

METHODOLOGY

The present study was conducted among school children. One group pre test and post test design was adopted for the study. 30 samples were selected using non probability convenience sampling technique. Data was collected with the help of following tools: Proforma for personal variables, assessment of signs and symptoms of respiratory tract infection, structured knowledge questionnaire and Structured Teaching Programme among school children. The tools were validated by five experts and the reliability of the tool was established. Split Half

method was used to establish the reliability and the tool was found reliable. Concept of construct validity was used to assess the reliability of prevention of respiratory tract infection among school children. The pilot study was conducted to assess the feasibility of the tools with the prior permission from Shreekantha higher primary school, Mysuru and it was found to be feasible. Thirty samples were selected from JSS school by using non probability convenience sampling technique. A written informed consent was obtained from the participants. The data was collected by using respiratory tract infection risk assessment tool and structured knowledge questionnaire from 18-3-19 to 23-3-19. On the same day, STP was given to school children on the 6th day post test was conducted for school children. Analysis and interpretation of data was done by using both descriptive and inferential statistics.

RESULTS

Section 1: Description of personal variables of the school children.

Findings of present study shows that majority16 (53.33%) are in the age group of 12 to 13 years 14(46.66%) are in the age group of 10-11years. Majority of school children 16 (53.33%) were males and 14(46.66%) were females. Majority 11(36.66%) are in 6th standard, 10 (33.33%) are in 5th standard and 9(30%) are studying in 7th standard majority. Study also shows that 11(36.66%) of school children residing in rural area, 18 (60%) residing in urban area and remaining 1(3.33%) residing in suburban area. Majority of school children parents education is higher secondary school 23 (76%), no formal education 06(20%) and graduation 1 (3.3%). Majority of school children 21(70%) have not attended awareness program on respiratory hygiene practices and remaining 09(30%) attended awareness program on respiratory hygiene practices.

Section 2: Data related to signs and symptoms of Respiratory Tract Infection was assessed, analyzed and presented in Table -1.

Table 1: Frequency and percentage distribution of school children according to signs and symptoms of respiratory tract infection. (n=30)

S. no.	Signs and symptoms	Present		Absent	
		(f)	(%)	(f)	(%)
1.	Nasal discharge	4	13.33%	26	86.66%
2.	Sneezing	10	33.33%	20	66.66%
3.	Watering of eyes	10	33.33%	20	66.66%
4.	Blocked nose	15	50%	15	50%
5.	Dry mouth	3	10%	27	90%
6.	Cough	9	30%	21	70%
7.	Increased body Temperature(>98.6˚F)	11	36.66%	19	63.33%

The data presented in table 1 shows that majority 15(50%) of school children have blocked nose, 11(36.66%) of school children have increased body temperature (>98.6˚F), 10(33.33%) of school children has watering of eyes, 10(33.33%) has sneezing, 9(30%) have cough, 4(13.33%) have nasal discharge and 3(10%) of school children have dry mouth.

Section 3: Description of knowledge scores of regarding respiratory hygiene practices.

Structured knowledge questionnaire on respiratory hygiene practices was used to assess the knowledge of school children and analyzed data is presented below tables

a) **Mean, median, range and SD (standard deviation) of knowledge scores of pretest and post test.**

Table 3: Mean, median, range and SD (standard deviation) of knowledge scores of pre test and post test. **(n=30)**

Group	Mean	Median	Range	SD (Standard deviation)
Pre test	12.13	13	6-15	± 2.02
Post test	18.53	19	13-23	± 2.27

Data presented in Table -2 shows that the pre test knowledge scores of school children regarding respiratory hygiene practices ranging from 6-15 with a mean of 12.13, median 13 and SD ± 2.02. The post test knowledge scores of school children regarding respiratory hygiene practices ranging from 13-23 with a mean of 18.53, median 19 and SD ± 2.27.

b) Level of knowledge of school children regarding respiratory hygiene practice

The knowledge scores of school children regarding respiratory hygiene practice was further categorized arbitrarily as Good (21-26), Average (14-20) and poor knowledge (≤ 13). Analyzed data is presented in Table 4

Table 4: Frequency and percentage distribution of level of knowledge scores of school children regarding respiratory hygiene practices. **(n=30)**

	Frequency	Percentage	Frequency	Percentage
Good knowledge	00	00	00	00
Average knowledge	06	20%	28	93.2%
Poor knowledge	24	80%	2	6.66%

It is evident that from table-4 that, out of 30 school children majority has average knowledge 6(20%) and remaining had poor knowledge 24(80%) in pre test and in post test majority has average knowledge 28(93.2%) and remaining having poor knowledge 2(6.66%). None of the school children have good knowledge in both pre and post test.

Section 4: Significance of difference between pre test and post test knowledge scores regarding respiratory hygiene practices among school children.

In order to find out the significance of difference between the mean pre test, post test knowledge score, paired 't' value was computed and data are presented in the table 5. To test the statistical significance the following null hypothesis was stated.

H_{01} -There will be no significance difference between mean pre test and post test knowledge score of school children.

Table 5: Mean, mean difference, standard deviation difference, standard error and paired 't' test of school children regarding respiratory hygiene practices. **(n=30)**

Group	Mean	Mean Difference	Standard deviation difference	Standard error	't' value
Pre-test	12.13	6.4	±0.25	±0.52	12.55
Post-test	18.53				

t(29)=2.048; p<0.05

The data presented in table 5 shows that the mean pre test score of respiratory hygiene practices among school children is 12.13 and post test mean is 18.53. To find out the significance of difference between mean pre test and post test of respiratory hygiene practices among school children paired 't' value was computed and obtained 't' value 12.55. Since the calculated 't' value is greater than table value at 0.05 level of significance the H_{01} is not supported, inferring that Structured Teaching Programme is effective in increasing the knowledge of school children.

Section 5: Association between level of knowledge regarding respiratory hygiene practices with their selected personal variables.

Finding of present study shows that, there is no significant association between the knowledge on respiratory hygiene practices among school children and their selected personal variables except for standard of studying and parental education. Hence the H_{01} is partially accepted at 0.05 level of significance, inferring that knowledge regarding respiratory hygiene practices among school children is not influenced by their selected personal variables except for standard of studying and parental education.

CONCLUSION

Thus, it was concluded that, the Structured Teaching Programme was effective in enhancing the knowledge regarding respiratory hygiene practices among school children. Therefore, the study reinforces the need to organize health campaigns and teaching programme which enhances knowledge regarding respiratory hygiene practices among school children.

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