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"THE EFFECTIVENESS OF SELF-INSTRUCTIONAL MODULE ON KNOWLEDGE REGARDING MULTISYSTEM INFLAMMATORY SYNDROME IN CHILDREN (MIS-C) AMONG NURSES WORKING IN PAEDIATRIC DEPARTMENTS"

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ABSTRACT

Introduction: A severe multisystem inflammatory syndrome associated with Kawasaki disease manifestations (MIS-C) has been reported in children with signs of recent infection with SARS-CoV-2. We here reported the case of a young adult woman who presented the complete manifestations of Kawasaki disease associated with a severe myocarditis, acute respiratory distress syndrome and hemodynamic instability a few weeks after a transient anosmia. **Methodology:** An quantitative approach with one group pre-test design was used for the study. The samples consisted of 60 staff nurses selected by Non probability purposive sampling technique. Researchdesign was pre-experimental one group pre-test and post-test design. Main study was conducted from 01/05/2022 to 15/06/2022 Data was collected by administering a structured knowledge questionnaire by the investigator before and after self instructional module. Post-test was conducted after 7 days of pre test and intervention. Data was analyzed using descriptive & inferential statistics (Paired't' test, Chi- square test, Karl- Person's correlation coefficient. **Result**: The pretest knowledge score was 9.05 ± 2.45, while the posttest knowledge score was 19.98 ± 2.57. The difference was found to be statistically significant ('t' value = -24.62, df=59, p value=0.05, Significant), showing a higher posttest knowledge score. **Conclusion:** The finding in the study proved that the structured teaching programme is effective in improving knowledge of staff nurses. The entire subject had improved in knowledge compared to their pre-test score**.**

KEYWORDS: Df: Degree of freedom, NS : Not significant, S: Significant

INTRODUCTION: Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), causing coronavirus disease 2019 (COVID-19), led to a pandemic health crisis within a few months' time. Severe COVID-19 and associated mortality has been highest in elderly and patients with comorbidities, such as cardiovascular disease, diabetes mellitus, and chronic lungdisease Since the outbreak, COVID-19 was generally described as asymptomatic or mild in children, causing few pediatric hospitalizations and minimal mortality.

Corona virus disease is defined as an infectious disease caused by the newly discovered coronavirus SARS-CoV-2. It was identified in Wuhan, China, on 29 December 2019, as reported by the World Health Organization. This disease was officially named COVID-19 by the WHO on 11 February 2020.

Multisystem inflammatory syndrome in children (MIS-C) associated with COVID-19 , also called as Pediatric inflammatory multisystem syndrome temporally associated with SARS-CoV- 2 (PIMS-TS) , is a hyperinflammatory syndrome occurring in close tem-poral association with a severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection in children. The initial cases from India were reported in May, 2020, and as the number of COVID-19 cases has grown exponentially across the country, clinicians have started identifying this new entity morefrequently.

NEED OF THE STUDY

A severe multisystem inflammatory syndrome associated with Kawasaki disease manifestations (MIS-C) has been reported in children with signs of recent infection with SARS-CoV-2. We here reported the case of a young adult woman who presented the complete manifestations of Kawasaki disease associated with a severe myocarditis, acute respiratory distress syndrome and hemodynamic instability a few weeks after a transient anosmia. The detection of specific antibodies to SARS-CoV-2 in the absence of detection of the virus suggested that the syndromewas the result of a delayed immune response to a recent COVID-19 infection. A combined treatment with colchicine, tocilizumab, high dose immunoglobulins, and methylprednisolone allowed to control the inflammatory process and to limit the development of coronary aneurysm. The patient recovered without sequelae. This case emphasized the importance of SARS-CoV-2 serology for the diagnosis of delayed immune complications of COVID-19. Clinicians caring for adult patients must be aware that not only children but also young adults can be affected by a multisystem inflammatory syndrome with KD features associated with COVID-19.

Investigator during clinical posting during COVID notice that nurses are not having adequate knowledge regarding MIS-C and its management. This observation inspired the researcher toconduct a study to assess the effectiveness of Self Instructional Module on knowledge regarding MIS-C in children among nurses working in paediatric departments in selected hospitals

PROBLEM STATEMENT

A study to assess the effectiveness of Self Instructional Module on knowledge regarding Multisystem Inflammatory syndrome in Children (MIS-C) among nurses working in pediatric departments in selected hospitals of Rajkot.

OBJECTIVES OF THE STUDY

1. To assess the pre test knowledge regarding Multisystem Inflammatory syndrome in Children (MIS-C) among nurses
2. To assess the post test knowledge regarding Multisystem Inflammatory syndrome inChildren (MIS-C) among nurses
3. To assess the effectiveness of self instructional module on knowledge regarding MultisystemInflammatory syndrome in Children (MIS-C) among nurses
4. To find an association between pre-test knowledge regarding Multisystem Inflammatorysyndrome in Children (MIS-C) with selected socio-demographic variables.

HYPOTHESIS

RH1 – There will be significant difference between pre-test and post-test knowledge score regarding Multisystem Inflammatory syndrome in Children (MIS-C) among nurses at the level of $P \leq 0.05$

RH2 – There will be a significant association of pre-test knowledge score regarding MultisystemInflammatory syndrome in Children (MIS-C) with selected socio-demographical variables at thelevel of $P \leq 0.05$.

ASSUMPTION :-

1) Nurses may have some knowledge regarding Multisystem Inflammatory syndrome inChildren (MIS-C) among nurses

2) Self Instructional Module may increase knowledge regarding Multisystem Inflammatorysyndrome in Children (MIS-C) among nurses.

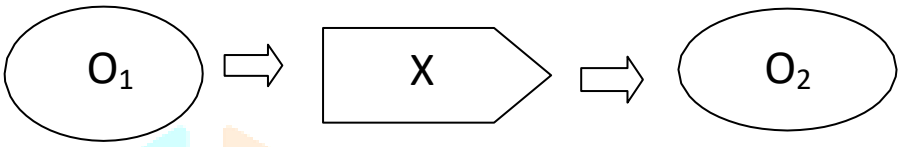
RESEARCH METHODOLOGY

RESEARCH APPROACH:

In view of the nature of the problem selected for the present study and the objectives to be accomplished, a quantitative approach was considered appropriate for the present study.

RESEARCH DESIGN:

The selection of design depends upon the purpose of the study, research approach and variables to be studied. The research design used for the present study is pre-experimental; one group pre-test post-test design. It includes manipulation, no randomization and no control group.



Key words:

O1 – Pre test on Knowledge of staff nurses regarding Multisystem Inflammatory syndrome inChildren (MIS-C) among nurses working in pediatric departments

X – Self Instructional Module on knowledge regarding Multisystem Inflammatory syndromein Children (MIS-C) among nurses working in pediatric departments

O2 – Post test on Knowledge of staff nurses regarding Multisystem Inflammatory syndrome inChildren (MIS-C) among nurses working in pediatric departments

FIG.NO.2 RESEARCH DESIGN

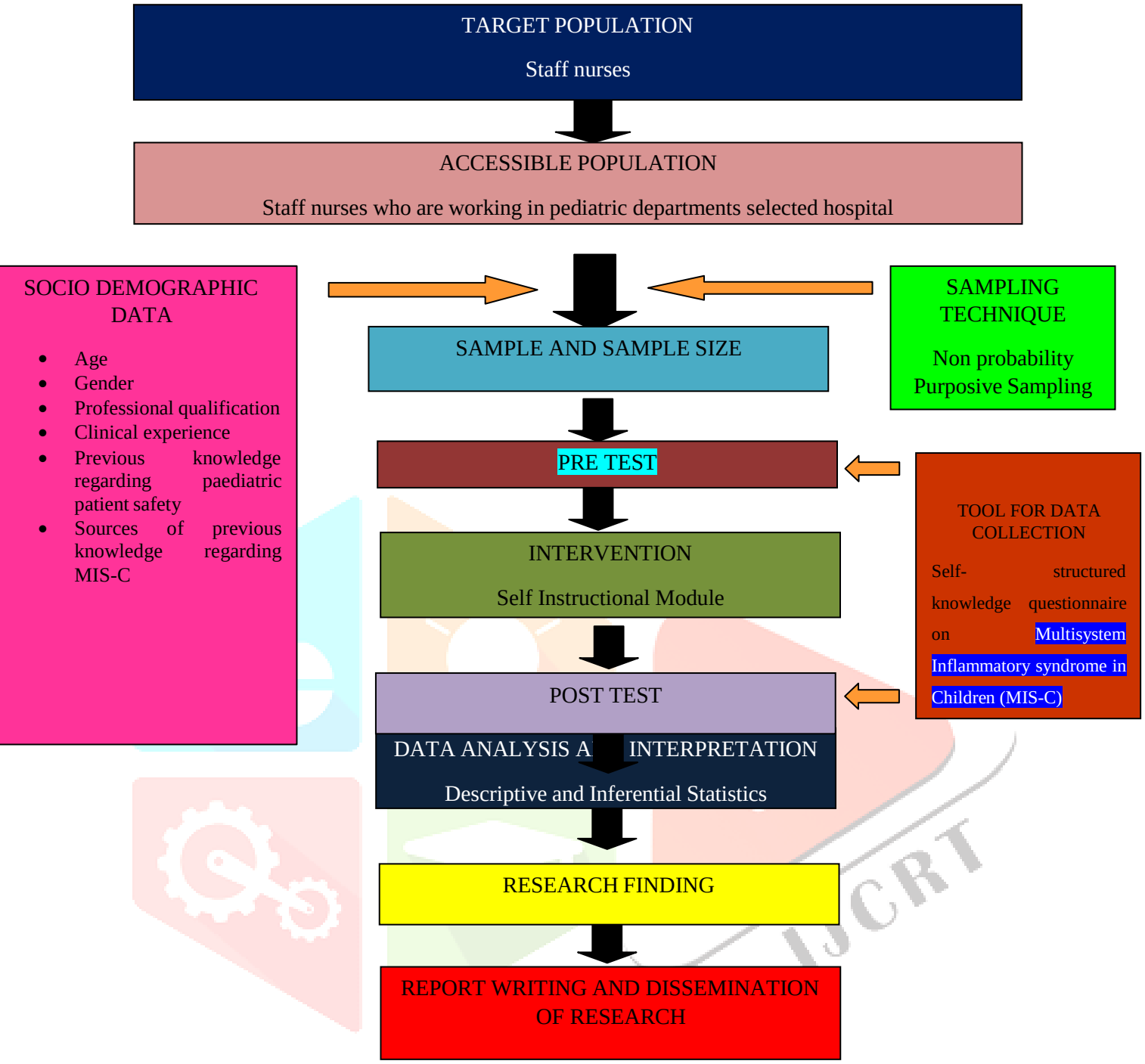


FIG.NO. 3- SCHEMATIC REPRESENTATION OF RESEARCH STUDY

VARIABLES:

Independent Variables:

In this study Self Instructional Module on knowledge regarding Multisystem Inflammatory syndrome in Children (MIS-C) among nurses working in paediatric departments is the independent variable.

Dependent variables:

In this study Knowledge of staff nurses regarding Multisystem Inflammatory syndrome in Children (MIS-C) among nurses working in pediatric departments is the dependent variable.

RESEARCH SETTING:

The study was conducted in Selected hospital Rakot

DATA ANALYSIS AND INTERPRETATION

Frequency and percentage distribution of staff nurses according todemographic variables.

S. No.	Demographic Variable	No.	Percentage
1.	**Age**		
	a. 21-26 years	16	26.7
	b. 27-32 years	27	45.0
	c. 33-38 years	11	18.3
	d. Above 38 years	6	10.0
2.	**Gender**		
	a. Male	21	35.0
	b. Female	39	65.0
3.	**Professional qualification**		
	a. GNM	21	35.0
	b. Post B.Sc.	18	30.0
	c. B.Sc. Nursing	16	26.7
	d. M.Sc. Nursing	5	8.3
4.	**Clinical Experience**		
	a. 1-5 years	20	33.3
	b. 6-10 years	26	43.3
	c. Above 10 years	14	23.3
5.	**Previous Knowledge**		
	a. Yes	14	23.3
	b. No	46	76.7

6.	**Sources of previous knowledge**		
	a. In service education	3	5.0
	b. Mass media	2	3.3
	c. Class room teaching	9	15.0
	d. None	46	76.7

There were 16 (26.7%) staff nurses in the age group 21-26 years, 27 (45.0%) staff nurses were in the age group 27-32 years, while 33-38 (18.3%) staff nurses were in the age group above 33-38 years, above 38 years (10.0%) staff nurses were in the age group above 32 years.

There were 21 (35.0%) males and 39 (65.0%) females in the present study. Majority of female found in the study.

There were 21 (35.0%) staff nurses were having GNM Diploma certificate, 18 (30.0%) staff nurses were having post B.Sc. Degree, 16 (26.7%) staff nurses were having B.Sc. Nursing degreewhile 5 (8.3%) staff nurses were having higher M.Sc. Nursing Degree.

In this study 20 (33.3%) staff nurses were having 1-5 years clinical experience, 26 (43.3%) staffnurses were having 6-10 years clinical experience, 14 (23.3%) staff nurses were having above 10 years clinical experience.

There were 14 (23.3%) staff nurses were having previous knowledge regarding Multisystem Inflammatory syndrome in Children (MIS-C), 46 (76.7%) were not having previous knowledge regarding Multisystem Inflammatory syndrome in Children (MIS-C) .

There were 3 (5.0%) staff nurses were attended in service education, 2 (3.3%) staff nurses wereattended mass media, 9 (15.0%) staff nurses were having knowledge from classroom teaching while majority of 46 (76.7%) staff nurses were not having previous knowledge from any other sources.

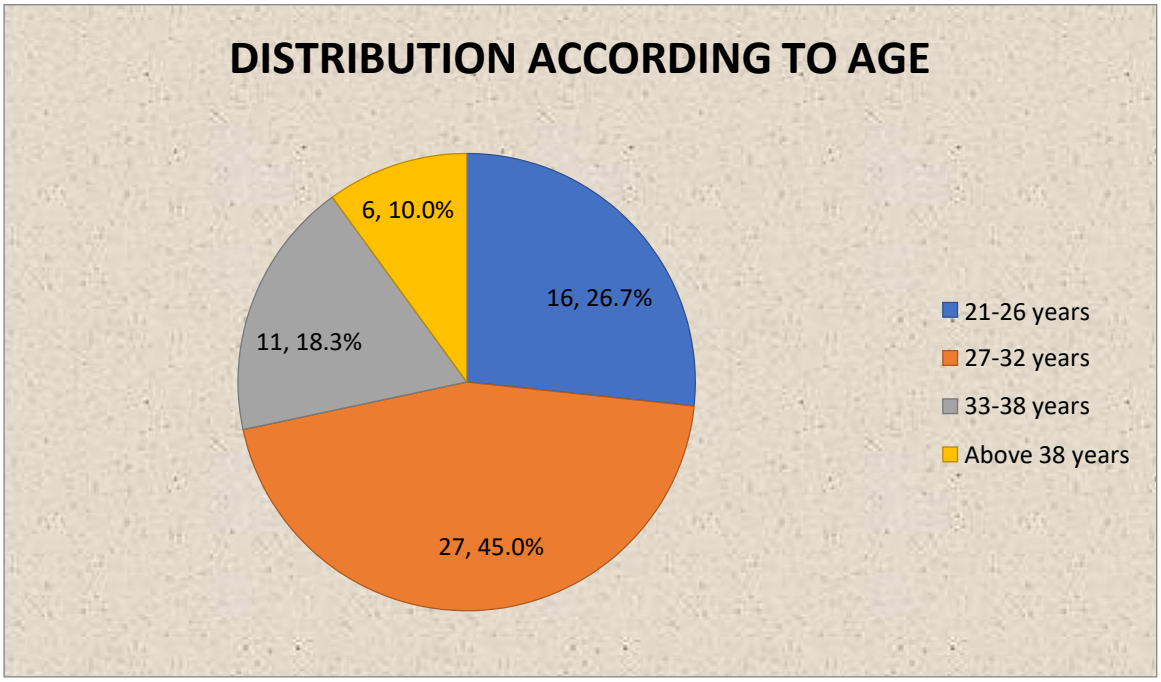


Fig. 4: Pie diagram showing distribution according to age

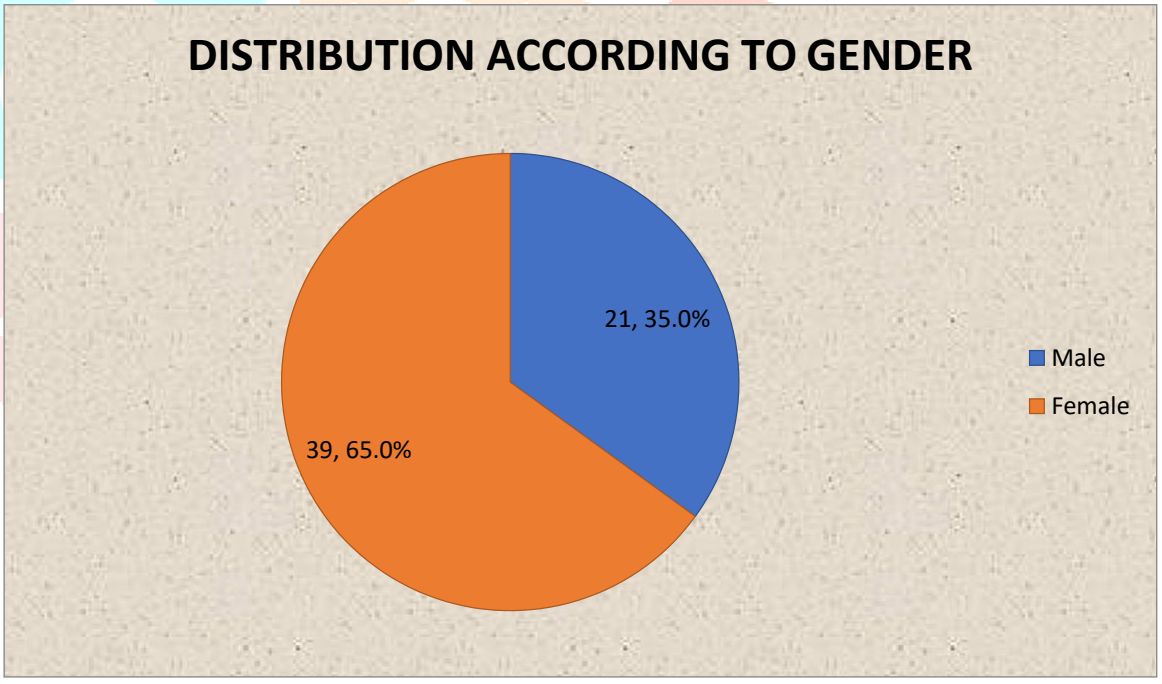


Fig.5: Pie diagram showing distribution according to gender

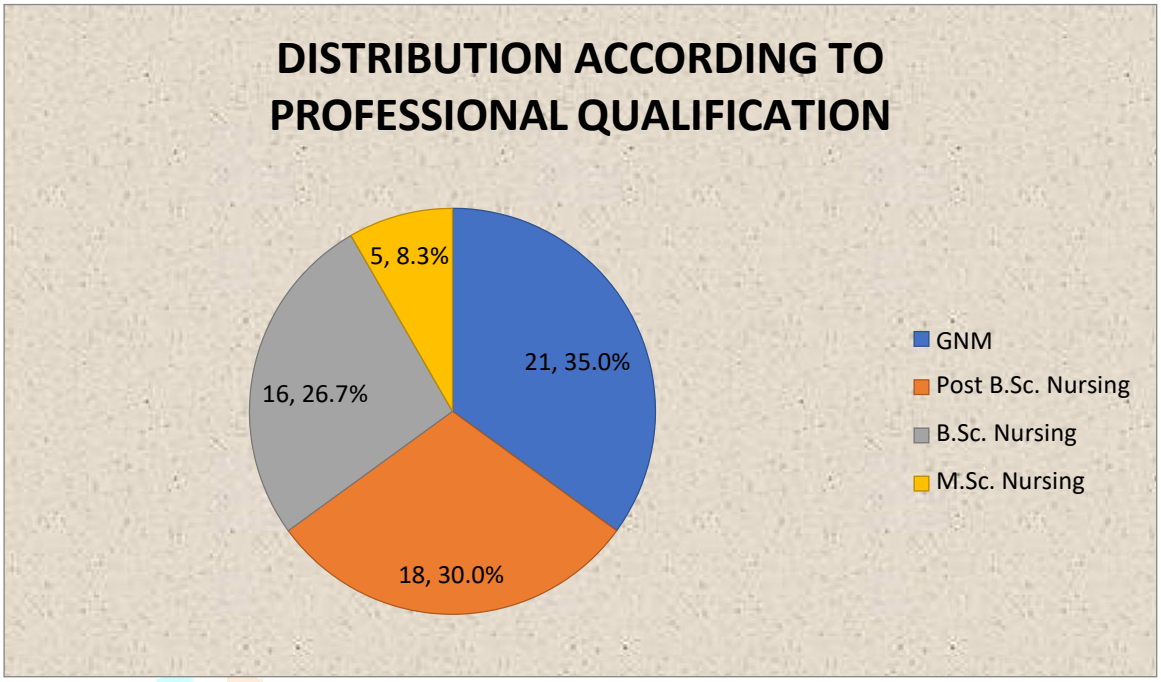


Fig. 6: Pie diagram showing distribution according to Professional qualification

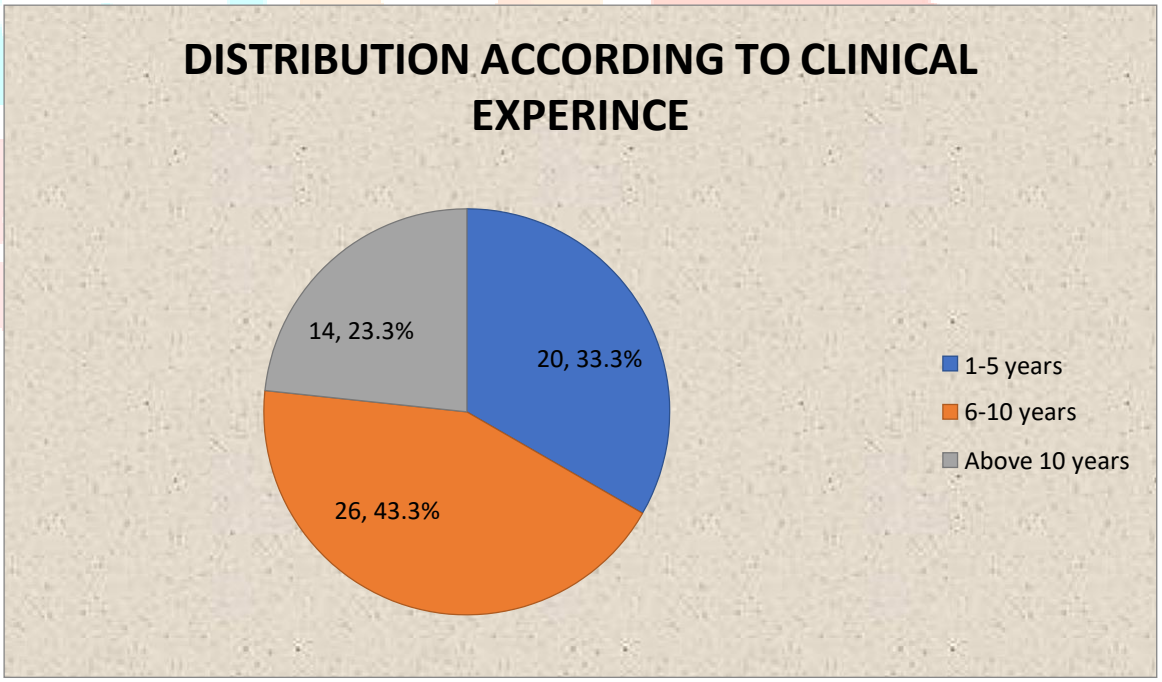


Fig. 7: Pie diagram showing distribution according to Clinical experience.

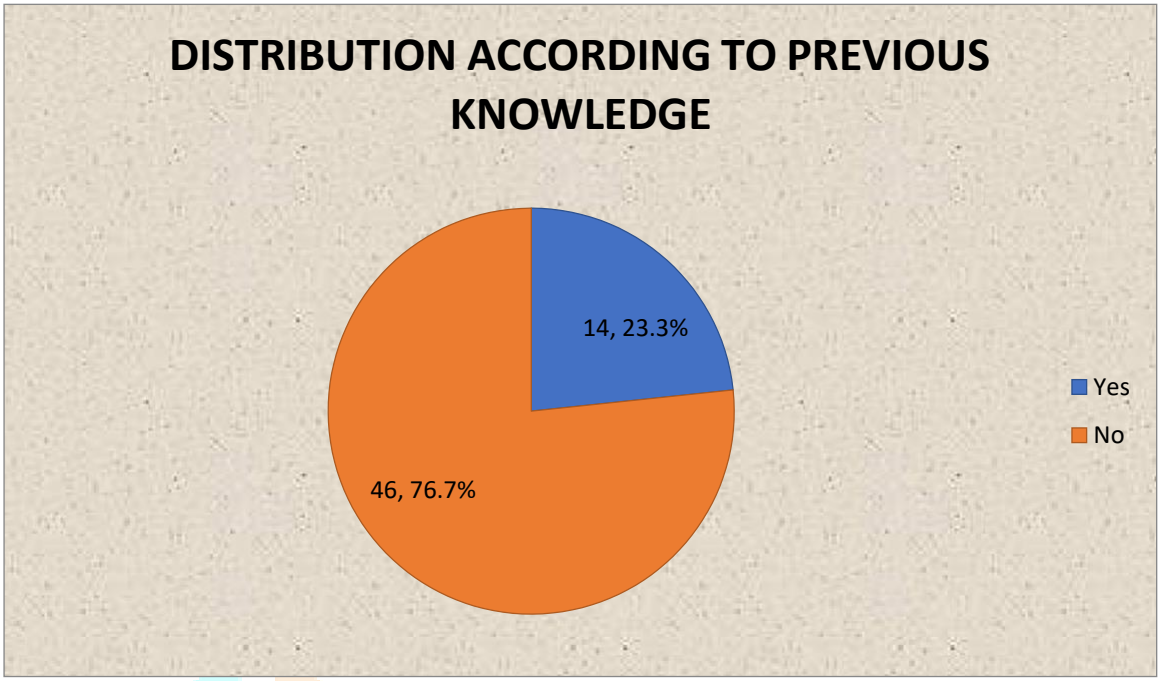


Fig. 8: Pie diagram showing distribution according to previous knowledge

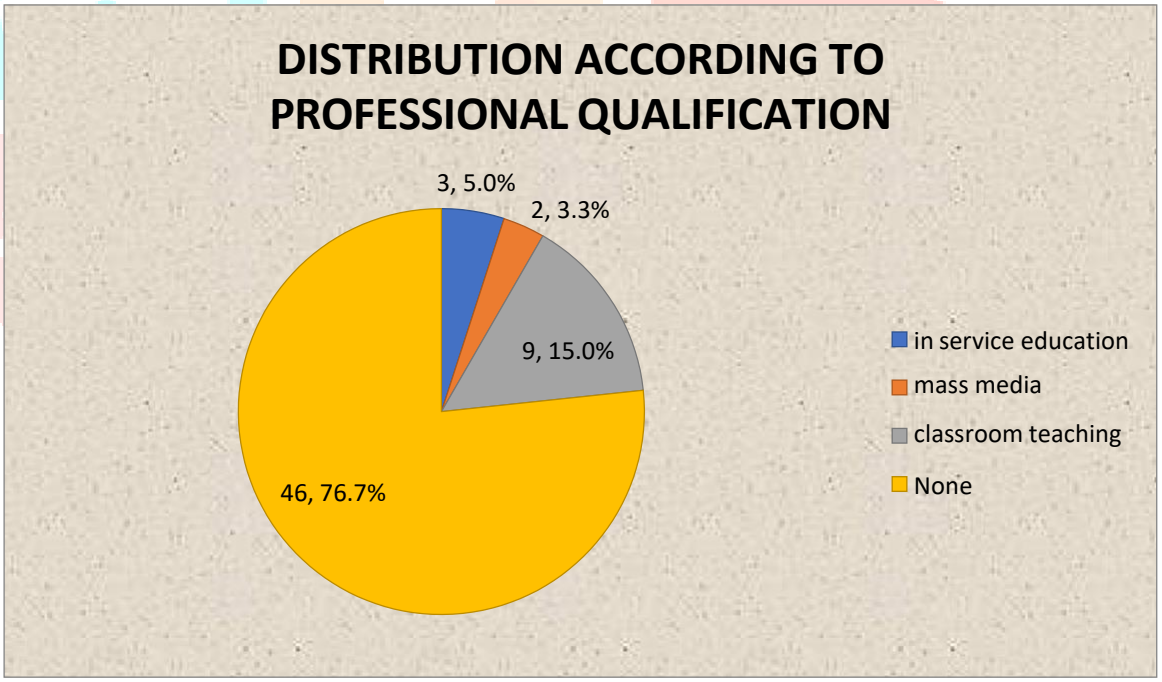


Fig. 9: Pie diagram showing distribution according to sources of previous knowledgeregarding Multisystem Inflammatory syndrome in Children (MIS-C) .

Effectiveness of self Insrutional Module.

For assessing the effectiveness of Self-instructional module, structured knowledge questionnaire consist of 16 questions were given to the staff nurses for each correct answer the staff nurses was given 1 mark and for every wrong answer was given 0 mark. Only 1 question was correct for every question. Thus, a student could obtain a minimum of 0 marks and maximumof 16 marks. These marks were graded as poor (0-6), average (7-12), good (13-18) and excellent(19-24).

Comparison of the pretest and posttest knowledge Grade

S. No.	Knowledge grade		Pretest		Posttest	
			No.	%	No.	%
1.	Poor	(1-6)	14	23.3	0	0.0
2.	Average	(7-12)	46	76.7	0	0.0
3.	Good	(13-18)	0	0.0	21	35.0
4.	Excellent	(19-24)	0	0.0	39	65.0
	Total		60	100.0	60	100.0

Comparison of the pretest and posttest knowledge score

S. No.	Knowledge Score	Mean ± SD	't' value	P value
1.	Pretest	9.05 ± 2.45	24.62, df=59	=0.05
2.	Posttest	19.98 ± 2.57		

Paired't' test applied P value = <0.05, Significant

Association between pre test knowledge score with selected demographic variables.

S. No.	Age	Pretest Knowledge grade				□2	P value
		Poor (1-6)	Average (7-12)	Good (13-18)	Excellent (19-24)		
1.	**Age**						
	a. 21-26 years	4	12	0	0		
	b. 27-32 years	7	20	0	0	0.43, df=3	0.05, NS
	c. 33-38 years	2	9	0	0		
	d. Above 38 years	1	5	0	0		
	Total	14	46	0	0		60
2.	**Gender**						
	a. Male	5	16	0	0	0.04, df=1	0.05, NS
	b. Female	9	30	0	0		
	Total	14	46	0	0		60
3.	**Professional qualification**						
	a. GNM	3	18	0	0	6.22, df=3	>0.05, NS
	b. Post B.Sc. [N]	4	14	0	0		
	c. B.Sc. Nursing	7	9	0	0		
	d. M.Sc. Nursing	0	5	0	0		
	Total	14	46	0	0		60
4.	**clinical experience**						
	a. 1-5 years	5	15	0	0		
	b. 6-10 years	6	20	0	0		
	c. Above 10 years	3	11	0	0	0.06, df=2	0.05, NS

	Total	14	46	0	0		60
5.	**previous knowledge** a. Yes b. No	 2 12	 12 34	 0 0	 0 0	0.83, df=1	0.05, NS
	Total	14	46	0	0		60
3.	**Sources of previous knowledge** a. In service education b. Mass media c. Classroom teaching d. None	 0 1 1 12	 3 1 8 34	 0 0 0 0	 0 0 0 0	2.65, df=3	0.05, NS
	Total	14	46	0	0		60

CONCLUSION

Thus after the analysis and interpretation of the data, we can conclude that the hypothesis **H1** that, "There will be a significant difference in the pre-test and post-test knowledge score regarding Multisystem Inflammatory syndrome in Children (MIS-C) among nurses working in paediatric departments is being accepted. From the above results, we can conclude that there was a statistically significant effectiveness seen in knowledge of staff nurses. Thus, the intervention "structured teaching programme" was effective in improving the knowledge of staff nurses.

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