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Efficacy of structured teaching programme on knowledge regarding hand, foot, and mouth disease in children among the mothers of under-five children residing in k.g. halli, Bengaluru

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Abstract: *Hand, foot, and mouth disease is a common viral infection that causes painful blisters on the hands, feet, diaper area, mouth, and throat. The coxsackievirus is the primary cause of HFMDs. When saliva, mucus, urine, or blister fluids come into contact with dirty hands, it is highly infectious and quickly spread. Particularly susceptible to HFMD are children under five. Infections are common in places like childcare centers, preschools, schools, and summer camps where kids hang out in large groups. HFMD cannot be prevented by vaccination; however, there is a home remedy that can be used to reduce discomfort and expedite healing.* ***OBJECTIVES OF THE STUDY1.*** *To assess the pre-test level of knowledge regarding hand, foot and mouth diseasein children among the mothers of under-five children.2. To evaluate the effectiveness of structured teaching program on knowledge regarding hand, foot and mouth disease in children among the mothers of under-five children.3. To find the association between pre-test level of knowledge scores and selected socio-demographic variables.* ***METHODS:*** *Pre-Experimental One Group Pre-Test Post-Test was the research design used in this study. The research employed the random sample technique to collect 60 women whose children were under five years old. The knowledge level was evaluated using the Structured Knowledge Questionnaire Tool. After the evaluation, mothers with children under five had access to the Structured Teaching Program. On day eight, a post-test evaluation was carried out with the same tool. The findings were explained with the use of both descriptive and inferential statistics.* ***RESULTS:*** *68.3% of participants had insufficient knowledge of children's hands, feet, and mouths during the data collection process, whereas 31.7% had intermediate knowledge. 16.7% of respondents had moderate knowledge and 83.3% had adequate knowledge in this domain at the post-test.* ***INTERPRETATION AND CONCLUSION:*** *Participating in a structured educational program can provide mothers of children under five with additional knowledge regarding hand, foot, and mouth illness in children.*

Keywords: *Effectiveness, structured teaching program, knowledge, hand, foot, and mouth disease, mother, under-five, children*

1. INTRODUCTION :

Hand, foot, and mouth disease (HFMD) is a common infectious disease that primarily affects children, while it can also strike adolescents and adults on occasion. An important new infection in India is hand, foot, and mouth disease (HFMD), an enteroviral illness.[1] Enteroviruses (which are composed of single-stranded, positive-sense RNA) with a size of 27–30 nm are the cause of HFMD. These viruses are members of the family Picornaviridae. Enterovirus 71 (EV71) and coxsackievirus A16 (CVA16) are the most common causes, however CVA4-10, CVA24, CVB2-5, and echovirus 18 (Echo18) can also be to blame. EVA71 and CV-A16 are the two viruses most commonly linked to HFMD; however, more and more cases of HFMD caused by other viruses, like CV-A6 and CV-A10, have been documented recently. With a brief incubation period of three to six days, the majority of the clinical indications are minor and self-

limiting. Low-grade fever, cough, and sore throat are the initial symptoms, which progressively progress to malaise and appetite loss. Following the initial signs and symptoms, the exanthema first appears as a blistered papule before developing into an ulcer. Inside the mouth, including the buccal mucosa, hard palate, cheek surfaces, gums, tongue, and palms and soles of the feet, is where the lesion typically appears. On the genital and buttock regions, lesions may occasionally develop. Severe consequences from HFMD can include meningitis, myoclonic seizures, tremor, nystagmus, brainstem encephalitis, and paralytic illness resembling polio. More severe symptoms in certain circumstances include tachycardia, pulmonary edema/hemorrhage, and sudden death from cardiopulmonary failure. Despite showing no signs of illness, some persons may carry and spread the virus. [2] People of all ages can contract the virus; however children under the age of five are most frequently affected. Frequently seen in the early fall and late summer. Immune deficits make a person very vulnerable to the virus, but most individuals have robust immune systems that can fend it off. By direct contact with unwashed hands or faeces-contaminated surfaces, these viruses can transfer from one person to another. Additionally, the saliva, sputum, or nasal mucus secretions, blister fluid, or stool of infected individuals can spread these viruses. The virus continues to shed through the faeces for a few weeks after it is first discovered in the pharynx and stool, some days before the illness manifests itself. [3] There is presently no cure or reliable immunization for HFMD, despite the disease's negative effects on the healthcare system and the difficulties it can cause during epidemics. As a result, many Asia-Pacific nations now consider establishing preventative and therapeutic measures for effective HFMD containment to be a national priority. There have been reports of HFMD outbreaks in several Indian states, including Kerala, Odisha, Himachal Pradesh, and Uttarakhand. One of the most severely impacted states in India is West Bengal. [4]

2. OBJECTIVES OF THE STUDY :

1. To assess the pre-test level of knowledge regarding hand, foot and mouth diseasein children among the mothers of under-five children.
2. To evaluate the effectiveness of structured teaching program on knowledge regarding hand, foot and mouth disease in children among the mothers of under-fivechildren.
3. To find the association between pre-test level of knowledge scores and selected socio-demographic variables.

3. METHODOLOGY :

Pre-Experimental One Group Pre-Test Post-Test was the research design employed in this study. The study included the recruitment of sixty mothers of children under five through the use of the random sampling technique. The Structured Knowledge Questionnaire Tool was used to gauge the degree of knowledge. Moms of children under five received the Structured Teaching Program after the assessment. Using the same instrument, a post-test assessment was conducted on the eighth day. The results were described by utilizing Descriptive and Inferential Statistics.

4. RESULTS :

Using both descriptive and inferential statistics, the results were calculated accordingly to the study's objectives.

Demographic characteristics of respondents

TABLE – 1
Classification of Respondents by Personal Characteristics

N=60

Characteristics	Category	Respondents	
		Number	Percent
Age group (years)	18-23	18	30.0
	24-29	22	36.7
	30-35	20	33.3
Religion	Hindu	33	55.0
	Muslim	18	30.0
	Christian	9	15.0
Residential Area	Urban	32	53.3
	Rural	28	46.7

Type of House	Kaccha	20	33.3
	Pukka	40	66.7
Total		**60**	**100.0**

TABLE – 2
Classification of Respondents by Family Characteristics

N=60

Characteristics	Category	Respondents	
		Number	Percent
Educational status of Mother	Primary	19	31.7
	Secondary	11	18.3
	Graduation	19	31.7
	No formal Education	11	18.3
Occupation of Mother	House wife	35	58.3
	Government	9	15.0
	Private	6	10.0
	Skilled labour	10	16.7
Family income/month	Rs.5,000-10,000	17	28.3
	Rs.10,000-15,000	14	23.3
	Rs.15,001-20,000	18	60.0
	Rs.20,001-25,000	11	18.3
Family Type	Nuclear	39	65.0
	Joint	21	35.0
Total		**60**	**100.0**

TABLE – 3
Classification of Respondents by Family Characteristics

N=60

Characteristics	Category	Respondents	
		Number	Percent
Specific habit	Smoking	4	6.7
	Drinking Alcohol	2	3.3
	Chewing tobacco	5	8.3
	No bad habit	49	81.7
Previous knowledge	Yes	27	45.0
	No	33	55.0
Source of Information	Mass media/Print media	5	8.3
	Family members/Relatives	12	20.0
	Friends/Neighbors	5	8.3
	Health personnel	5	8.3
	No	33	55.0
Total		**60**	**100.0**

TABLE – 4
Classification of Respondents on Pre-test and Post-test Knowledge level on Hand, Foot and Mouth disease
N=60

Knowledge Level	Category	Classification of Respondents			
		Pre test		Post test	
		N	%	N	%
Inadequate	≤ 50 % Score	41	68.3	0	0.0
Moderate	51-75 % Score	19	31.7	10	16.7
Adequate	> 75 % Score	0	0.0	50	83.3
Total		60	100.0	60	100.0

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Table 4 & Figure 1 shows that Classification of Respondents on Pre-test and Post-test Knowledge level on Hand, Foot and Mouth disease

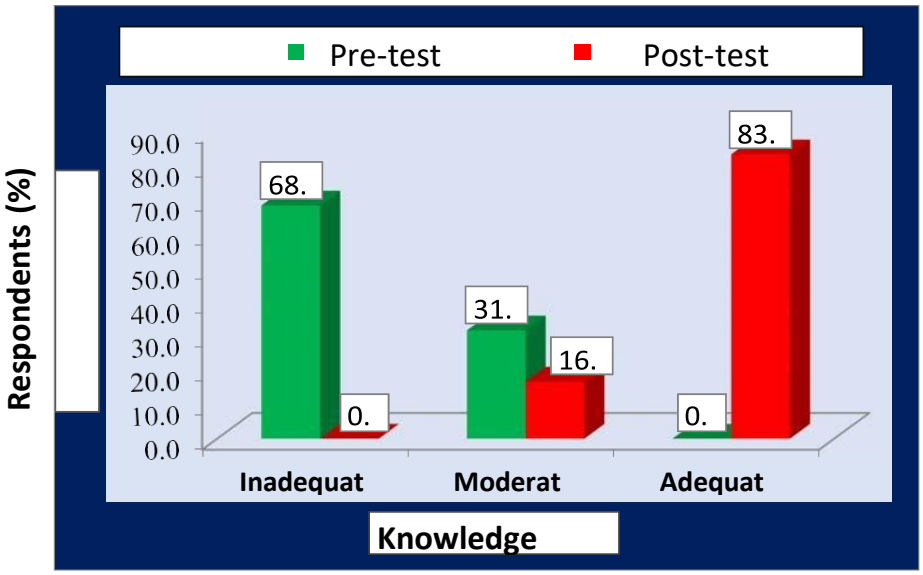

Figure 1: Classification of Respondents on Pre-test and Post-test Knowledge level on Hand, Foot and Mouth disease

Overall and Aspect wise Pre-test and Post-test Knowledge scores onHand, Foot and Mouth disease

TABLE – 5

Over all Pre-test and Post-test Mean Knowledge scores on Hand, Foot and Mouth disease

N=60

Aspects	Max. Score	Knowledge Scores				Paired 't' Test
		Mean	SD	Mean (%)	SD (%)	
Pre test	30	12.75	4.23	42.5	14.1	
Post test	30	25.98	3.28	86.6	10.9	26.08*
Enhancement	30	13.23	3.92	44.1	13.1	

* Significant at 5% level, t (0.05, 59df) = 1.96

Table 5 & Figure 2 shows that overall Pre-test and Post-test knowledge score onhand foot and mouth disease. It is found that the Pre-test mean is 42.5%, Post-test mean is 86.6% and Enhancement mean is 44.1%.

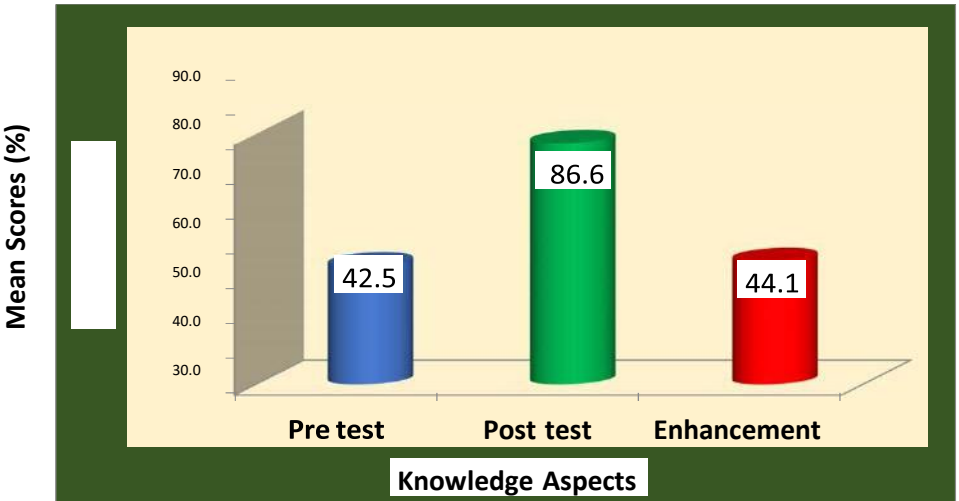

Figure.2: Over all Pre-test and Post-test Mean Knowledge scores on Hand, Foot andMouth disease.

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TABLE – 6

Aspect wise Mean Pre-test and Post-test Knowledge scores on Hand, Foot and Mouthdisease

N = 60

No.	Knowledge Aspects	Respondents Knowledge (%)						Paired 't' Test
		Pre test		Post test		Enhancement		
		Mean	SD	Mean	SD	Mean	SD	
I	General knowledge on HFMD	43.2	19.3	86.8	14.7	43.6	19.4	17.41*
II	Causes & Sign and Symptoms of HFMD	41.1	20.0	84.7	17.7	43.6	18.9	17.87*
III	Prevention & Management of HFMD	42.5	16.5	87.4	10.7	44.9	17.0	20.46*
	Combined	**42.5**	**14.1**	**86.6**	**10.9**	**44.1**	**13.1**	**26.08***

* Significant at 5% level, t (0.05,59df) = 1.96

TABLE – 7

Association between Demographic variables and Pre-test Knowledge level on Hand, Foot and Mouth disease

N=60

DemographicVariables	Category	Sample	Knowledge Level				χ^2 Value	P Value
			Inadequate		Moderate			
			N	%	N	%		
Age group (years)	18-23	18	14	77.8	4	22.2	1.64	P>0.05 (5.991)
	24-29	22	13	59.1	9	40.9		
	30-35	20	14	70.0	6	30.0	NS	
Religion	Hindu	33	25	75.8	8	24.2	3.24	P>0.05 (5.991)
	Muslim	18	12	66.7	6	33.3		
	Christian	9	4	44.4	5	55.6	NS	
Residential Area	Urban	32	18	56.3	14	43.8	4.63*	P<0.05 (3.841)
	Rural	28	23	82.1	5	17.9		
Type of House	Kaccha	20	17	85.0	3	15.0	3.85*	P<0.05 (3.841)
	Pukka	40	24	60.0	16	40.0		
Combined		**60**	**41**	**68.3**	**19**	**31.7**		

* Significant at 5% Level, NS: Non-significant

Note: Figures in the parenthesis indicate table value

TABLE – 8

Association between Demographic variables and Pre-test Knowledge level on Hand,

Demographic Variables	Category	Sample	Knowledge Level				χ^2 Value	P Value
			Inadeqete		Moderate			
			N	%	N	%		
Educational statusof Mother	Primary	19	18	94.7	1	5.3	24.31*	P<0.05 (7.815)
	Secondary	11	8	72.7	3	27.3		
	Graduation	19	5	26.3	14	73.7		
	No formal Education	11	10	90.9	1	9.1		
Occupation of Mother	House wife	35	25	71.4	10	28.6	1.11 NS	P>0.05 (7.815)
	Government	9	6	66.7	3	33.3		

	Private	6	3	50.0	3	50.0		
	Skilled labour	10	7	70.0	3	30.0		
Family income/month	Rs.5,000-10,000	17	12	70.6	5	29.4	7.97*	P<0.05 (7.815)
	Rs.10,000-15,000	14	10	71.4	4	28.6		
	Rs.15,001-20,000	18	15	83.3	3	16.7		
	Rs.20,001-25,000	11	4	36.4	7	63.6		
Family Type	Nuclear	39	23	59.0	16	41.0	4.51*	P<0.05 (3.841)
	Joint	21	18	85.7	3	14.3		
Combined		**60**	**41**	**68.3**	**19**	**31.7**		

Foot and Mouth disease

TABLE – 9

Association between Demographic variables and Pre-test Knowledge level on Hand, Foot and Mouth disease

Demographic Variables	Category	Sample	Knowledge Level				χ^2 Value	P Value
			Inadequate		Moderate			
			N	%	N	%		
Specific habit	Smoking	4	4	100.0	0	0.0	6.51 NS	P>0.05 (7.815)
	Drinking Alcohol	2	0	0.0	2	100.0		
	Chewing tobacco	5	4	80.0	1	20.0		
	No bad habit	49	33	67.3	16	32.7		
Previous knowledge	Yes	27	10	37.0	17	63.0	22.22*	P<0.05 (3.841)
	No	33	31	93.9	2	6.1		
Source of Information	Mass media/Print media	5	2	40.0	3	60.0	24.28*	P<0.05 (9.488)
	Family members/Relatives	12	3	25.0	9	75.0		
	Friends/Neighbors	5	3	60.0	2	40.0		
	Health personnel	5	2	40.0	3	60.0		
	No	33	31	93.9	2	6.1		
Combined		**60**	**41**	**68.3**	**19**	**31.7**		

* Significant at 5% Level, NS: Non-significant

INTERPRETATION AND CONCLUSION

The present study shows the effectiveness of Structured Teaching Programme on knowledge regarding hand, foot and mouth diseases in children among mothers of under-five children. The following conclusion is drawn on the basis of the findings ofthe studies.

NURSING IMPLICATION

The investigator observed that the following implication drawn from the study are ofvital concern for nursing education, nursing practice, nursing administration and nursing research which provides way towards better improvement in knowledge regarding hand, foot and mouth diseases in children among mothers of under-five children.

NURSING EDUCATION

1. The nursing educator should be educated to provide information to mothers of under-five children regarding hand, foot and mouth diseases in children.
2. The nursing educator should plan for educating mothers of under-five children regarding hand foot and mouth diseases in children to impart the education to the mothers of under-five children.

NURSING PRACTICE

The nursing practice has been undergoing many evolutions in recent past. The expandedrole of professional nurse emphasizes the activities which promotes health and prevention behavior among the people. The primary role of the nurse is that of patientadvocate and because nurses tend to have holistic approaches to care.

NURSING ADMINISTRATION

1. The Nurse administrator should explore and encourage innovative ideas in preparations of an appropriate teaching material. She should organize sufficient manpower, money and material for disseminating information regarding hand, foot and mouth diseases in children.

2. Nursing administrator can collaborate with community to prevent the incidence ofhand foot and mouth diseases in children.

NURSING RESEARCH

Nursing research plays an important role in the field of nursing. Nursing research improves clinical expertise and personal knowledge, helps to implement changes to provide excellence in nursing care and helps to locate additional resources. Therefore,nurses must be vigilant and should adopt skills based on new scientific base.

It is essential to identify the present level of knowledge regarding hand foot and mouth disease in children among the mothers of under-five children, to identify the extend of information to be given.

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