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Research Article

A Study to Evaluate the Effectiveness of Interactive Session on Knowledge Regarding Prevention of Selected Communicable Diseases among Primary School Children of Selected Government Schools, Hubballi, Karnataka

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Abstract: Background: Communicable disease is an illness due to a specific infectious agent or its toxic product capable of being directly or indirectly transmitted from, animal to animal or from the environment to man or animal and from man to man such as chicken pox, mumps, measles, rubella, filaria, tuberculosis, malaria, dengue fever.
Objectives: 1) To assess the knowledge regarding prevention of communicable diseases among primary school children. 2) To evaluate the effectiveness of interactive session regarding prevention of communicable diseases among primary school children. 3) To find out an association between pre-test knowledge scores of school children and selected socio-demographic variables.
Methodology: An Evaluative approach was used to conduct study with Pre-Experimental: One group Pre-test Post-test research design. The study was conducted among 45 primary school children of selected Government school, Hubballi. Sample was selected by using non-probability: convenient sampling technique. Data was collected by Structured Interview Schedule to assess knowledge. Data analysis was done using Descriptive and Inferential statistics.
Results: Overall result of the study revealed that out of 45 subjects, in pre-test most of the subjects i.e. 17 (37.77%) had good knowledge, 25 (25.55%) had average knowledge and 03 (06.665) had poor knowledge. After administration of interactive session in post-test, 30 (66.66%) had good knowledge, 14 (31.11%) had average knowledge and 01 (02.22%) had poor knowledge regarding communicable diseases and its prevention.
The calculated value of paired 't' value (t_{cal}=19.77) is greater than the tabulated value (t_{tab} = 2.69) at 0.005 level of significance which revealed that there was a gain in knowledge after administration of interactive session. There was association found between four variable i.e. Age, Standard of the Student, Residence and Type of Family. Whereas in regards with remaining variables there were no association found with pre-test knowledge scores of school children.
Conclusion: The study concluded that, the interactive session was effective in enhancing and upgrading the knowledge of school children.
Keywords: Communicable Diseases, Prevention, School Children, Knowledge, Interactive Session.

Introduction

"The children of today will make the India of tomorrow. The way we bring them up with determine the future of the country".

-Pandit Jawaharlal Nehru

All aspects of a society, directly or indirectly have close relationship with the health of every member of the family and of the community especially of its physiologically and culturally vulnerable groups like infants and children. Environmental sanitation, cultural attitudes, values, national and individual economy, education etc, are some of the examples. Since, infants and children are particularly affected, their health care needs are reflected by these aspects of the society [1].

Child health is a state of physical, mental, intellectual, social and emotional well-being and not merely the absence of disease or infirmity. Health children live in families, environments, and communities that provide them with the opportunity to reach their fullest development potential [3]. Illness is caused by infectious disease are common in children in schools and other childcare settings. Socioeconomic factors can increase the risk of outbreaks among children and adolescents in these settings. Some infectious diseases are communicable, i.e. can be transmitted from one person to another [5].

Communicable disease is a crisis of global proportions is today threatening hard won gains in health and life expectancy. They are now the world's biggest killer of children and young adults. They account for more than 13 million deaths a year over the next hour alone, 1,500 people will die from an infectious disease over half of them under five children. Most deaths from infectious disease occur in developing countries, the countries with the least money to spend on health care. Meanwhile, the growth of densely populated cities with unsafe water, poor sanitation and widespread poverty has created the perfect breeding ground for out breaks of disease [6].

Common communicable diseases in children are Chicken Pox (Varicella), Common cold, Conjunctivitis (Pink-eye), Diarrhoea, Fifth`s Disease (Parvovirus B19), Hand, Foot and Mouth Disease, Hepatitis A, Hepatitis B, Impetigo, Influenza, Lice, Measles (Rubeola), Meningitis (Viral), Mononucleosis, Mumps, Pinworm, Roseola (*Examthem subitem*), Rubella (German Measles), Scabies, Scarlet Fever, Strep Throat (Streptococcal Sore Throat), Whooping Cough (Pertussis), Tuberculosis, Malaria and Dengue fever [7].

Tuberculosis is specific infectious disease caused by *Mycobacterium tuberculosis*. The diseases primary affects lungs, causes pulmonary tuberculosis. Tuberculosis remains a worldwide public health problem despite the facts that the causative organism was discovered more than 100 years ago and highly effective drugs and vaccines are available making Tuberculosis a preventable and curable disease. It is a disease with devasting social and economic costs [4].

The National Vector Borne Disease Control Programme (NVBDCP) is an umbrella programme for prevention of control of vector borne diseases (VBDs), viz, Malaria, Lymphatic Filaria, Kala-azar, Dengue, Chikungunya and Japanese Encephalitis (JE). These diseases pose major public health problems and hamper socio-economic development. Generally the rural, tribal and urban slum areas are inhabited mostly by people of socio-economic groups who are more prone to develop vector borne diseases and are considered as high risk groups [8].

Malaria is mosquito-borne febrile disease caused by malaria. Malaria (mala means bad and aria meaning air) is a protozoal infection, characterized by recurrent fever, splenomegaly and anaemia [2]. Despite significant improvement in prevention and control for the past decades, malaria remains a significant public health concern. Malaria is a treatable and preventable disease requiring well-

organized and delivered intervention programs. Malaria reduction is targeted through a rapid scale-up of four proven and highly effective malaria prevention and treatment measures: insecticide-treatment mosquito nets (ITNs); indoor residual spraying (IRS); accurate diagnosis and prompt treatment with artemisinin-based combination therapies (ACTs); and intermittent preventive treatment of pregnant women (IPTp) [9].

Dengue is self-limiting acute disease characterized by fever, headache, muscle and joint pain, rash, nausea and vomiting. Some infections result in Dengue Haemorrhagic Fever (DHF) and its severe form Dengue Shock Syndrome (DSS) can threaten the patient`s life primarily through increased vascular permeability and shock due to bleeding from internal organs. Presently there is no specific anti-viral drug or vaccine against dengue infection. Mortality can be minimized by early diagnosis and prompt symptomatic management of cases [10].

Communicable diseases remain a major public health problem in the developing countries predominately seen in school going children. Public health interventions like supply of drinking water, appropriate sanitation, awareness of diseases and its transmission and practices of good personal hygiene practices may be employed. Also, vaccination and rationale use of antibiotics based on the culture sensitivity pattern will help in reducing the burden of the diseases.

Statement of the problem

"A study to evaluate the effectiveness of interactive session on knowledge regarding prevention of selected communicable diseases among primary school children of selected Government Schools, Hubballi."

Objectives of the study

1) To assess the knowledge regarding prevention of communicable disease among primary school children.
2) To evaluate the effectiveness of Interactive session regarding prevention of communicable disease among primary school children.
3) To find out an association between pre-test knowledge scores and selected demographic variables.

Methodology

Research approach : Evaluative research approach
Research design : Pre-experimental: One group Pre-test post-test design

Variables under the study

Variables
Independent Variables : Interactive session
Dependent Variables : Knowledge on communicable diseases and its prevention.

Extraneous Variables : Socio-demographic variable such as age, gender, class, religion, education of the father, education of the mother, income of the parents, type of the family, habitat, source of information regarding selected communicable diseases and its prevention.

Settings of the study : Government Kannada Higher Primary School, Unkal, Hubballi.
Population : School children
Sample : School children studying in 2nd and 3rd standard
Sample size : 45
Sampling technique : Non-probability: Convenient Sampling technique

Inclusive criteria : School children who were;
1) Studying in 2nd and 3rd standard

2) Understands Kannada
3) Willing to participate in the study

Exclusive criteria : School children who were sick at the time of data collection.

Tools and techniques :
The following tools are intended to use for data collection;
Part-I : Information on demographic variables of respondents.
Part-II : Structured Interview Schedule.

Ethical consideration
Research proposal was approved by the Ethical Committee. Prior permission was taken by concerned authority and informed written consent was taken from each selected sample.

Analysis and Interpretation of Data (Results)
Organization of Findings
The analysis of the data is organized and presented under following sections

Section I: Description of Selected Personal Variables

Table 1. Frequency and percentage distribution of participants according to socio-demographic variables (n=45)

S/N	Socio-demographic variables	Frequency	Percentage
1	**Age in years**		
	07	20	44.44
	08	25	55.55
2	**Gender**		
	Boy	17	37.77
	Girl	28	62.22
3	**Class**		
	2nd standard	20	44.44
	3rd standard	25	55.55
4	**Religion**		
	Hindu	23	51.11
	Muslim	13	28.88
	Christian	04	08.88
	Others	05	11.44
5	**Education of mother**		
	Non formal education	09	20.00
	SSLC	15	33.33
	PUC	16	35.55
	Degree	05	11.44
6	**Education of father**		
	Non formal education	11	24.44
	SSLC	16	35.55
	PUC	12	26.66
	Degree	06	13.33
7	**Income of the parents per month**		
	Below Rs. 10,000	08	17.77
	Rs. 10,000-20,000	19	42.22
	Rs. 20,000-30,000	15	33.33
	More than Rs. 30,000	03	06.66

8	**Type of family**		
	Nuclear	21	46.66
	Joint	11	24.44
	Extended	03	06.66
9	**Habitat**		
	Rural	14	31.11
	Urban	31	68.88
10	**Source of information regarding communicable diseases and its prevention**		
	News paper	08	17.77
	Peer group	10	22.22
	Teacher	12	26.66
	Electronic media (TV/Mob)	15	33.33

Section II: Mean, Median, Mode, Standard Deviation and Range of knowledge scores of subjects regarding communicable diseases and its prevention (n=45)

Table 2. Distribution of area of analysis of mean, median, mode, standard deviation and range of knowledge score of subjects regarding communicable diseases and its prevention

Area of analysis	Mean	Median	Mode	Standard Deviation	Range
Pre-test	20.47	22	25.06	4.25	18
Post-test	33.72	37	43.56	16.39	18
Difference	13.25	15	18.5	12.14	00

The data represented in the table 2 shows that, the pre-test mean knowledge score was 20.47, median 22, mode 25.06, standard deviation 4.25 and range 18. Whereas the post-test, mean knowledge score was 33.72, median 37, mode 43.56, standard deviation 16.39 and range 18. The overall difference in mean knowledge score was 13.25, median 15, mode 18.5, standard deviation 12.14 and range 00.

Section 3: Frequency and percentage distribution of knowledge scores of subjects regarding communicable diseases and its prevention

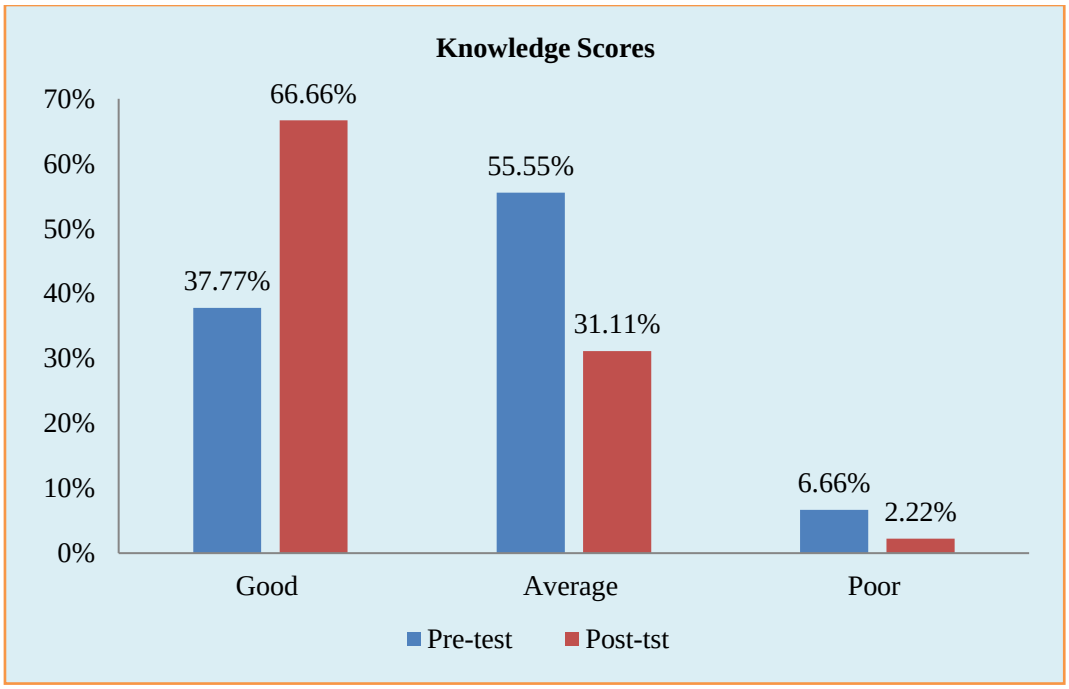

Figure 1. The clustered column diagram represents the percentage diagram of subjects according to Knowledge Scores

Table 3. Pre-test and post-test percentage of knowledge scores of subjects regarding communicable diseases and its prevention

Items	Total score	Mean % of knowledge score of subjects		
		Pre-test	Post-test	Gain in knowledge
Interactive Session	2160	45.37	74.81	29.44*

The data represented in the table 3 shows that there was 29.44% gain in knowledge after administration of Interactive Session.

Table 4. Frequency and percentage distribution of knowledge scores subjects according to area of knowledge

Area of knowledge	Total score	Pre-test		Post-test		Gain in knowledge (%)
		Score obtained (f)	Percentage (%)	Score obtained (f)	Percentage (%)	
Items on knowledge regarding communicable diseases	315	157	49.84	240	76.19	26.35
Items on knowledge regarding Tuberculosis	360	141	39.16	228	63.33	24.17
Items on knowledge regarding Malaria	315	129	40.95	250	79.36	38.41
Items on knowledge regarding Dengue fever	360	184	51.11	267	74.16	23.05
Items on knowledge regarding prevention of communicable diseases	810	369	45.55	631	77.90	32.35

The data represented in the table 4 shows that, the knowledge scores of subjects according to area of analysis. Majority 38.41% gain in knowledge regarding malaria, 32.35% gain in knowledge regarding prevention of communicable diseases, 26.35% gain in knowledge regarding communicable diseases, 24.17% gain in knowledge regarding tuberculosis and 23.05% gain in knowledge regarding dengue fever.

Table 5. Mean difference (d□), Standard error of difference (S□dE) and paired 't' values of knowledge scores of subjects regarding communicable diseases and its prevention

Mean difference (d□)	Standard error of difference (S□dE)	Paired 't' test	
		Calculated	Tabulated
13.25	0.67	19.77*	2.69

The data represented in the table number 5 shows that, the calculated paired' (t_{cal}=19.77*) was greater than the tabulated value (t_{tab}=2.69). Hence, H_1 was accepted. This indicates that the gain in knowledge score was statistically significant at 0.05 level of significance. Therefore, the interactive session was effective to improve the knowledge of subjects.

Section 04: Distribution of findings related to association between pre-test knowledge scores of subjects and selected socio-demographic variables

Findings related to association between pre-test knowledge scores of school students and socio-demographic variables

The computed chi-square test revealed that there was association found between four variables, i.e. Age, Standard of the student, Residence and Type of family. Whereas with regards to remaining

variables like Gender, Education of the mother, Education of the father, Income of the parents, Area of residence, Source of information, there were no association found.

Conclusion

Based on the findings of the study, the following conclusions were drawn:

1) The overall pre-test knowledge scores of school students were average.
2) The post-test knowledge scores of school students after administration of interactive session was significantly higher than the pre-test knowledge scores.
3) Post-test knowledge scores after administration of interactive session showed that gain in knowledge score of subject was statistically significant at 0.05 levels.
4) There was a statistical association found between four variables i.e. Age, Standard of the student, Residence and Type of family. Whereas with regards to remaining variables, there was no association found between pre-test knowledge scores of school students with their selected socio-demographic variables.

Conflicts of interest: There is no conflict of interest of any kind.

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