



International Journal of Research In Paediatric Nursing

E-ISSN: 2664-1305

P-ISSN: 2664-1291

www.paediatricnursing.net

IJRPN 2024; 6(2): 196-200

Received: 25-09-2024

Accepted: 29-10-2024

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Comparative study to assess the knowledge regarding hand, foot and mouth disease (HFMD) among mothers of under five children at selected urban and rural area, Tumkur

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DOI: <https://doi.org/10.33545/26641291.2024.v6.i2c.190>

Abstract

Introduction: The hand, foot, and mouth disease are common illness caused by virus in under five children. The study was undertaken to compare the knowledge of mothers of under five children at rural and urban area.

Methodology: A comparative descriptive design was used. A non-probability convenient sampling technique was used to select 150 mothers residing in urban and rural area, Tumkur. Data collection tool was developed, which include self-administered questionnaire.

Results: In this study the association between knowledge score of urban mothers and demographic variables such as age of mother($\chi^2=10.45$), educational status of mother($\chi^2=10.2$), educational status of husband($\chi^2=11.8$), and number of children($\chi^2=11$).

Conclusion: The study on knowledge of HFMD among rural and urban mothers of under five children revealed that the urban mothers had adequate knowledge on HFMD than the rural mothers.

Keywords: HFMD, urban mothers, rural mothers

Introduction

Hand, foot and mouth disease (HFMD) is a common illness caused by a virus. It's more common in children under the age of 5, but teens and adults can also get the virus. Most outbreaks happening the summer and fall. Hand, foot, and mouth disease is a viral exanthem, and it is most commonly caused by the coxsackievirus of the *Enterovirus* family. Coxsackievirus A16 and enterovirus A71 are the serotypes most commonly implicated as causative agents ^[1]. Hand, foot, and mouth disease can start with a low-grade fever, reduced appetite, and general malaise. The most common hand, foot, and mouth disease presenting symptom is usually mouth or throat pain secondary to the exanthem. The presence of vesicles is surrounded by a thin halo of erythema, eventually rupturing and forming superficial ulcers with a grey-yellow base and erythematous rim. The exanthem can be macular, popular, or vesicular. The lesions are about 2 mm to 6 mm in size, are non-pruritic, and are typically not painful. They last about ten days, tend to rupture, and result in painless and shallow ulcers that do not leave a scar. The exanthem can involve the dorsum of the hand, feet, buttocks, legs, and arms. Oral lesions commonly involve buccal and tongue ulcers but may also involve the soft palate ^[2]. HFMD can also present with atypical features like concomitant aseptic meningitis. Enterovirus infections that cause hand, foot, and mouth disease are notorious for involving the central nervous system (CNS) and may cause encephalitis, polio-like syndrome, acute transverse myelitis, Guillain-Barre syndrome, benign intracranial hypertension, and acute cerebellar ataxia².

Review of Literature

In May 2022, an outbreak of a rash-affecting children occurred in Kollam district of Kerala, India. The rash developed into small tomato-like blisters, earning it the name 'tomato flu'. Undiagnosed fever in children under the age of five is a rather common occurrence in India. Dehydration, skin pain, and rashes are typical signs of infection in children. Tomato flu primarily affected people who were recovering from tropical diseases like chikungunya or dengue fever, health experts previously believed that tomato fever was either a viral fever

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brought on by a novel virus or an impact of such diseases: However, because of young children weakened immune systems, many virologists now think that “tomato fever” is probably a brand-new variation of the viral hand, foot, and mouth infection (HFMD) [5]. The study to assess the current knowledge, and attitudes towards and practise (KAP) levels of HFMD prevention strategies (HFMD-PS) amongst parents and teachers of children under 5 years amidst the COVID-19 pandemic. A convenience sample of 240 teachers and 404 parents responded to a self-administered standardised questionnaire between mid-October and December 2020. A scoring framework was used to assess responses in the ‘knowledge’, ‘attitude’, and ‘practice’ domains. This study suggested potential gaps between positive knowledge and attitudes towards prevention strategies and their actual adoption levels in homes and childcare centres during COVID-19 pandemic. These evidences suggest the importance of continuous promotion of HFMD prevention practise in homes and childcare centres, even amidst pandemics [3]. The study was to assess the knowledge level on HFMD among mothers (under five children) & to discover the association between study findings and selected demographic variables. quantitative research design, non-experimental A descriptive comparative research approach was used. 30 sample sizes were used to assess the knowledge among mothers (of under-five children) were chosen with non-probability convenient sampling technique. The studies conclude that Majority of the mothers of under 5 children’s have average level of knowledge. And although the association between knowledge level and the demographic variable occupation is small (less than 0.05), occupation was found to have a significant association with knowledge of hand-foot-mouth disease [4].

Objectives

1. To find out the knowledge among mothers of under five children regarding HFMD.
2. To compare the knowledge between urban and rural

3. To find out the association between demographic variables with knowledge among mothers of under five children regarding HFMD.

Methodology

The design used for the study was a comparative descriptive research design. Sample included were mothers of under five children of selected urban and rural area, the non-probability convenient sampling technique was used to select 150 mothers residing in selected urban and rural area, Tumkur, Karnataka, India. Women who were willing to participate, can able to read and write Kannada and English were included in study, Mothers having children above five years were excluded. Permission was obtained from the concerned authorities to conduct study and informed consent was obtained from mothers. Data collection tool was developed by the researcher, which included by using self-administered questionnaire with two parts. Part – 1 included item regarding Age of mother, religion, education status of mother, educational status of husband, occupation of mother, occupation of husband, type of family, number of children and Part- 2 consisted of multiple-choice questions to assess the knowledge of mothers. The total scores of knowledge questionnaire were categorized as inadequate knowledge (<50%), average knowledge (>50-75%), adequate knowledge (>75%). The content validity was done. The reliability of the tool was established.

Result

1. Comparison of knowledge regarding HFMD among mothers at rural and urban area.

The frequency and percentage distribution of knowledge on rural mothers was 60% had inadequate knowledge, 33.3% had moderately adequate and 6.7% had adequate knowledge. And in urban area 28% had attained adequate knowledge, 56% had attained moderately adequate and 16% had inadequate knowledge.

Table 1: This table compares the levels of knowledge (inadequate, moderate, and adequate) among rural and urban mothers

Level of knowledge	n=75			
	Rural		Urban	
	No	%	No	%
Inadequate	45	60	21	28
Moderate	25	33.3	42	56
Adequate	5	6.7	12	16

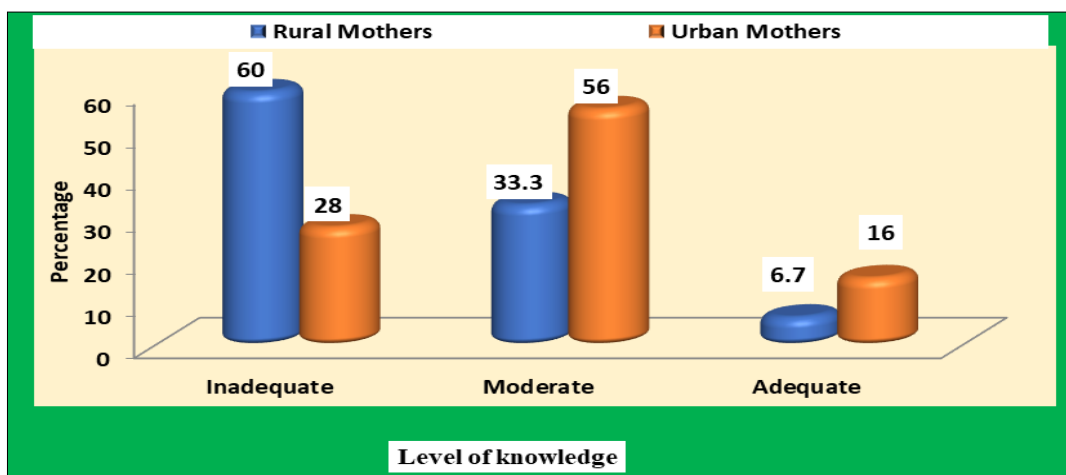


Fig 1: The figure illustrates the comparative knowledge levels (inadequate, moderate, and adequate) of rural and urban mothers regarding Hand, Foot, and Mouth Disease (HFMD)

2. Association between the knowledge on HFMD and the selected demographic variables of rural Mothers.

There is an association between knowledge score and the variables such as educational status of husband and type of family of sample with obtained χ^2 value 7.58

and 7.98 respectively. But it was found that there is no association between knowledge score and other demographic variables like age of mother (3.78), religion (4.52), educational status of mother (2.13), occupation of mother (3.96), occupation of husband (5.03) and number of children (5.83).

Table 2: This table outlines the relationship between the knowledge scores of rural mothers and various demographic variables

S. No	Demographic variables	No	%	Level of Knowledge				Chi square
				< Median (30)		≥ Median (45)		
				No	%	No	%	
				n=75				
Age of the mother								
1	20-25 Years	19	25.3	10	33.3	9	20	
	26--30 Years	32	42.7	12	40.0	20	44.4	3.78
	31--35 Years	10	13.3	5	16.7	5	11.1	df 3
	Above 35 Years	14	18.7	3	10.0	11	24.4	N.S
Religion								
2	Hindu	36	48.0	12	40.0	24	53.3	4.52
	Muslim	16	21.3	9	30.0	7	15.6	df 3
	Christian	11	14.7	6	20.0	5	11.1	N.S
	Others	12	16.0	3	10.0	9	20.0	
Education Status of the mother								
3	Illiterate	0	0	0	0.0	0	0.0	
	Primary	30	40	15	50.0	15	33.3	2.13
	Secondary	34	45.3	11	36.7	23	51.1	df 2
	Higher secondary	11	14.7	4	13.3	7	15.6	N.S
	Graduate and above	0	0	0	0.0	0	0.0	
Educational status of Husband								
4	Illiterate	0	0	0	0.0	0	0.0	
	Primary	38	50.7	21	70.0	17	37.8	7.58
	Secondary	34	45.3	8	26.7	26	57.8	df 2
	Higher secondary	3	4.0	1	3.3	2	4.4	S
	Graduate and above	0	0	0	0.0	0	0.0	
Occupation of the mother								
5	Unemployment	33	44	16	53.3	17	37.8	
	Government sector	2	2.7	0	0.0	2	4.4	3.96
	Private sector	22	29.3	6	20.0	16	35.6	df 3
	Coolie	18	24	8	26.7	10	22.2	N.S
	Business	0	0	0	0.0	0	0.0	
	Others	0	0	0	0.0	0	0.0	
Occupation of Husband								
6	Unemployment	0	0	0	0.0	0	0.0	
	Government sector	10	13.3	2	6.7	8	17.8	5.03
	Private sector	20	26.7	9	30.0	11	24.4	df 4
	Coolie	24	32	13	43.3	11	24.4	N.S
	Business	14	18.7	4	13.3	10	22.2	
	Others	7	9.3	2	6.7	5	11.1	
Type of family								
7	Nuclear family	28	37.3	17	56.7	11	24.4	7.98
	Joint family	47	62.7	13	43.3	34	75.6	df 1 S
Number of children								
8	One	8	10.7	5	16.7	3	6.7	
	Two	20	26.7	11	36.7	9	20.0	5.83
	Three	31	41.3	10	33.3	21	46.7	df 3
	Above three	16	21.3	4	13.3	12	26.7	N.S

N.S - Not Significant * S- Significant at $p < 0.05$ level

3. Association between the knowledge on HFMD and the demographic variables of urban mothers

There is an association between knowledge score and the variables such as age of mother, educational status of mother, educational status of husband and number of children of sample with obtained χ^2 value 10.45,10.2,

11.8 and 11 respectively. But it was found that there is no association between knowledge score and other demographic variables like religion (6.62), occupation of mother (3.16), occupation of husband (2.56) and type of family (2.25).

Table 3: This table examines the relationship between the knowledge scores of urban mothers and demographic factors

S. No	Demographic variables	No	%	Level of Knowledge				Chi square
				< Median (37)		≥ Median (38)		
				No	%	No	%	
Age of the Mother								
1	20--25 Years	11	14.7	7	18.9	4	10.5	10.45* df 3 S
	26--30 Years	15	20.0	11	29.7	4	10.5	
	31--35 Years	30	40.0	15	40.5	15	39.5	
	Above 35 Years	19	25.3	4	10.8	15	39.5	
Religion								
2	Hindu	25	33.3	17	45.9	8	21.1	6.62 df 3 N.S
	Muslim	30	40.0	13	35.1	17	44.7	
	Christian	11	14.7	5	13.5	6	15.8	
	Others	9	12.0	2	5.4	7	18.4	
Education Status of the mother								
3	Illiterate	0	0.0	0	0.0	0	0.0	10.2* df 2 S
	Primary	0	0.0	0	0.0	0	0.0	
	Secondary	15	20.0	11	29.7	4	10.5	
	Higher secondary	38	50.7	21	56.8	17	44.7	
	Graduate and above	22	29.3	5	13.5	17	44.7	
Educational status of Husband								
4	Illiterate	0	0.0	0	0.0	0	0.0	11.8* df 2 S
	Primary	0	0.0	0	0.0	0	0.0	
	Secondary	17	22.7	13	35.1	4	10.5	
	Higher secondary	28	37.3	16	43.2	12	31.6	
	Graduate and above	30	40.0	8	21.6	22	57.9	
Occupation of the mother								
5	Unemployment	16	21.3	9	24.3	7	18.4	3.16 df 3 N.S
	Government sector	27	36.0	16	43.2	11	28.9	
	Private sector	24	32.0	9	24.3	15	39.5	
	Coolie	0	0.0	0	0.0	0	0.0	
	Business	0	0.0	0	0.0	0	0.0	
	Others	8	10.7	3	8.1	5	13.2	
Occupation of Husband								
6	Unemployment	0	0.0	0	0.0	0	0.0	2.56 df 3 N.S
	Government sector	29	38.7	11	29.7	18	47.4	
	Private sector	16	21.3	9	24.3	7	18.4	
	Coolie	0	0.0	0	0.0	0	0.0	
	Business	20	26.7	11	29.7	9	23.7	
	Others	10	13.3	6	16.2	4	10.5	
Type of family								
7	Nuclear family	34	45.3	20	54.1	14	36.8	2.25 df 1 N.S
	Joint family	41	54.7	17 37	45.9	24	63.2	
Number of children								
8	One	16	21.3	12	32.4	4	10.5	11* df 3 S
	Two	25	33.3	15	40.5	10	26.3	
	Three	26	34.7	7	18.9	19	50.0	
	Above three	8	10.7	3	8.1	5	13.2	

N.S - Not Significant * S- Significant at $p < 0.05$ level

Discussion

The above table 1 shows the level of knowledge were seen into 3 categories; inadequate, moderate and adequate. Majority of rural mothers ie, 60% had inadequate knowledge, 33.3% had moderate knowledge and 6.7% had adequate knowledge and the level of knowledge of urban mothers were seen into 3 categories; inadequate, moderate and adequate. 28% had inadequate knowledge, 56% had moderate knowledge and 16% had adequate knowledge. There is a significant difference found between the mean and standard deviation of scores of knowledge on HFMD of rural and urban mothers. [using unpaired ‘t’ test]. The unpaired t-test was carried out and it was found to be invariably significant at $P < 0.01$ level. It evidence that the

mean score of knowledge on infant rearing practice between rural and urban mothers differ significantly, ie the study shows that urban mothers have more knowledge on HFMD than rural mothers. The study found that educational qualification of husband and type of family of rural mothers have significant association with their knowledge on HFMD. It was found that statistically not significant at 5% level in other variables such as age, religion, education of mother, occupation of mother, occupation of father, type of family and number of children by using χ^2 test. The study found that age, educational status of mother, educational status of husband and number of children of urban mothers have significant association with their knowledge on HFMD. It was found

that statistically not significant at 5% level in other variables such as religion, occupation of mother, occupation of husband and type of family which was calculated by using χ^2 test.

Conclusion

The study enlightens the importance of this research there was a significant difference in knowledge on HFMD among rural and urban mothers in selected areas at Tumkur. The study also revealed that, there was significant association between demographic variables and knowledge on HFMD among mothers residing at rural and urban areas, Tumkur.

Limitations

1. The study was limited to selected rural and urban areas at Tumkur.
2. The study was conducted using convenient sampling which restricted the generalization that could be made.
3. The study was limited to mothers of under five children.

Recommendations

Keeping in view the findings of the present study, the following recommendations were made.

1. The study can be conduct among preschool teachers since they have more exposure to under five children.
2. A similar study can be conducted to assess the effectiveness of teaching program on HFMD among rural and urban mothers.
3. An observational study can be conducted in the actual practice of frequent hand washing and extraordinary hygienic practices for a period of time in prevention of HFMD.

Conflict of Interest

Not available

Financial Support

Not available

References

1. Guerra AM, Orille E, Waseem M. Hand, Foot, and Mouth Disease. StatPearls. Last Update: March 4, 2023.
2. Saguil A, Kane SF, Lauters R, Mercado MG. Hand-foot-and-mouth disease: Rapid evidence review. American Family Physician. 2019 Oct 01;100(7):408-414.
3. Wang MX, Pang J. Assessment of knowledge on preschool teachers and parents on prevention of HFMD among pre-school children. Public Health. 2022 Oct 17;10:2022.
4. Kamble MM, Upendra S, Waghmare S. A study to assess knowledge on hand-foot-and-mouth disease (HFMD) among mothers of under 5 children in selected urban area of Pune City.
5. Tang *et al.* The 2022 outbreak and the pathobiology of the coxsackie virus (hand-foot-and-mouth disease) in India. Journal of Medical Virology. 2023 Jul;111:105432.
6. Rao S, Ray A. Bengaluru sees rise in hand-foot-and-mouth disease among children. Times of India. Updated Aug 27, 2018.

How to Cite This Article

Vidyashri R, Suma L. Comparative study to assess the knowledge regarding hand, foot and mouth disease (HFMD) among mothers of under five children at selected urban and rural area, Tumkur. International Journal of Research in Paediatric Nursing. 2024;6(2):196-200.

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