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A STUDY TO ASSESS THE EFFECTIVENESS OF PLANNED TEACHING PROGRAMME ON KNOWLEDGE AND PRACTICE OF PREVENTIVE MEASURES OF COVID-19 AMONG THE SCHOOL AGE CHILDREN IN GOVERNMENT SCHOOL OF BARDOLI, SURAT, GUJARAT.

[1]Jannet Reena Purani, [2]Shyama Rathod, [3]Dhruvi Patel

[1]Assistant Professor, [2,3]Fourth Year B.Sc. Nursing Students

[1]P P Savani School of Nursing,

[1]P P Savani University, Surat, India

Abstract: This study has been undertaken to assess the knowledge and practice regarding measures used to prevent COVID-19 among school age children. The objectives of the study were to assess the existing knowledge of school age children regarding knowledge and practices of preventive measures of COVID-19, to evaluate the effectiveness of planned health teaching program in terms of gain in post-test knowledge and practice scores and to find the association between knowledge and practices of preventive measure of COVID-19 among the school age children with selected demographic variables. The research design used for the study was non experimental descriptive study and based on Ludwig's modified general system theory and nursing process. The review of literature consisted of studies relate to incidence of COVID-19 in school age children, predisposing factors, causes, and preventive measures of COVID-19 in school age children. The sample size was 60 school age children selected using simple random sampling technique. The tool consisted of section I with 10 items regarding demographic data, section II of 25 items regarding to knowledge aspects and section III of 15 items regarding practice aspects. The interpretation of data was done with the help of descriptive statistics. Major findings of the study reveal that 35% of them good knowledge, 63.33% had average knowledge and 1.67% had poor knowledge regarding COVID-19. After the administration of planned teaching program 98.33% of children gained good knowledge, 1.67% gained average knowledge. Analysis of practice scores revealed that 49.77% always used preventive measures, 22.67% used more often, 10.33% used rarely and 17.22% never practiced preventive measures. The study also revealed that there was significant association between demographic variables like age, parents' education status, type of family and source of information and the pretest knowledge scores of the school age children.

Index Terms **– Planned health teaching, Preventive measures, Covid-19, School age children.**

I. INTRODUCTION

COVID-19 is an infectious disease caused by a newly discovered Corona virus. It is a new virus linked to the same family of viruses as severe acute respiratory syndrome (SARS) and some types of common cold. Since the first reported case of COVID-19 in December 2019, in Wuhan, China, it has quickly spread globally, prompting the World Health Organization (WHO) to declare it a pandemic on 12 March 2020. Most people infected with the COVID-19 virus experienced mild to moderate respiratory illness and recovered without requiring special treatment. Older people and those with underlying medical problems like cardiovascular disease, diabetes, chronic respiratory disease, and cancer were more likely to develop serious illness. Most people who become ill with COVID-19 will be able to recover at home with getting enough rest, staying well hydrated, and taking medications to relieve fever and aches and pains also help with COVID-19. The virus can be more serious in some people and they need to be hospitalized. WHO published the guideline for prevention of COVID-19 such as often hand washing, maintain safe distance, wear mask, avoid touching mouth, nose, eyes etc. globally scientists have researched on COVID-19 vaccines and some countries have made vaccines after many trials such as Phizer & biotech developed by Germany, Johnson & Johnson developed by Belgium, Sputnik developed by Russia, Covishield developed by UK, Sweden, India and Covaxin developed by India.

As reported by the CDC, from February 12 to April 2, 2020, of 149,760 cases of confirmed COVID-19 in the United States, 2572 (1.7%) were children aged <18 years, similar to published rates in China. Severe illness has been rare. Of 749 children for whom hospitalization data is available, 147 (20%) required hospitalization (5.7% of total children), and 15 of 147 required ICU care (2.0%,0.58% of total). Of the 95 children aged <1 year, 59 (62%) were hospitalized, and 5 (5.3%) required ICU admission.

Despite children being relatively spared by COVID-19, spread of disease by children, and consequences for their health and pediatric healthcare are potentially profound with immediate and long-term impact on all of society. When compared to adult population the pediatric group is more vulnerable as they are not able to care for themselves and even not able to comprehend instructions. Out of the most vulnerable pediatric population, the school going children are at risk of exposure to COVID-19 infection. Hence it is our prime responsibility to spread awareness to contain this disease and protect our future generations.

II. OBJECTIVES

- To assess the existing knowledge of school age children regarding knowledge and practices of preventive measures of COVID-19.
- To evaluate the effectiveness of planned health teaching program in terms of gain in post-test knowledge scores.
- To evaluate the effectiveness of planned health teaching program in terms of practice in post test scores.
- To find the association between knowledge and practices of preventive measure of COVID-19 among the school age children with selected demographic variables.

III. ASSUMPTIONS

- Children will have inadequate knowledge about prevention of COVID-19
- Teaching program will enrich children knowledge in prevention of COVID-19.
- Knowledge regarding prevention of covid19 will help to prevent the incidence of COVID-19 pandemic

IV. METHODOLGY

An evaluator research approach was used in this study and the research design selected was pre-experimental research design (one group pretest-post test design).

4.1 Research variables

Dependent variables: Knowledge levels regarding COVI-19 among school age children residing at selected rural areas, Surat, Gujarat.

Independent variables: Self-instructional module on COVID-19.

Extraneous variables: Characteristics of children such as age, gender, religion, education, previous information regarding COVID-19, source of information.

4.2 Population and Sample

The population in this study includes school age children residing at selected rural areas, Surat, Gujarat. The sample size selected for this study was 60 school age children which were selected by simple random sampling technique.th criteria fro sample selection had inclusion and exclusion criteria.

Inclusion criteria:

- School age children who are staying in selected rural areas.
- School age children who are available at the time of data collection.
- School age children who are willing to participate in the study.
- School age children who are able to understand the language.

Exclusion criteria:

- School age children who are not staying in selected rural area.
- School age children who are not available at the time of data Collection.
- School age children who are not willing to participate in the study.
- School age children who are not understand Gujarati & English language.

4.3 Description of the tool

The tool has three sections. Section -I deals with the structured interview schedule to obtain semi structured demographic variables like age, gender, religion, education and source of information. Section-II has questionnaire on knowledge regarding preventive measures of COVID-19 among school age children. Section -III consists of a rating scale to evaluate the practices of preventive measures of COVID-19 among school age children. The tool was given to different experts in the field of medicine and nursing for checking the validity. The reliability of the tool was established by using split half method. The reliability was found to be r=0.86 for degree of risk factor index which indicated that the tool was reliable.

4.4 Data collection

For this study primary data has been collected from the school age children of the selected government school by using the structured questionnaire. Before collection of the data, permissions were obtained from the concerned authorities and the participants. A pilot study was conducted to check the feasibility of the study and tool and was found practicable and appropriate. Ethical clearance and formal permission was taken from the principal of the school to conduct final study. The data was collected from the school age children with the help of structured questionnaire to assess the demographic data, a self -structured questionnaire to assess knowledge regarding preventive measures of COVID-19 and a checklist to evaluate practices on preventive measures of COVID-19. Consent was taken from each participant before collecting the data. Descriptive and inferential statistics will be used for analysis of data.

4.5 Plan for Analysis

I. Descriptive statistics were used to find out percentage, mean, standard deviation for knowledge, practice, frequency and percentage distribution for level of knowledge.
II. Descriptive and inferential statistics was used to analyze knowledge, and practice regarding school age children.
III. Frequency and percentage distribution was used to analyze demographic variables of school age children.
IV. Mean and standard deviation was used to analyze knowledge levels regarding COVID-19 among school age children at selected government school of Bardoli, Surat.

V. ANALYSIS

The findings of the study are presented under four sections as follows:
Section 1: Analysis and Interpretation of the demographic variables of theSchool Age Children.
Section 2: Analysis and Interpretation of Pretest and Posttest scores in terms of Knowledge regarding prevention of COVID-19.
Section 3: Analysis and Interpretation of Pretest and Posttest scores in terms of Practice regarding prevention of COVID-19.
Section 4: Association of the pretest scores of Knowledge regarding preventive measures of COVID-19 with selected demographic variables.

5.1 SECTION-I: Analysis and interpretation of the demographic variables of the school age children.

This part dealt about demographic data analysis. The sample selection was done in selected government school of Bardoli, Surat. A total of 60 subjects were included in the study. Information regarding sample characteristics are age, gender, religion, father's educational qualification, mother's educational qualification, number of rooms, number of family member, type of family, previous information, source of information was collected. Data collected was tabulated and analyzed obtain frequency and percentage distribution

Table 5.1 Analysis and Interpretation of the demographic variables of the School Age Children.

SR. NO.	DEMOGRAPHIC VARIABLES	FREQUENCY	PERCENTAGE
1.	Age in years		
	a. 7-8 years	7	11.6%
	b. 9-10 years	22	36.7%
	c. 11-12 years	31	51.7%
2.	Gender		
	a. Male	32	53.34%
	b. Female	28	46.66%
3.	Religion		
	a. Hindu	45	75%
	b. Muslim	15	25%
	c. Christian	00	00
	d. Other	00	00
4.	Father's Educational qualification		
	a. Illiterate	8	13.33%
	b. Primary	39	65%
	c. Secondary	11	18.33%
	d. Higher secondary	2	3.33%
	e. Graduate	00	00
	f. Postgraduate	00	00
5.	Mother's Educational qualification		
	a. Illiterate	12	20%
	b. Primary	43	71.67%
	c. Secondary	3	5%
	d. Higher secondary	2	3.33%
	e. Graduate	00	00
	f. Postgraduate	00	00
6.	Number of rooms in the house		
	a. 1 room	19	31.67%
	b. 2 rooms	16	26.67%
	c. 3 rooms	12	20%
	d. More than 3 rooms	13	21.67%
7.	Number of family members		
	a. 2 members	1	1.67%
	b. 3 members	2	3.33%
	c. 4 members	6	10.%
	d. More than 4 members	51	85%
8.	Type of family		
	a. Nuclear	29	48.33%
	b. Joint	31	51.66%
9.	Previous information		

	a. Yes b. No	39 21	65% 35%
10.	Source of information a. Mass media b. Family members and relatives c. News paper d. School teacher	 8 29 6 17	 13.33% 48.33% 10% 28.33%

5.2 SECTION-II: Analysis and interpretation of pre test and post test scores in terms of knowledge regarding prevention of COVID-19

Table 5.2 Mean difference table

	Pre Test		Post test		Mean Difference
Subject	**Mean**	**SD**	**Mean**	**SD**	
Overall	15.183	2.813	19.050	1.702	3.867

Table5.2 shows the mean score and standard deviation between pretest and posttest level of knowledge among school age children. The mean score was increased and the standard deviation score was decreased after the planned health teaching program. This shows that there is significant difference between the mean score after the planned health-teaching program.

Table 5.2.1 Frequency and Percentage Distribution of Knowledge

	Pre-Test		Post-Test	
	Frequency	Percentage	Frequency	Percentage
Poor	1	1.67	0	0
Avg	38	63.33	1	1.67
Good	21	35	59	98.33
Total	60	100	60	100

Table 5.2.2 Frequency and Percentage Distribution of Knowledge

Group	**Mean knowledge Score**		**Mean Difference**	**T value (Calculated value)**	**T value (Tabulated value)**	**Level of Significance**
	Pre Test	**Post Test**				
Student	15.18	19.05	3.87	14.85	2	0.05

Table 5.2.2 revels that obtained "T" value was found to be extremely significant at level of <0.05. It is inferred that the administration of planned health teachingprogram on preventive measures of covid19 among school age children had significant increase in posttest knowledge score.

5.3 SECTION-III: Analysis and interpretation of pre test and post test scores in terms of practice regarding prevention of COVID-19

5.3.1 Frequency and Distribution of Practice

	Pre-Test		**Post-Test**	
	Frequency	**Percentage**	**Frequency**	**Percentage**
Always	33	3.66	448	49.77
More often	181	20.11	204	22.67
Rarely	487	54.11	93	10.33
Never	199	22.11	155	17.22

Table 5.3.1 shows that there is significant increase in the post test score in practice level regarding preventive measures of COVID-19 among the school age children.

5.4 SECTION-IV: Association of the pretest scores of knowledge regarding preventive measures of covid-19 with selected demographic variables.

Table 5.4.1 Pretest association table

Association Table									
Demographic Variables	Classification	Frequency	Level of Knowledge		d f	P-val	Chi Square		Interference
			Below Median	Above Median			Table value	Calculate value	
Age	7-8 year	7	6	1	2	0.05	5.99	6.946	Significant
	9-10 year	22	11	11					
	11-12 year	31	10	21					
Gender	Male	32	16	16	1	0.05	3.84	0.308	NS
	Female	28	12	16					
Religion	Hindu	45	25	20	3	0.05	7.81	5.711	NS
	Muslim	15	3	12					
	Christians	0	0	0					
	Others	0	0	0					
Father's educational status	Illiterate	8	8	0	5	0.05	11.07	17.359	Significant
	Primary	39	20	19					
	Secondary	11	1	10					
	Higher secondary	2	0	2					
	Graduate	0	0	0					
	Post graduate	0	0	0					
Mother's educational status	Illiterate	12	11	1	5	0.05	11.07	14.948	Significant
	Primary	43	17	26					
	Secondary	3	0	3					
	Higher secondary	2	0	2					
	Graduate	0	0	0					
	Post graduate	0	0	0					
Number of room	1 Room	19	10	9	3	0.05	7.81	1.204	NS
	2 Room	16	6	10					
	3 Room	12	5	7					
	More than 3 Rooms	13	7	6					
Number of family member	2 Members	1	0	1	3	0.05	7.81	1.425	NS
	3 Members	2	1	1					
	4 Members	6	2	4					
	More than 4 Members	51	25	26					
Type of family	Nuclear	29	7	22	1	0.05	3.84	11.42	Significant
	Join	31	21	10					
Information	Yes	39	12	27	1	0.05	3.84	11.31	Significant
	No	21	16	5					
Resource	Mass media	8	3	5	3	0.05	7.81	1.741	NS
	Family members & Relatives	29	13	16					
	News paper	6	2	4					
	School Teacher	17	10	7					

Table 5.4.1 shows that the calculated chi square value of demographic variables such as age of the children, parents education status, type of family and previous information regarding preventive measure of COVID-19 are greater than the table chi square value at the 0.05 significance level which indicate that these demographic variables have an effect on the pre-test knowledge level of the children regarding preventive measures of COVID-19.

VI. CONCLUSION

The study was conducted to assess the effectiveness of planned teaching programme on knowledge and practice of preventive measures of COVID-19 among the school age children in a selected Government school in Bardoli, Surat. Pretest was taken and then the planned teaching program was administered to 60 school age children. Then a post test was done to find the effectiveness of the planned teaching program. There was a significant difference between the pre-test and post-test mean score. The knowledge level improved to 98.33% from 63.33%. There was also a significant increase in post-test Likert chart analysis after the administration of teaching program.

The findings had thrown new light on implications of the nursing practice, nursing education, nursing administration and nursing research. Implications on the study revealed that majority of school age children were lacking knowledge on COVID-19. Use of pamphlet helps to improve their knowledge. So health education can be prime basis to enhance the knowledge of school age children in school to impart knowledge on corona virus disease.

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